OECD Economic Surveys
GREECE

APRIL 2018

OECD

OECD Economic Surveys: Greece 2018

OECD
BETTER POLICIES FOR BETTER LIVES

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Please cite this publication as:
OECD (2018), *OECD Economic Surveys: Greece 2018*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/eco_surveys-grc-2018-en

ISBN 978-92-64-29251-2 (print)
ISBN 978-92-64-29254-3 (PDF)
ISBN 978-92-64-29818-7 (HTML)
ISBN 978-92-64-29256-7 (epub)

Series: OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

OECD Economic Surveys: Greece
ISSN 1995-3224 (print)
ISSN 1999-0286 (online)

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Photo credits: Cover © iStockphoto.com/Barislaw Stefanov.

Corrigenda to OECD publications may be found on line at: *www.oecd.org/about/publishing/corrigenda.htm*.

© OECD 2018

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of the source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to *rights@oecd.org*. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at *info@copyright.com* or the Centre français d'exploitation du droit de copie (CFC) at *contact@cfcopies.com*.

Table of contents

Basic statistics of Greece, 2016 9
Executive summary 11

Assessment and recommendations 15
The economy is finally growing again 20
Strengthening the banking sector 26
Higher growth, prudent fiscal policy and debt restructuring will reduce the public debt 30
Redressing public finance to bolster inclusive growth 33
Boosting employment, reducing poverty and improving skills 40
Greening the economy 54
Improving the business environment to raise investment 55
References 67

Annex. **Progress in structural reforms** 71

Thematic chapters

Chapter 1. **Boosting investment** 79
Easing product market regulation and enhancing regulatory quality 83
Boosting foreign direct investment and integration in global value chains 88
Streamlining insolvency procedures and strengthening contract enforcement . . . 92
Building an innovation system 100
Reviving bank lending to firms 104
Enhancing public investment 114
Policy recommendations 121
References 122

Chapter 2. **Generating employment, raising incomes and addressing poverty** 131
Supporting employment growth through more effective social dialogue 137
Expanding opportunities through a stronger education system 149
Lowering poverty through more effective social protection 161
Active labour market programmes that assist the recovery in employment 175
Policy recommendations 179
References 180

Boxes

1. The National Anti-Corruption Action Plan and Greece-OECD project on anti-corruption . . . 63
1.1. The OECD Competition Assessment Reviews for Greece . . . 86
1.2. Identifying sectors with comparative advantage in the Greek economy . . . 91
1.3. Main recent changes in Greece's insolvency framework . . . 95
1.4. The OECD questionnaire on insolvency regimes . . . 96
1.5. The distressed debt market in Japan . . . 112
2.1. Reforms to Greece's labour market institutions . . . 137
2.2. A dedicated commission to advise on minimum wage adjustments . . . 149
2.3. Integrating early education with early childhood care . . . 154
2.4. Measuring poverty . . . 162
2.5. Simulating tax and benefit policies . . . 170

Tables

1. Selected elements of the reform programme . . . 19
2. Macroeconomic indicators and projections . . . 25
3. Low probability events that could lead to major changes in the outlook . . . 25
4. Share of non-performing exposures for different types of loans . . . 28
5. Assumptions of different scenarios for debt sustainability analysis . . . 31
6. Impact of structural reforms on GDP level . . . 31
7. Selected examples of recent actions taken to reduce cash payments and tax evasion . . . 37
8. Fiscal impacts of selected reforms . . . 40
1.1. Main elements of Greece's insolvency framework . . . 94
1.2. Share of NPEs for different types of loans . . . 109
1.3. Operational targets to reduce non-performing exposures . . . 111
2.1. The labour market has improved but remains less inclusive than elsewhere . . . 133
2.2. Most countries that allow extensions of collective agreements impose significant conditions . . . 143
2.3. Minimum wage levels, determination and differential across groups . . . 148
2.4. Recent and legislated policy settings . . . 170

Figures

1. Growth has resumed . . . 16
2. The external and fiscal imbalances have closed . . . 17
3. Transitions into employment improved following labour market reforms . . . 17
4. Poverty rose sharply during the crisis, especially among children, and investment collapsed . . . 18
5. Greece's well-being outcomes are low . . . 18
6. Confidence is gradually increasing and the unemployment rate is declining . . . 21
7. External competitiveness has improved but productivity continues to decline . . . 21
8. Private consumption has stopped falling, investment is volatile, price and wage pressure remains moderate . . . 22
9. The primary balance has improved . . . 22
10. Bank lending rates in Greece have declined but remain higher than in other Eurozone countries . . . 23

11. Bank deposits have levelled off and reliance on the central bank's funding is decreasing . . . 24
12. Capital ratios exceed thresholds but return on assets remains negative . . . 26
13. The stock of non-performing loans is large . . . 28
14. Private sector debt and loans to non-financial corporations are lower than in other OECD countries . . . 29
15. Locking-in lower interest rates and additional reforms will help reduce the public debt . . . 32
16. Tax rates are high whereas tax revenues are low . . . 34
17. Value-added tax collection is low . . . 34
18. There is large scope to increase non-cash payments . . . 37
19. Performance budgeting procedures can be used more extensively . . . 39
20. Wages have moved more closely with employment and productivity since changes to the wage-setting framework . . . 41
21. Many private-sector employees earn less than the poverty line . . . 42
22. Years of schooling are above average . . . 44
23. Adults' skills lag the OECD average . . . 45
24. Adults' participation in life-long learning is low . . . 45
25. Student performance at school is below the OECD average . . . 47
26. Schools and teachers have limited influence over resource and curriculum management . . . 47
27. Participation in active labour market programmes is limited . . . 48
28. Poverty remains high despite extensive redistribution through taxes and benefits . . . 50
29. Pensions dominate Greece's social spending . . . 50
30. The social solidarity income, family benefit and housing allowance reforms support poor households' incomes but also raise participation tax rates . . . 52
31. Greece's top green growth challenges are waste disposal and air pollution . . . 55
32. Product market regulation has eased but remains above most OECD countries . . . 56
33. Recent reforms have improved the business environment, which however remains poor . . . 57
34. Implementation of OECD Competition Assessments' recommendations has progressed . . . 57
35. Greece's inward FDI stocks are low but have improved recently . . . 59
36. FDI regulatory restrictions are low compared to other OECD countries . . . 61
37. Regulatory governance can be improved, especially by extending the use of *ex post* evaluations . . . 62
38. Control of corruption is positively associated with capacity to innovate and retain talent . . . 64
39. Large shares of employment and capital are trapped in zombie firms . . . 65
40. Greece's insolvency framework has improved . . . 66
41. Insolvency proceedings in Greece are slow and the asset recovery rate is low . . . 66
42. Enforcement of contracts is weak . . . 67
1.1. Low investment is dragging potential output and labour productivity growth . . . 80
1.2. Investment dropped more than elsewhere . . . 81
1.3. Business investment in fixed and knowledge-based capital (KBC) is low . . . 82

1.4. Obstacles to investment reported by businesses are high 83
1.5. Product market regulation has eased but remains above most OECD countries 84
1.6. Service trade restrictions can be lowered further 85
1.7. Implementation of OECD Competition Assessments' recommendations has progressed 86
1.8. Greece's inward FDI stocks are low but have improved recently 89
1.9. There is ample scope to deepen participation in global value chains 90
1.10. FDI regulatory restrictions are low compared to other OECD countries 90
1.11. Revealed comparative advantage in Greece 91
1.12. Large shares of employment and capital are trapped in zombie firms 93
1.13. Components of the OECD insolvency index 96
1.14. Greece's insolvency framework has improved 97
1.15. Greece has improved across all areas of the OECD insolvency regime indicator . . . 98
1.16. Insolvency proceedings in Greece are slow and the asset recovery rate is low . . . 99
1.17. Enforcement of contracts is weak 99
1.18. Research and development expenditure is among the lowest in the OECD . . . 101
1.19. Research productivity is low 102
1.20. Co-operation with higher education or research institutions in innovation is low 103
1.21. Bank lending rates in Greece have declined but remain higher than in other Eurozone countries 104
1.22. Bank credit's standards have yet to ease and demand for bank loans is still weak 105
1.23. Capital ratios exceed thresholds but return on assets remains negative 106
1.24. Bank deposits have levelled off and reliance on the central bank's funding is decreasing 108
1.25. The stock of non-performing loans is large 108
1.26. Policy measures helped to create a distressed debt market and lower NPLs in Japan 113
1.27. Public investment has fallen 115
1.28. EU co-financing of public investment spending is sizeable 115
1.29. The share of public investment in total budget expenditure remains stable . . 116
1.30. The perceived quality of infrastructure lags other countries 116
1.31. Greece's logistics lags OECD countries 117
1.32. Railways infrastructure spending was cut much more than spending on roads . 118
1.33. Disbursement of public investment funds is concentrated towards the end of the year 119
1.34. The central government accounts for most public investments spending 120
2.1. Employment in Greece fell further during the crisis and has recovered more slowly 132
2.2. Real wages have stabilised 134
2.3. Poverty rates in Greece are high 134
2.4. The share of workers at risk of poverty is high and has increased 135
2.5. The incidence of long-term unemployment is very high 135
2.6. Employment has shifted away from higher-skill jobs 136
2.7. Many workers are over-skilled for their job 136

2.8. Wages have moved more closely with employment and productivity since changes to the wage-setting framework . . . 138
2.9. Collective agreements cover fewer Greek workers . . . 139
2.10. Transitions into employment improved following labour market reforms . . . 140
2.11. Many private-sector employees earn less than the poverty line . . . 140
2.12. Unionisation and employer association membership rates are lower in smaller firms . . . 142
2.13. Trust between social partners rebuilt after the changes to the wage-setting framework, but remains low . . . 144
2.14. Greece's minimum wage is comparable to other OECD economies . . . 146
2.15. More workers in small firms earn low wages . . . 146
2.16. Labour force participation fell among those receiving the youth minimum wage relative to the cohort receiving the adult wage . . . 147
2.17. Greece's education input effort is in-line with other OECD countries . . . 150
2.18. Years of schooling are above average . . . 151
2.19. Student performance at school is below the OECD average . . . 151
2.20. Adults' skills lag the OECD average . . . 152
2.21. Enrolment in early childhood education and care below compulsory school age lags other OECD countries . . . 153
2.22. Schools and teachers have limited influence over resource and curriculum management . . . 155
2.23. School evaluations are infrequent in Greece . . . 157
2.24. Greece has few universities ranked among the world's best . . . 159
2.25. Few adults participate in professional training or life-long learning . . . 160
2.26. Poverty rates and the poverty gap rose in Greece over the crisis . . . 161
2.27. The poverty gap has widened . . . 162
2.28. Those in work are at lowest risk of poverty . . . 164
2.29. Poverty has shifted from retirees to young households with children . . . 164
2.30. Pensions dominate Greece's social spending . . . 165
2.31. Poverty and income inequality remain high even after extensive redistribution through taxes and benefits . . . 166
2.32. The Social Solidarity Income, reformed family benefits, and proposed housing allowances raise poor households' incomes but also raise participation tax rates . . . 169
2.33. Hypothetical increases in the Social Solidarity Income and earnings disregards would further support poor households' incomes . . . 172
2.34. Housing costs overburden most low income households, especially renters . . . 174
2.35. Participation in active labour market programmes is limited . . . 176
2.36. Eligibility conditions for unemployment benefits are moderately strict . . . 178

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

The economic situation and policies of Greece were reviewed by the Committee on 29 January 2018. The draft was revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 14 March 2018.

The Secretariat's draft report was prepared for the Committee by Mauro Pisu, Tim Bulman, Panagiotis Barkas and Nicholas Lazarou under the supervision of Asa Johansson, and the general supervision of Alvaro Pereira. Statistical research assistance was provided by Eun Jung Kim and administrative support by Dacil Kurzweg.

The Survey *also benefitted from contributions by Willem Adema, Jarmila Botev, Hervé Boulhol, Bert Brys, Sandrine Cazes, Chris Clarke, Thomas Dannequin, Oliver Denk, Alexandros Dimitropoulos, Assia Elgouacem, Arno Engel, Diana Toledo Figueroa, Robert Ford, Michael Förster, Alessia Forti, Andrea Garnero, Yvan Guillemette, Alexander Hijzen, Herwig Immervoll, Patrick Lenain, Andrew Macintyre, Federica Maiorano, Iota Nassr, Kostas Panagiotopoulos, Beatriz Ponz, Gillian Golden, Daniele Pacifico, Olga Rastrigina, Nicolas Ruiz, Angelica Salvi Del Pero, and Daniel Sanchez-Serra.*

The previous Survey *of Greece was issued in March 2016.*

Follow OECD Publications on:

http://twitter.com/OECD_Pubs

http://www.facebook.com/OECDPublications

http://www.linkedin.com/groups/OECD-Publications-4645871

http://www.youtube.com/oecdilibrary

http://www.oecd.org/oecddirect/

This book has...

StatLinks

A service that delivers Excel® files from the printed page!

Look for the *StatLinks* at the bottom of the tables or graphs in this book. To download the matching Excel® spreadsheet, just type the link into your Internet browser, starting with the *http://dx.doi.org* prefix, or click on the link from the e-book edition.

BASIC STATISTICS OF GREECE, 2016

(Numbers in parentheses refer to the OECD average)[a]

LAND, PEOPLE AND ELECTORAL CYCLE

Population (million)	11.4		Population density per km^2	82.4	(37.2)
Under 15 (%)	14.2	(17.9)	Life expectancy (years, 2015)	81.1	(80.5)
Over 65 (%)	20.3	(16.6)	Men	78.5	(77.9)
Foreign-born (%, 2014)	6.4		Women	83.7	(83.1)
Latest 5-year average growth (%)	0.5	(0.6)	Latest general election	September 2015	

ECONOMY

Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	192.7		Primary sector	4.0	(2.5)
In current prices (billion EUR)	173.9		Industry including construction	16.3	(26.7)
Latest 5-year average real growth (%)	-2.1	(1.9)	Services	79.7	(70.9)
Per capita (000 USD PPP)	26.7	(42.2)			

GENERAL GOVERNMENT

Per cent of GDP

Expenditure	49.8	(41.2)	Gross financial debt	189.9	(99.4)
Revenue	50.2	(38.3)	Net financial debt	149.3	(64.6)

EXTERNAL ACCOUNTS

Exchange rate (EUR per USD)	0.904		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	0.604		Mineral fuels, lubricants and related materials	27.5	
In per cent of GDP			Food and live animals	16.8	
Exports of goods and services	30.5	(53.6)	Manufactured goods	15.6	
Imports of goods and services	31.4	(49.3)	Main imports (% of total merchandise imports)		
Current account balance	-1.1	(0.2)	Mineral fuels, lubricants and related materials	22.7	
Net international investment position	-132.7		Machinery and transport equipment	21.9	
			Chemicals and related products, n.e.s.	15.5	

LABOUR MARKET, SKILLS AND INNOVATION

Employment rate for 15-64 year-olds (%)	52.0	(66.9)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	23.5	(6.3)
Men	61.0	(74.7)	Youth (age 15-24, %)	47.4	(13.0)
Women	43.3	(59.3)	Long-term unemployed (1 year and over, %)	16.9	(2.0)
Participation rate for 15-64 year-olds (%)	68.2	(71.7)	Tertiary educational attainment 25-64 year-olds (%)	30.2	(35.7)
Average hours worked per year	2 035	(1 763)	Gross domestic expenditure on R&D (% of GDP, 2015)	1.0	(2.4)

ENVIRONMENT

Total primary energy supply per capita (toe, 2015)	2.1	(4.1)	CO_2 emissions from fuel combustion per capita (tonnes, 2015)	5.7	(9.2)
Renewables (%, 2015)	11.3	(9.6)	Water abstractions per capita (1 000 m3, 2015)	0.9	
Exposure to air pollution (more than 10 µg/m^3 of $PM_{2.5}$, % of population, 2015)	99.8	(75.2)	Municipal waste per capita (tonnes, 2012)[b]	0.5	(0.5)

SOCIETY

Income inequality (Gini coefficient, 2015)[b]	0.340	(0.311)	Education outcomes (PISA score, 2015)		
Relative poverty rate (%, 2015)[b]	14.9	(11.3)	Reading	467	(493)
Median disposable household income (000 USD PPP, 2015)[b]	12.1	(22.9)	Mathematics	454	(490)
Public and private spending (% of GDP)			Science	455	(493)
Health care	8.3	(9.0)	Share of women in parliament (%)	19.7	(28.7)
Pensions (2012)[c]	17.5	(9.1)	Net official development assistance (% of GNI)	0.19	(0.39)

Better life index: *www.oecdbetterlifeindex.org*

a) 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.

b) 2014 for the OECD aggregate.

c) 2013 for the OECD aggregate.

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.

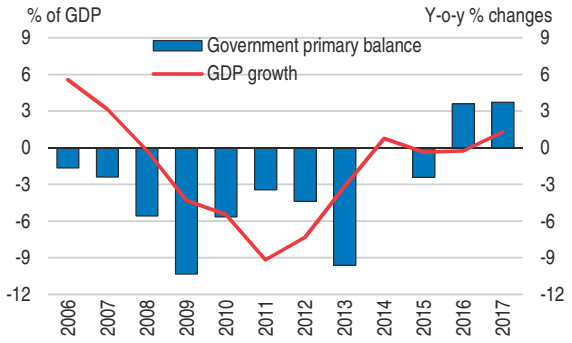
© OECD 2018

Executive summary

- *The economy is recovering and fiscal credibility has improved*
- *Well targeted social programmes will enhance social inclusion and intergenerational equity*
- *Despite significant reforms, cumbersome regulation and lack of finance hinder private investment*

The economy is recovering and fiscal credibility has improved

The primary budget balance is in surplus



Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

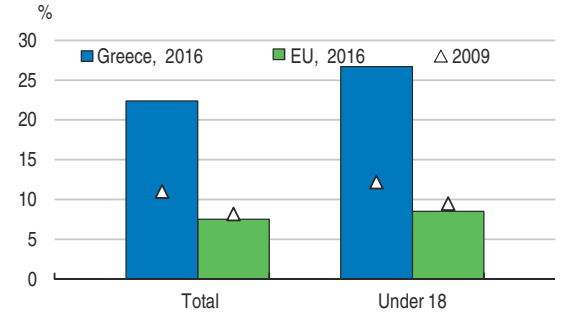
StatLink http://dx.doi.org/10.1787/888933713118

Greece is on track to recover from a deep depression. Reforms have gathered pace and fiscal consolidation has strengthened credibility, lowering uncertainty. Exports have led the expansion and labour market reforms have improved competitiveness. Employment is rising strongly while the external and fiscal imbalances are being addressed. Large fiscal consolidation has returned the primary balance to surplus. Tax expenditure has been reduced. Yet, the tax system relies on high rates and narrow bases, mainly due to tax evasion, hampering growth and creating inequities. The public debt remains high. Reducing the debt ratio will hinge on reforms to raise long term growth, maintaining prudent fiscal policy and additional debt restructuring as needed.

Well targeted social programmes will enhance social inclusion and intergenerational equity

Poverty rates are high, especially for children

Severe material deprivation rate



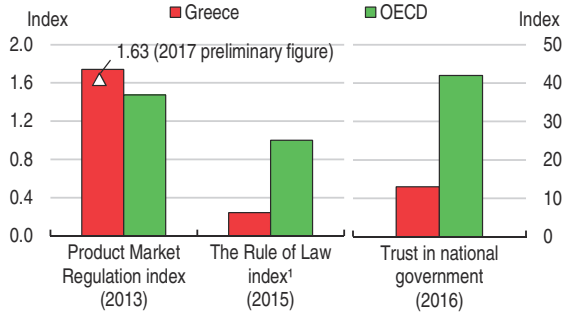
Source: Eurostat (2018), EU Statistics on Income and Living Conditions (database).

StatLink http://dx.doi.org/10.1787/888933713137

Labour market reforms have boosted employment, but wages and productivity remain depressed. Workers' skills often do not match workplaces' needs, trapping workers in low-skill and low-wage jobs. The long crisis combined with an ineffective social protection system caused a surge in poverty, especially among families with children, the young and unemployed. In-work poverty is also high. Better matching workers' skills with workplaces' needs, strengthening firms' incentives to innovate and train workers, and continuing social protection reforms will raise wages and reduce poverty. The roll-out of the guaranteed minimum income, the strengthening of family benefits and the provision of school meals are important steps to better protect poor households.

Despite significant reforms, cumbersome regulation and lack of finance hinder private investment

Improving the business environment would accelerate the investment recovery



1. Perceived confidence in the rules of society.

Source: OECD (2013), *Product Market Regulation Database*; World Bank (2017), World Development Indicators Database; and OECD (2017), *Government at Glance 2017*.

StatLink http://dx.doi.org/10.1787/888933713156

Real investment has dropped by 60% since its pre-crisis peak and remains depressed due to tight financial conditions and structural impediments. The government has improved important areas of the investment climate, including product markets and entry to professions, but more is required to revive investment. The new Investment Incentives Law and the ongoing design of a National Growth Strategy are initiatives in this direction. Further easing product market regulation, improving regulatory quality and transparency, continuing to fight corruption and addressing informality would improve the business environment, strengthen the rule of law and increase trust in the government. Reducing gradually but steadily non-performing loans and phasing out capital controls while preserving financial stability will improve financing conditions and boost confidence.

MAIN FINDINGS	KEY RECOMMENDATIONS
Boosting sustainable growth and reducing the debt ratio	
The economic recovery is strengthening and reforms are progressing. But poverty and inequality are still high, long-term growth prospects are modest and the public administration is still inefficient.	Maintain the reform momentum focusing on implementation, enhancing public administration efficiency and continuing to fight corruption.
Fiscal consolidation has led to large primary surpluses, well above fiscal targets, strengthening fiscal credibility. Tax collection has improved. However, informality is still high, and the tax system relies on high rates and narrow bases – mainly due to tax evasion – hindering growth. The public debt remains high and is a source of vulnerability that needs to be addressed.	Maintain the primary surplus agreed with official creditors and facilitate debt restructuring as needed. Reduce tax evasion by extending the use of risk analysis, targeted tax audits and strengthening incentives for voluntary tax compliance. Extend the obligation of having an electronic cash register to all self-employed and introduce e-invoicing. Undertake regular spending reviews and extensive use of performance budgeting.
The banks' governance framework has improved and capital ratios are well above regulatory thresholds. Yet, new bank governance practices have still to become entrenched. Non-performing loans, though decreasing, remain high and tax incentives for disposing of them can be strengthened.	Continue to align banks' governance standards with international best practices. Align tax incentives for disposing of non-performing loans with those of previous legislation and make them temporary. Fully implement out-of-court workout procedures and e-auctions.
Per-capita greenhouse gases emissions are below the OECD average. However, fossil fuel support measures are high. Landfill remains the most common form of waste disposal, many landfill sites are unregulated and in some areas urban waste-water treatment is below EU standards, contributing to high local pollution.	Phase out fossil-fuel support measures. Enforce EU standards for waste disposal and urban waste-water treatment.
Expanding employment opportunities, improving job quality and reducing poverty	
Poverty has risen dramatically among the young and unemployed due to the long crisis. Social programmes other than pensions are underfunded despite recent strengthening and improved targeting.	Continue spending reviews to reallocate resources to targeted social programmes. Further rationalise remaining non-targeted programmes. Consider introducing in-work benefits.
Collective wage agreements, including extension of agreements, have been suspended. Wages are now competitive but many workers still earn below the minimum wage, because of part-time contracts, and a growing share of jobs is temporary and low quality.	Introduce sectoral collective-wage bargaining covering broad working conditions and without automatic extensions. Ensure collective agreements are sufficiently flexible so that they can be adapted to specific firm-level conditions.
The minimum wage in the private sector is slightly below the OECD average relative to the median earnings. The legislated minimum wage setting process risks future adjustments that do not support employment growth and living standards.	Establish a commission of social partners and independent experts to recommend minimum wage adjustments.
The many years of schooling often do not translate into good educational results. Workers' skills do not match workplace needs and lag other countries. Few adults attend on-the-job training.	Introduce assessment frameworks and professional development schemes; gradually give schools and teachers greater pedagogical and managerial autonomy. Scale up post-secondary vocational education and adult education, linking them with labour market needs, and certify the quality of courses. Evaluate reskilling programmes, expand those that are successful and cost-effective and cancel those that are not.
Improving the business environment and boosting investment	
Sector-specific product market reforms have progressed but public administration inefficiencies as well as excessive red tape continue to mar the business environment.	Simplify regulatory impact assessments and build a network of civil servants with regulatory-quality expertise. Expand the scope of the "silence is consent" rule, *ex post* monitoring compliance and one-stop shops; ensure they have the resources to operate effectively.
The state asset management agency is operational, but an asset management strategy is yet to be fully developed. The land registry has been legislated but is not complete, and, along with other administrative hurdles, hampers the privatisation programme.	Finalise and implement the state asset management strategy and link it with the privatisation programme. Complete the land registry.
Insolvency proceedings are slow and complex because of yet to be implemented reforms and a slow judicial system.	Fully implement the legislated insolvency reforms. Ensure a sufficient number of well-trained insolvency professionals start operating soon.

© OECD 2018

Assessment and recommendations

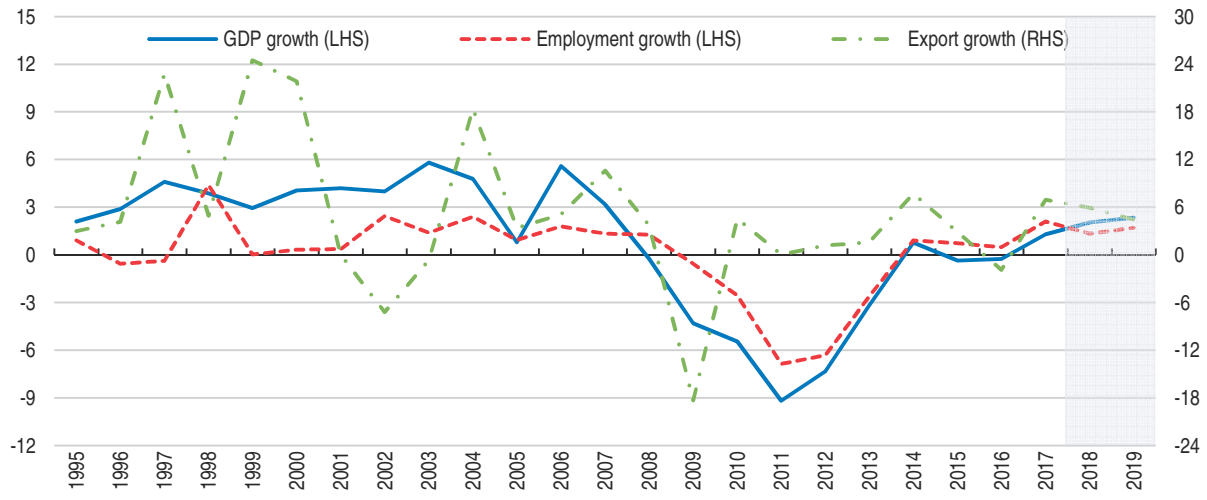
- *The economy is finally growing again*
- *Strengthening the banking sector*
- *Higher growth, prudent fiscal policy and debt restructuring will reduce the public debt*
- *Redressing public finance to bolster inclusive growth*
- *Boosting employment, reducing poverty and improving skills*
- *Greening the economy*
- *Improving the business environment to raise investment*

Note by Turkey:
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union:
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Greece's economic recovery is finally gaining traction after an unprecedented depression. GDP has started to recover after having fallen by a quarter from 2008 to 2016 (Figure 1). In the last two years, the pace of reforms has accelerated and broadened. The imbalances in public finances and the current account have been reversed due to large fiscal adjustments, which have strengthened fiscal credibility and reduced uncertainty (Figure 2). Exports are leading the recovery, building on competitiveness gains following labour market reforms. Jobs are being created and transitions into employment have picked up (Figure 3), supporting household incomes and improving labour force participation for women. In the summer of 2017, Greece returned to the international debt market after a three-year hiatus, signalling investors' increasing confidence in the country's prospects and improved fiscal credibility. In the past two years, the 10-year government bond yields dropped from nearly 12% to 4%.

Figure 1. **Growth has resumed**

Year-on-year percentage changes



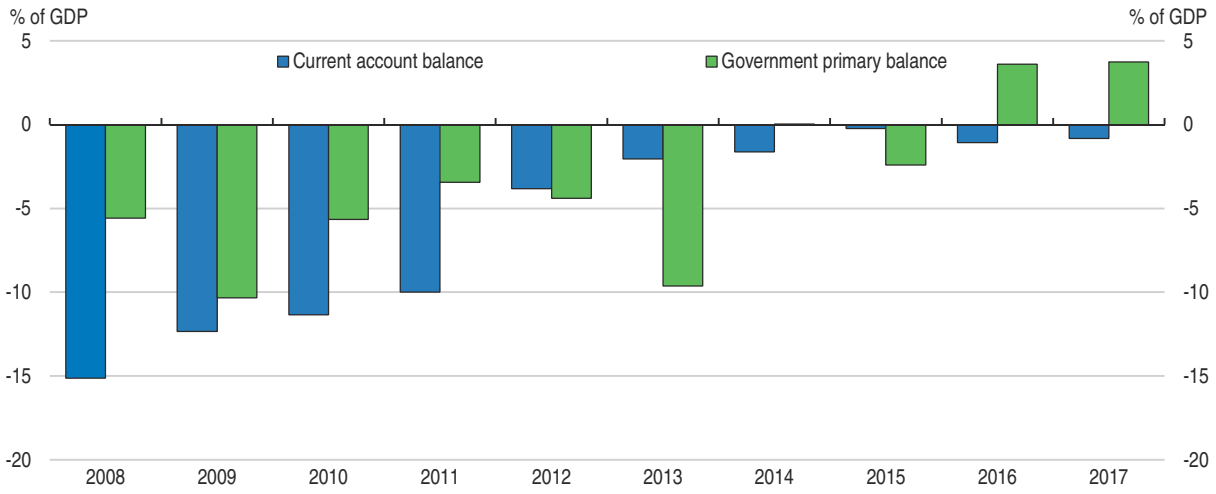
Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713175

Despite these positive developments, challenges abound. GDP per capita is still 25% below its pre-crisis level. The public debt is still high and a source of significant vulnerability. Poverty rose sharply during the crisis, especially among the young and families with children. Though poverty has stabilised, it remains near a record high (Figure 4 – Panel A). Skill mismatch is also high and investment remains depressed (Figure 4 – Panel B). This contributes to low productivity – which has fallen further behind other OECD countries – and low wages – resulting in high in-work poverty. Though improving, female labour participation is among the lowest across OECD countries. The recovery in investment is held back by a dearth of finance – due in part to high levels of non-performing loans and to capital controls – high cost of capital relative to wages, cumbersome regulations and low demand. These problems weigh on people's well-being. In most dimensions of the OECD's *Better Life Index*,

Figure 2. **The external and fiscal imbalances have closed**

Current account and government primary balance

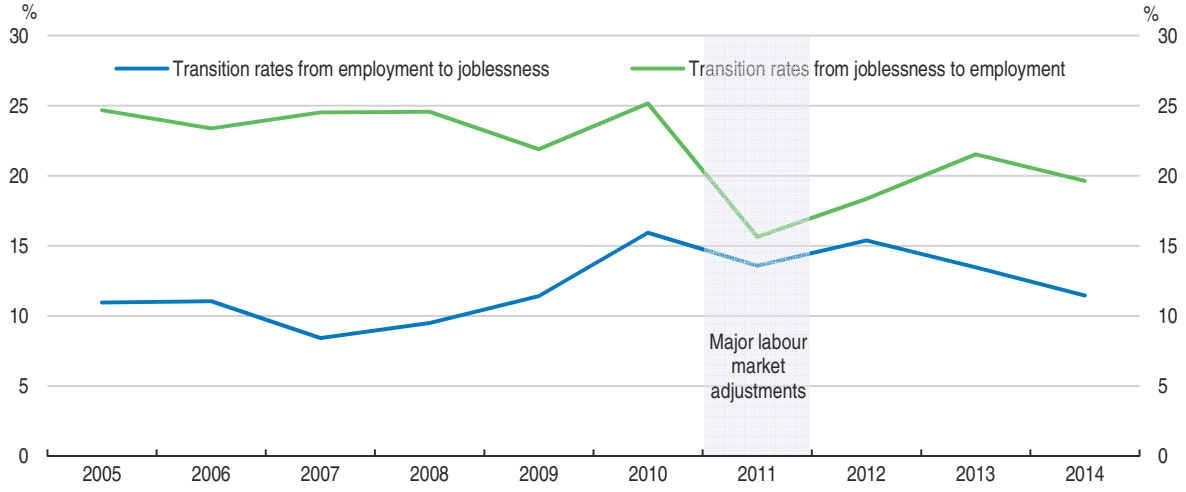


Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713194

Figure 3. **Transitions into employment improved following labour market reforms**

Labour transitions between joblessness and employment, 25-59 year-olds, 2005-14[1]



Note: Transition rates between joblessness and employment at the individual level at time *t* measure the number of times an employed worker at the end of year t-1 experiences a transition from joblessness to employment (and from employment to joblessness), based on monthly information on employment status of the worker: employed; unemployed; and inactive. Individual transition information is used to calculate aggregate transition rates at the country level. See for more details: Garda, P. (2016), "The Ins and Outs of Employment in 25 OECD Countries", *OECD Economics Department Working Papers*, No. 1350.

1. The reference income year.

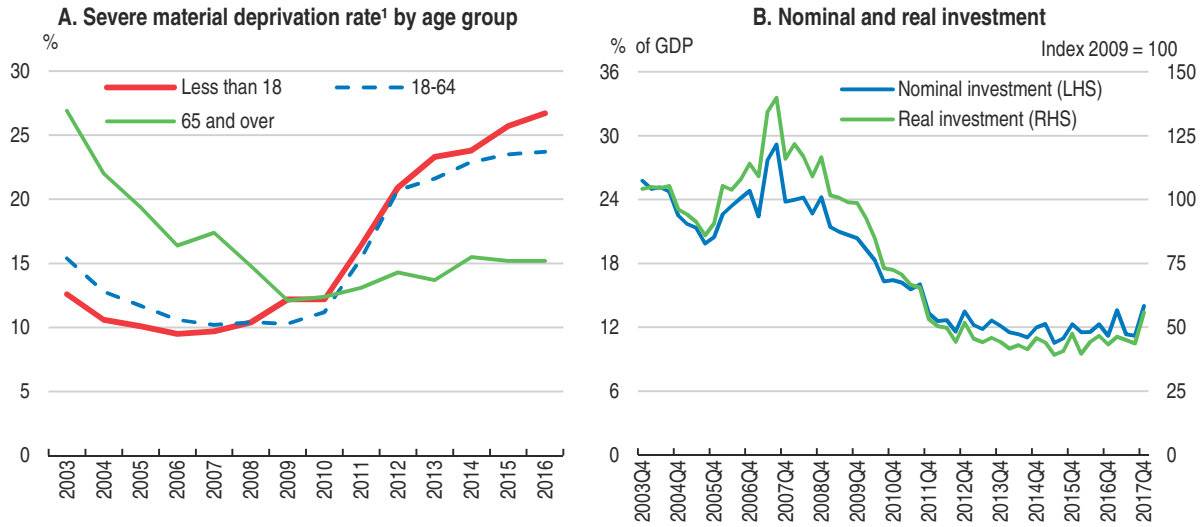
Source: OECD calculations based on *European Survey on Income and Living Conditions (EU-SILC) 2005-2015*.

StatLink http://dx.doi.org/10.1787/888933713213

Greece ranks below the OECD average (Figure 5). Greece compares favourably only in health status and work-life balance. The legacy of the crisis weighs especially on subjective well-being and civic engagement, which have deteriorated markedly in the latest 10 years (OECD, 2017).

Extending the current recovery into durable improvements in social welfare will require maintaining the reform momentum. Since the start of the economic adjustment programmes,

Figure 4. **Poverty rose sharply during the crisis, especially among children, and investment collapsed**



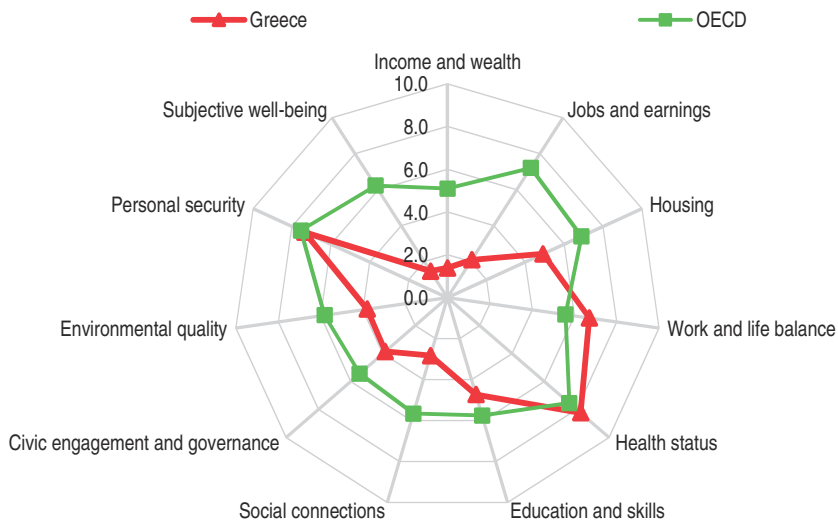
1. The severe material deprivation rate is the proportion of the population living in households unable to afford at least four of the following items: unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, the adequate heating of a dwelling, durable goods like a washing machine, colour television, telephone or car, or are confronted with payment arrears.

Source: Eurostat (2018), *EU Statistics on Income and Living Conditions* (database) and OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713232

Figure 5. **Greece's well-being outcomes are low**

Better Life Index, 2017[1]



1. Each well-being dimension is measured by one to four indicators from the *OECD Better Life Index* set. Normalised indicators are averaged with equal weights. Indicators are normalised to range between 10 (best) and 0 (worst) according to the following formula: (indicator value - minimum value)/(maximum value - minimum value) x 10.

Source: OECD (2017), *OECD Better Life Index*, *www.oecdbetterlifeindex.org*.

StatLink http://dx.doi.org/10.1787/888933713251

structural reforms have focussed mostly on the labour market and controlling pension spending. In the latest two years, reforms have accelerated, especially in product markets – supporting Greece's competitiveness – and social protection, but progress has been uneven across sectors (Table 1). Reforms of education, job search and training policies, public

Table 1. **Selected elements of the reform programme**

Reforms	Purpose of the reform	Completed	In progress
	Government spending and public administration		
Pensions	Merge pension funds into single fund; phase out of solidarity pension allowance; lower replacement rates and pension ceilings.		Mid 2018
Public financial management	Financial management information system, chart of accounts, fiscal council; independent authority of public revenue; arrears' structural causes.		Mid 2018
Tax compliance and evasion	Justice and tax administration co-operation, self-employed contributors' registry, electronic payments, and improved collection procedures and tools.	✓	
Procurement	Centralised procurement scheme; e-procurement.	✓	
Mobility and special wage grid	Mobility scheme for civil servants; simplification of wage grids.	✓	
Human resource management	Replace political appointees with career civil servants; performance assessment scheme.		Mid 2018
Corruption	Funding of political parties; political intervention in investigations.		Early 2018
Justice	Electronic auctions; secured creditor protection.	✓	
	Taxation		
Corporate tax law	Mergers and acquisition law review	✓	
Tax code	Efficiency and equity of business income tax incentives and exemptions; simplification of VAT legislation;		Early 2018
	Financial stability and insolvency procedures		
Capital controls	Roadmap for relaxation of capital controls.	✓	
Non-performing loans (NPLs)	Remove impediments in secondary NPL market; NPL service providers licensing; out-of-court workout.	✓	
Insolvency procedures	Regulate insolvency administrators; simplify and expedite insolvency procedures.	✓	
	Product markets and business environment		
OECD Competition Assessment recommendations and others	Licensing procedures; electronic incorporation of companies; regulated professions, investment licencing and others.		Mid 2018
Trade unions	Contract termination clauses; leave benefit rationalisation.	✓	
	Public investment, infrastructure and privatisation		
SOEs and real estate portfolio management	Determine assets to be privatised; establishment of the Hellenic Corporation of Assets and Participations; Hellenikon transfer.	✓	
Port concessions	Concessions agreed	✓	
Electricity and Public Power Corporation (PPC)	De-monopolise electricity market, PPC arrears collection; Independent Power Transmission Operator ownership.	✓	
Gas	Market liberalisation and privatisation		Mid-2018
Logistics and transport	Logistics and transport master plans.		2019
Renewable energy sources	Market-based feed-in premium programme; environmental assessment licensing expedition.	✓	
Land registry	Extend the land registry to improve land management.		2020
	Labour market		
Collective bargaining and dismissals	Mediation and arbitration procedures; collective redundancies' notice periods;		Early 2018
Industrial action	Legality of strikes; voting percentage required for strikes.	✓	
	Education and vocational training		
Schools	Private education act; number of teaching hours; student per class ratio; expansion of school meals programme;	✓	
Vocational Education and Training	Implementation roadmap; pilot tenders for apprenticeships; plan for human capital development.	✓	
Evaluation	Framework for school self-evaluation, evaluation of head teachers, Ministry of Education senior staff; upgrade bodies responsible for evaluations.		Early 2018
	Social policy		
Social solidarity income (SSI)	National introduction of SSI; SSI centres in municipalities;	✓	
Social welfare	Welfare system rationalisation		Mid 2018

Source: European Commission (2017) *Compliance Report of the Third Economic Adjustment Programme for Greece: Second Review – June 2017*, Government of Greece (2016, 2017) National Programme of Reforms, IEA (2017), *Energy Policies of IEA Countries: Greece 2017 Review*, European Commission (2016), *European Social Policy Network Flash Report*, 2016/63.

administration, and fighting corruption and informality have ample room to progress. Improving the allocation of public spending and the fiscal policy mix can better support inclusive growth. The integration of refugees in the education system and the labour market has further to go so as to raise wellbeing and reduce social tensions.

In the coming years, the success of reforms will hinge on creating an enabling environment based on transparent regulation, an efficient public sector, competitive markets and effective social protection. Against this background the main messages of this Survey are:

- Cutting tax evasion, enlarging the tax base, rationalising public spending and enhancing public administration efficiency are pro-growth and inclusive ways to sustain the primary surplus targets of 3.5% of GDP over the medium term and above but close to 2% over the long term. Pro-growth reforms and appropriate debt restructuring are needed to support the country's economic outlook, improve debt sustainability and reduce vulnerabilities to shocks;
- Enhancing the quality of regulation, continuing to fight corruption and boosting competition would help revive domestic and foreign direct investment, and productivity, thus leading to higher living standards;
- Actively helping and retraining the unemployed and discouraged workers to find jobs and reducing poverty, especially among children and young families, while boosting work incentives, would sustain social progress.

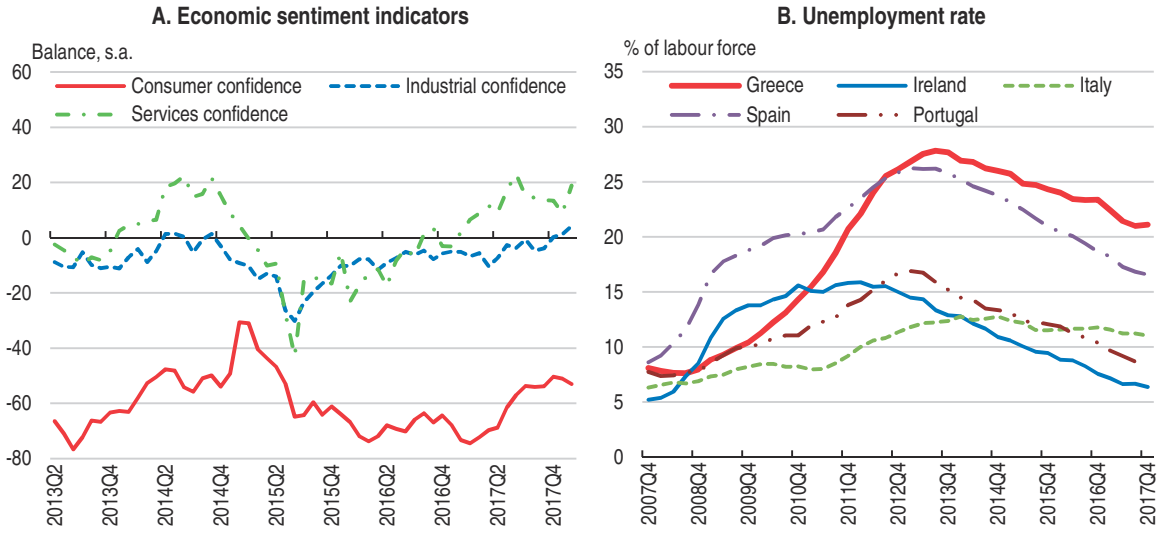
The economy is finally growing again

In 2017 GDP expanded by 1.3%, according to initial estimates, the fastest pace since the onset of the crisis. The completion of the second review of the ESM Stability Support Programme in June 2017 and the progress made towards completing the third review, which was concluded in March 2018, buoyed confidence, supporting activity (Figure 6 – Panel A). Unemployment is declining (Figure 6 – Panel B), although many new positions are temporary or part-time and pay the minimum wage. Greece's improved competitiveness in combination with rising external demand is boosting exports, though productivity growth remains weak (Figure 7). Private consumption has stabilised (Figure 8 – Panel A) and sizeable spare capacity continues mitigating consumer price and wage inflation (Figure 8 – Panel B).

Overall the economy is becoming more open. Exports rose from 24% of GDP in 2008 to 34% in 2017, though this is still below the EU average of 46%. Moreover, the economy is gradually shifting towards tradable sectors. The share in total gross value added of tradable sectors rose from 40% in 2013 to 43% in 2017, slightly above the EU average. Goods account for an increasing share of total exports, having risen from 40% in 2008 to 50% in 2016. Within service exports, the share shipping dropped from 52% to 23% over 2008-16 while that of tourism increased from 34% to 53%.

Greece's budget primary balance swung from a deficit of 2.4% of GDP in 2015, including bank recapitalisation, to a surplus of 3.5% of GDP in 2016 (Figure 9). In the same year, the general government budget balance was in surplus for the first time in 44 years. This fiscal consolidation effort has been unprecedented, totalling 13 percentage points of GDP between 2009 and 2016. Over the same period nominal GDP fell by more than a quarter and the IMF and EU programmes helped to close the external financing gap. In 2017, Greece's primary surplus is expected to have been above 3.5% of GDP, outperforming its target of 1.75% of GDP. The fiscal over-achievement of 2015-17 may have boosted confidence, mitigating the

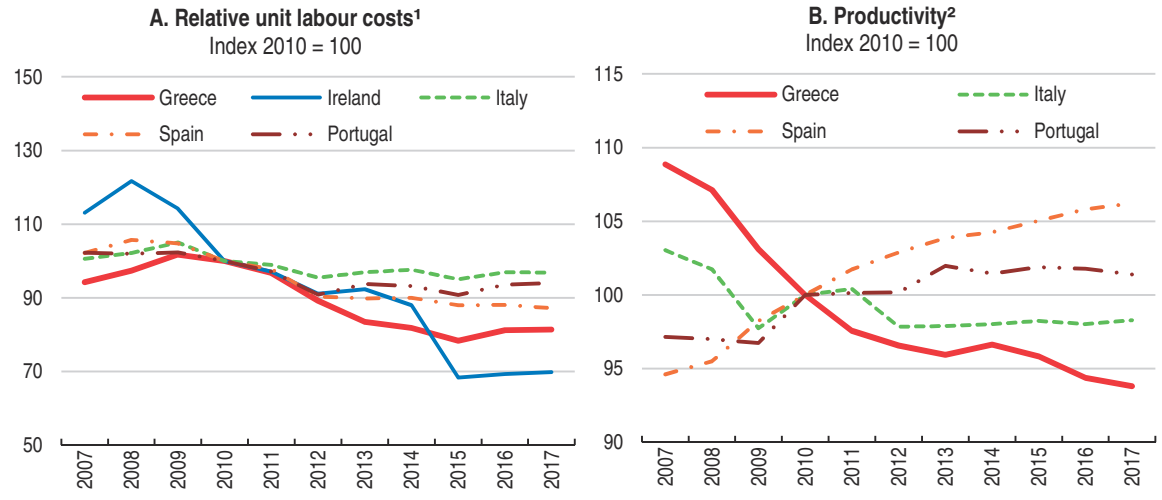
Figure 6. **Confidence is gradually increasing and the unemployment rate is declining**



Source: European Commission (2018), *Business and consumer survey database*, and OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713270

Figure 7. **External competitiveness has improved but productivity continues to decline**



1. Ratio of own unit labour costs against those of trading partners. An increase corresponds to lower competitiveness.
2. Real GDP per worker.

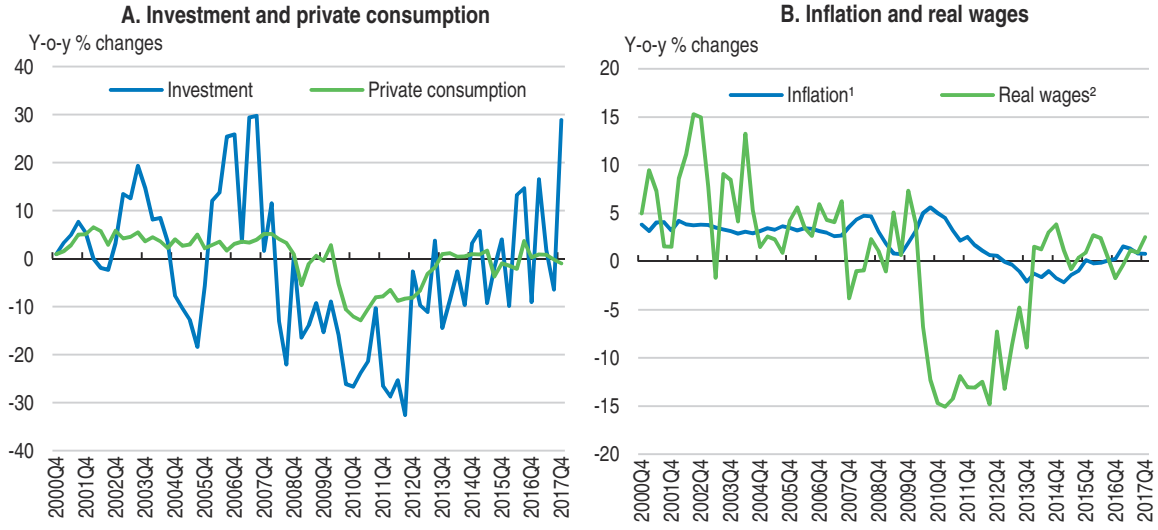
Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713289

contractionary effects of fiscal consolidation. As a result of its fiscal performance and expected further improvements, in 2017 Greece exited the EU Excessive Deficit Procedure. In its 2018 budget, the government projects to achieve a primary budget surplus of about 3.7% of GDP (against the ESM Stability Support Programme's target of 3.5%) based on further improvements in tax compliance and spending controls. The government plans to maintain primary surpluses of 3.5% up to 2022 and equal to or just above 2% of GDP afterwards.

The government's efforts to regain fiscal credibility are bearing fruit. Major credit rating agencies have upgraded Greece's sovereign rating, which remains below investment grade

Figure 8. **Private consumption has stopped falling, investment is volatile, price and wage pressure remains moderate**



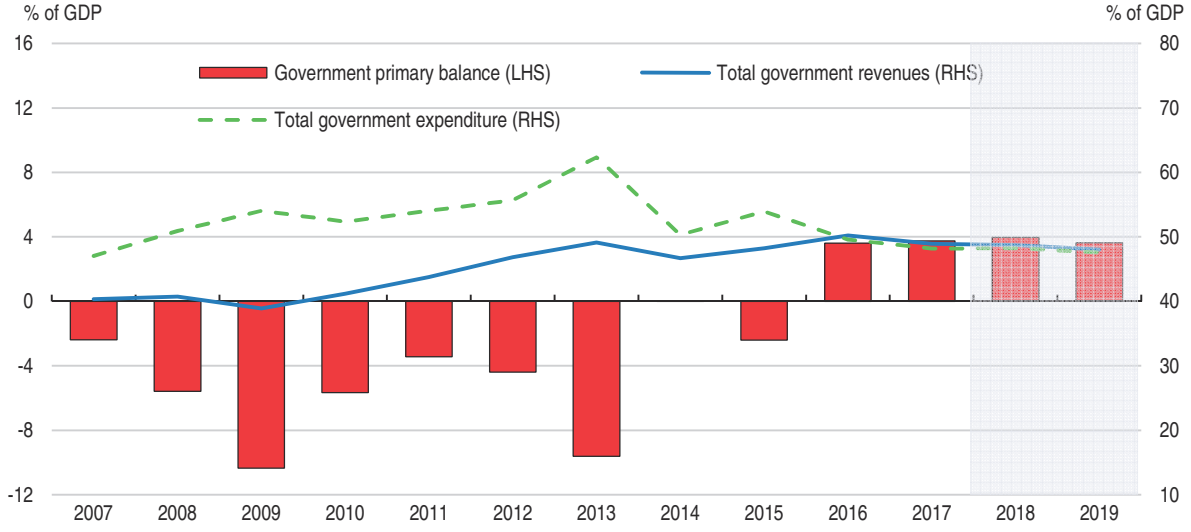
1. Harmonised consumer price index (HICP).
2. Compensation of employees excluding employers' total social contributions. Deflated by private final consumption expenditure.

Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713308

Figure 9. **The primary balance has improved**

Government primary balance, revenues and expenditure



Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713327

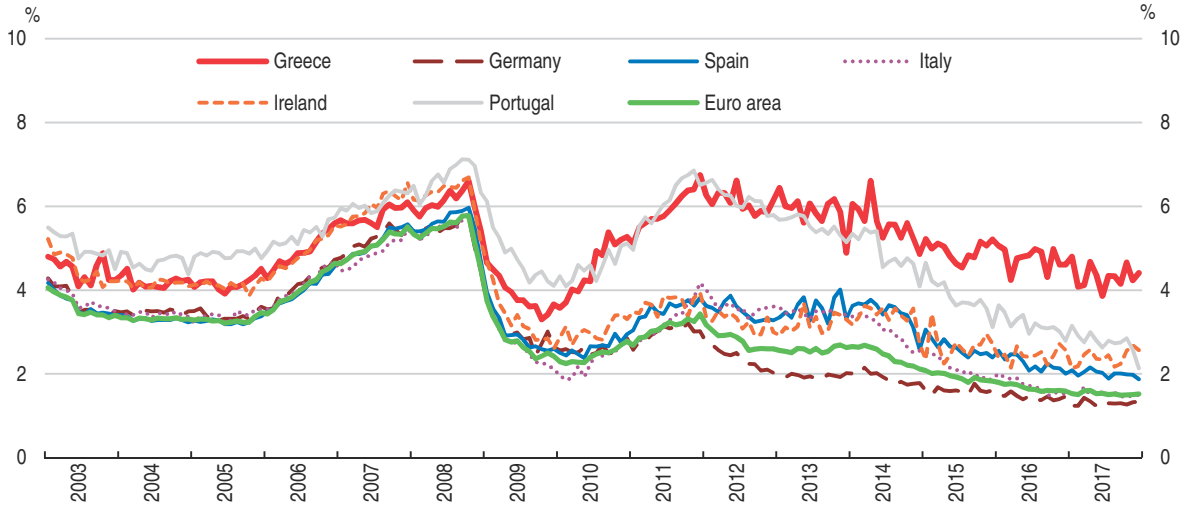
but with a positive outlook. In July 2017, Greece returned to the debt market after 3 years. In November 2017, the government successfully completed a swap of the private-sector-involvement (PSI) bonds issued in 2012 with five new issues with maturities from 5 to 25 years. Government bond yields have been on a declining path for the past two years, narrowing the gap with European peers, though the ECB has not yet included Greece in its asset purchase programme. In January 2018, the 10-year government bond yield fell below

4% (reaching a 12-year low) and the 2-year yield hit a historic low of 1.3%, before rising in February in line with increased volatility in international capital markets. The 10-year Greek government bond yield is currently above Ireland (3.5%) and Portugal (3.7%) when they exited their EU programmes (in late 2013 and mid 2014 respectively). Maintaining the regained fiscal credibility is key to being able to access the debt market regularly and at lower interest rates when the ESM Stability Support Programme ends.

Bank lending interest rates have declined to pre-crisis levels after having peaked in 2011. However lending interest rates remain well above those in other EU countries and the differential is higher than in the pre-crisis period (Figure 10). Bank credit to non-financial corporations shows signs of stabilisation albeit at low levels as credit standards have yet to start easing, curtailing investment growth.

Figure 10. **Bank lending rates in Greece have declined but remain higher than in other Eurozone countries**

Bank interest rates on loans in EUR – new business, maturity up to 1 year

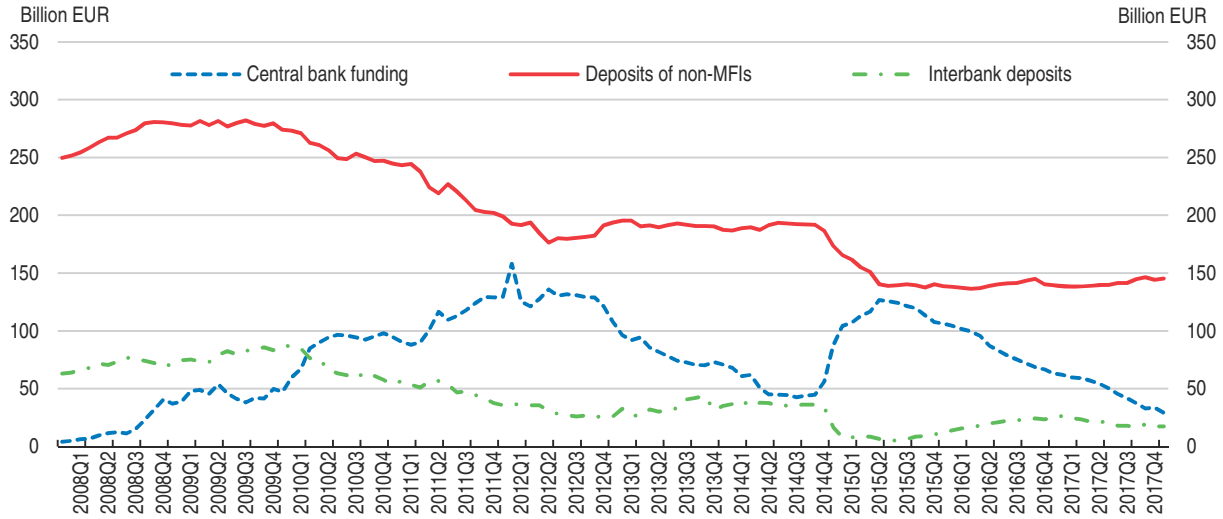


Source: ECB (2018), "MFI interest rate statistics", Statistical Data Warehouse, European Central Bank.

StatLink http://dx.doi.org/10.1787/888933713346

Banks' access to funding is improving. The central bank funding is diminishing steadily and is now below the levels of end-2014 (Figure 11). Greek banks' interbank market access has also increased. Bank deposits have levelled off, though the bulk of bank deposits lost during the crisis (50% since 2009) have yet to return. The capital controls imposed in mid-2015 halted the deposit outflows and are being gradually relaxed, but they still contribute to tight financial constraints. The government has issued a roadmap to lift them as conditions improve while preserving financial stability.

Figure 11. **Bank deposits have levelled off and reliance on the central bank's funding is decreasing**



Note: Deposits include deposits and repos of non-monetary and financial institutions (non-MFIs). Central bank funding includes ELA provided by the Bank of Greece and financing provided by the ECB.
Source: Bank of Greece.

StatLink http://dx.doi.org/10.1787/888933713365

GDP is projected to accelerate

GDP growth is projected to strengthen through 2018 and 2019, and remain above 2% in both years. Business investment will rebound, after 10 years of contraction, as the new investment law starts to yield results, and financing conditions as well as confidence improve, quickening domestic demand growth. The effect of product and labour market reforms will support competitiveness. Expanding employment and low inflation will buttress private consumption. The recovery in domestic spending will progressively raise imports, subtracting from aggregate growth, even as exports continue to expand (Table 2).

High levels of public debt and non-performing loans (NPLs) make Greece's economic outlook highly sensitive to any slippage in policy. Slower progress in addressing NPLs than expected would lower confidence and investment. An exogenous shock to public debt service costs after the ESM Stability Support Programme concludes in August 2018 could compress public finances and confidence, dragging growth. Slower trading partner growth or a disorderly Brexit could lower confidence and lead to lower exports. Additional public debt restructuring would reduce vulnerabilities and accelerate gains in access to finance and in activity. Stronger progress on the reform programme would raise productivity, investment and exports faster than projected. A faster recovery in main trading partners would further boost exports. The exposure of the Greek economy to large, low probability shocks is illustrated in Table 3.

Table 2. **Macroeconomic indicators and projections**

Annual percentage change, volume (2010 prices)

	2014 Current prices (billion EUR)	2015	2016	2017	2018	2019
Gross domestic product (GDP)	**178.4**	**-0.3**	**-0.3**	**1.3**	**2.0**	**2.3**
Private consumption	125.4	-0.5	0.1	0.1	0.4	1.5
Government consumption	36.3	1.1	-1.4	-1.2	0.7	1.5
Gross fixed capital formation	20.5	-0.3	1.5	9.7	7.9	8.1
Housing	1.8	-25.7	-12.4	-8.7	-2.1	1.0
Final domestic demand	182.2	-0.2	0.1	0.9	1.4	2.4
Stockbuilding[1]	0.4	-1.0	0.5	0.5	0.0	0.0
Total domestic demand	182.6	-1.1	0.4	1.6	1.5	2.4
Exports of goods and services	57.7	2.9	-1.9	6.9	5.9	4.4
Imports of goods and services	61.9	0.4	1.2	7.5	4.1	4.6
Net exports[1]	-4.2	0.8	-1.0	-0.3	0.6	-0.1
Other indicators (growth rates, unless specified)						
Potential GDP	. .	-0.9	-0.5	-0.2	0.2	0.6
Output gap[2]	. .	-13.2	-13.0	-11.6	-10.0	-8.5
Employment	. .	2.1	1.7	2.2	1.3	1.7
Unemployment rate	. .	24.9	23.5	21.5	20.4	19.4
GDP deflator	. .	-1.0	-0.9	0.5	0.5	0.7
Consumer price index (harmonised)	. .	-1.1	0.0	1.1	0.7	1.1
Core consumer prices (harmonised)	. .	-0.4	0.6	0.3	0.3	1.1
Household saving ratio, net[3]	. .	-15.6	-17.0	-16.7	-19.0	-20.0
Current account balance[4]	. .	-0.2	-1.1	-0.8	-0.5	-0.6
Government primary balance[4]	. .	-2.4	3.6	3.7	4.0	3.6
General government fiscal balance[4,5]	. .	-5.7	0.6	0.8	0.5	0.4
Underlying general government fiscal balance[2]	. .	4.6	6.7	6.1	5.3	4.4
Underlying government primary fiscal balance[2]	. .	7.4	9.3	8.7	8.5	7.3
General government gross debt (Maastricht)[4]	. .	177.1	181.1	175.8	172.5	168.3
General government net debt[4]	. .	147.8	149.3	145.8	141.6	137.0
Three-month money market rate, average	. .	0.0	-0.3	-0.3	-0.3	-0.3
Ten-year government bond yield, average	. .	9.6	8.4	6.0	5.0	4.8

1. Contribution to changes in real GDP
2. As a percentage of potential GDP.
3. As a percentage of household disposable income.
4. As a percentage of GDP.
5. The primary balance definition is different from that used in the ESM Support Stability Programme. The difference amounts to approximately 0.2 percentage points of GDP.

Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

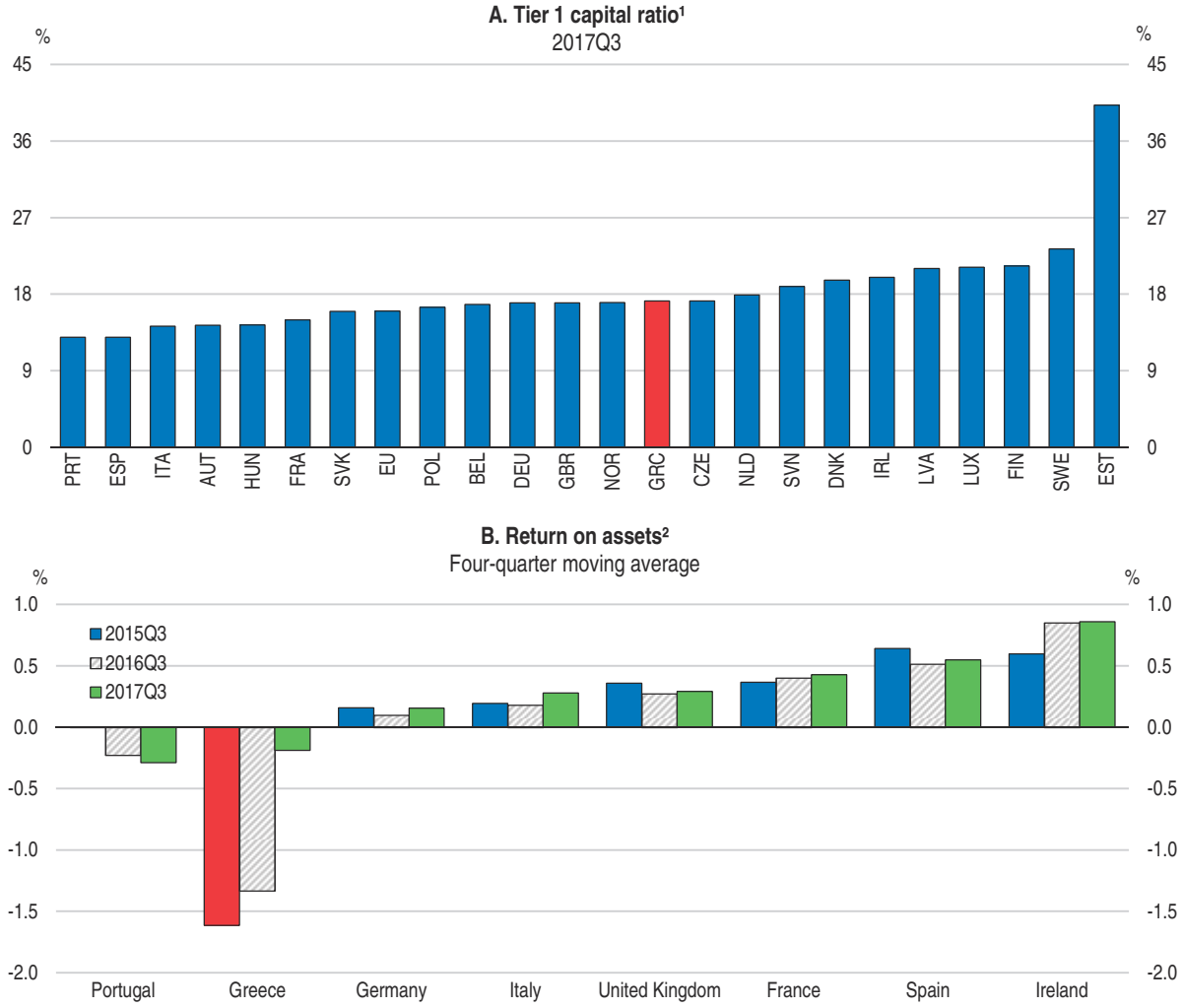
Table 3. **Low probability events that could lead to major changes in the outlook**

Vulnerability	Possible outcomes
Reform fatigue, leading to backtracking of structural reforms, and insufficient debt restructuring.	Backtracking of structural reforms and insufficient debt restructuring would result in lower potential growth, less resilience to economic shocks, ultimately impairing debt sustainability and raising political uncertainty to destabilising levels.
Heightening of geo-political tensions in the Mediterranean region and increase in the influx of refugees.	A renewed large influx of refugees would strain national resources and capacity to deal with it, harm the tourism industry and stoke social tensions.
Severe financial market and banking system crisis in the context of persistent low growth and high public debt.	A systemic crisis would lead to large bank recapitalisation needs, which the private sector could be unwilling to fund.

Strengthening the banking sector

Continued improvement in the banking sector and re-starting bank lending to firms are paramount to revive investment growth and strengthening the ongoing economic recovery. The Greek banking sector has already undergone deep reforms centred on rationalisation of banks' operations, consolidation, recapitalisation, and more recently improving banks' governance. As detailed in Chapter 1, the restructuring of the banking sector has already yielded results. Following past recapitalisation rounds, banks' capital ratios are now well above regulatory thresholds and the EU average (Figure 12 – Panel A). Confidence in the banking sector is starting to recover. From 2016, credit agencies have upgraded the rating of Greek banks (e.g. Moody's, 2016), on the back of improving profitability and loan quality.

Figure 12. **Capital ratios exceed thresholds but return on assets remains negative**



1. % of the total risk exposure.
2. The ratio is calculated by dividing annual profit or loss by total assets.

Source: European Banking Authority (2018),"Risk Dashboard, Data as of Q3 2017".

StatLink http://dx.doi.org/10.1787/888933713384

Bank lending to non-financial corporations has stabilised but remains low and the banking sector still faces challenges. Banks return on assets is improving but still low compared to other OECD countries (Figure 12 – Panel B). Banks' assets are declining, also

Past OECD recommendations on financial stability policies

Recommendations	Action taken since the previous *Survey*
Continue improving the bankruptcy framework to speed-up resolution of non-performing loans. Introduce effective incentives and performance targets for banks to monitor their progress in reducing non-performing loans.	Introduction of NPL reduction targets. Out-of-court restructuring procedures established. Licence regime for facilitating entry into the loan services industry introduced and additional licences being issued. Procedures for SME bankruptcies simplified and accelerated, expediting sales of movable and immovable property. Electronic auctions commenced. Legal protection of bank and public sector executives involved in write-offs of private debt.

because of disinvestment of foreign subsidiaries. Moreover, banks are well capitalised but the stock of NPLs remains high and about half of capital consists of deferred tax credits (or 7% of total assets) (Moody's, 2017).

Banks' governance framework has improved

Improving banks' governance is essential to reap the full benefits of the banking-sector reforms already undertaken. In the past, banks had poor corporate governance. Eligibility criteria for banks' boards were weak, resulting in poor management. Credit risks were not properly assessed due to insufficient risk controls, lack of data and uneven use of credit-scoring methodologies (IMF, 2006). These problems have skewed lending decisions and contributed over the crisis to the rise in NPLs and their ineffective management.

The Single Supervisory Mechanism and the Bank of Greece supervise banks' corporate governance. The Hellenic Financial Stability Fund (HFSF) as a shareholder of banks plays an important role in implementing corporate governance reforms. Such reforms have progressed since the banks were consolidated and recapitalised in 2015. In 2016, the four systemic banks replaced many members of their boards to conform to the new strict "fit and proper" criteria. In 2017, the HFSF led an in-depth review of the governance and performance of the four systemic banks' boards of directors and their committees, aiming at establishing a culture of evaluation at the board level and at focusing attention on managing NPLs.

Entrenching corporate governance reforms is a precondition for HFSF to divest its equity holdings in the banks by 2020. The HFSF should keep aligning banks' corporate governance standards with international best practices and help ensure that respecting such standards becomes common practice. The government should ensure HFSF's continued independence and authority to fully implement the new compulsory corporate governance standards.

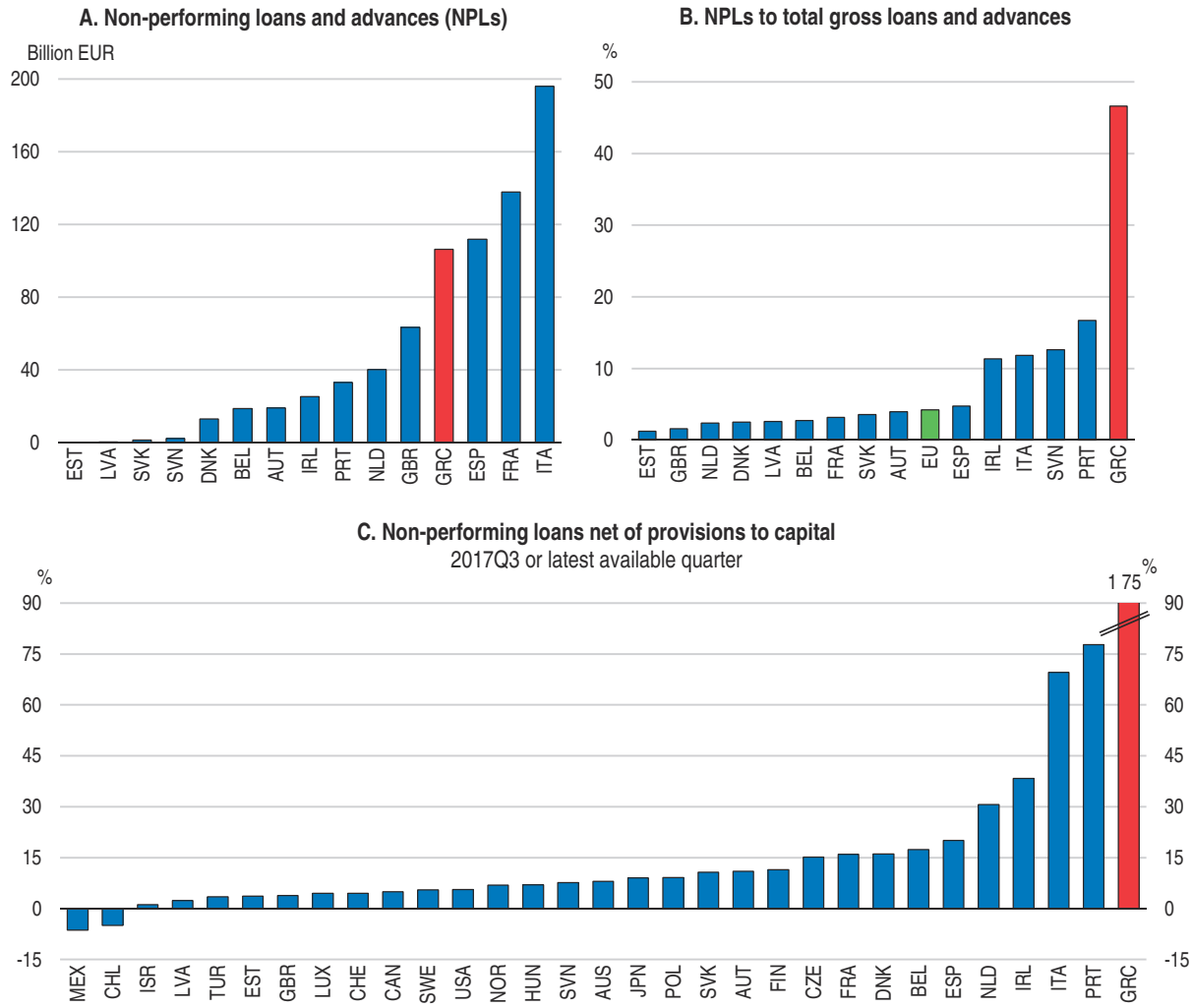
Reducing non-performing loans

In September 2017, the gross value of NPLs stood at EUR 106 billion, which is about 47% of total loans (Figure 13 – Panels A and B). The size of non-performing exposures (NPEs) – which in addition to loans and advances consider debt securities other than those held for trading – is similar to that of NPLs. In September 2017 the NPE ratio was 42% in Greece, against 14% in Portugal and 10% in Italy and Ireland (EBA, 2017). In Greece, provisions amount to 48% of NPLs' gross value, higher than the EU average, and the net value of NPLs (gross value minus provisions) amounts to about 175% of banks' capital (Figure 13 – Panel C). A large share of NPEs consists of loans towards SMEs and residential mortgages (Table 4).

The prolonged crisis has led to the rise in NPLs in combination with structural and bank governance problems. Private debt relative to GDP and the share of loans to non-financial corporations is low compared to other OECD countries (Figure 14) but the long crisis has eroded

Figure 13. **The stock of non-performing loans is large**

2017Q3



Source: European Banking Authority (2018),"Risk Dashboard, Data as of Q3 2017" and IMF (2018), *IMF Financial Soundness Indicators Database*.

StatLink http://dx.doi.org/10.1787/888933713403

Table 4. **Share of non-performing exposures for different types of loans**

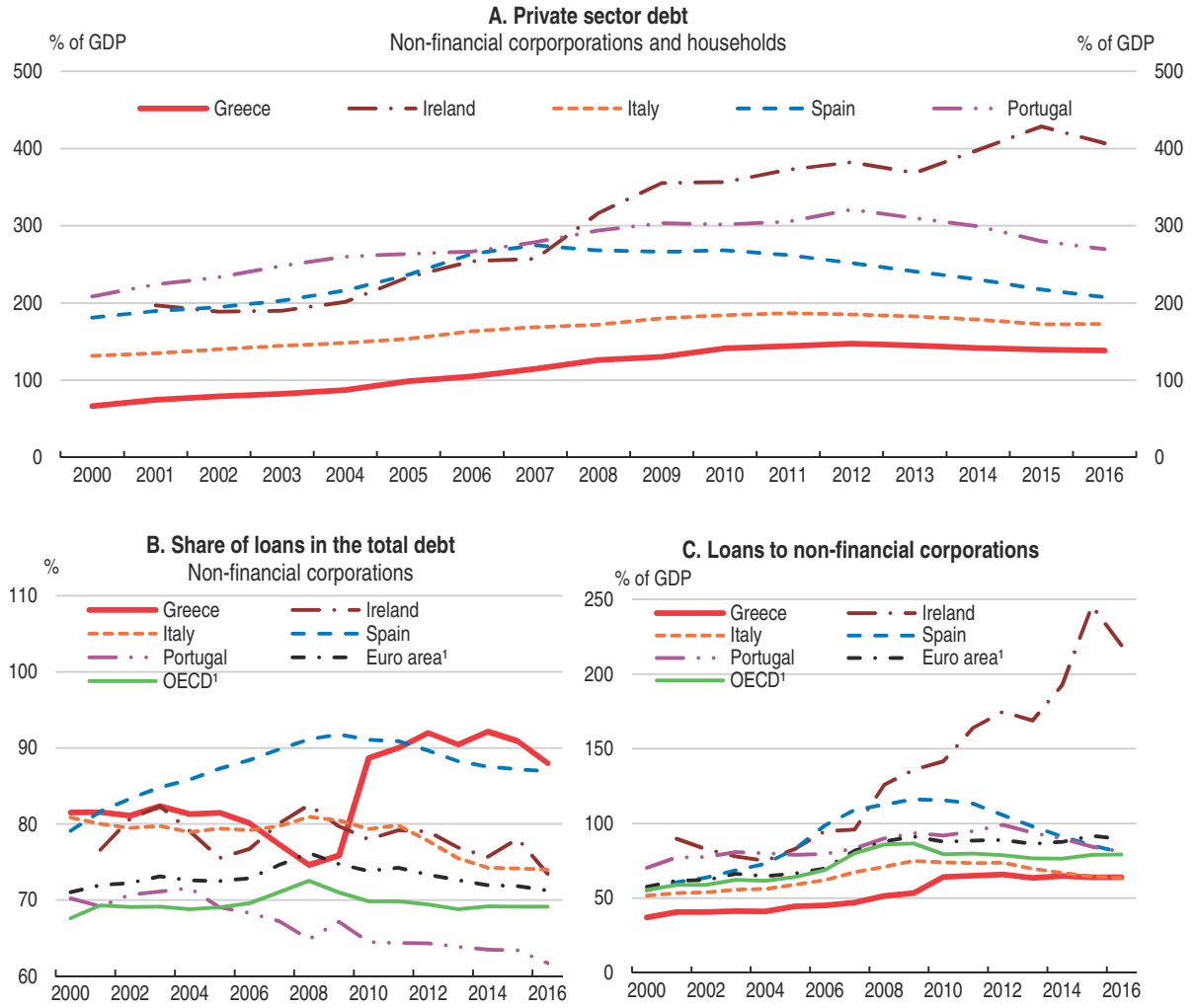
June 2017

Type	% NPEs in total gross loans[1] by category	% of category NPEs in total NPEs
Residential mortgages	43.3	30.2
Consumer loans	53.2	14.9
Business loans	43.6	52.8
Sole proprietors	66.5	10.1
SMEs	59.0	31.5
Large corporates	24.5	12.8

1. Includes loans, advances and debt securities. NPEs are non-performing exposures according to the European Banking Authority definition and computed by the Bank of Greece. NPEs include either of the two criteria: a) material exposures which are more than 90 days past due; b) unlikely to pay in full without realisation of collateral, regardless of the existence of any past due amount or of the number of days past due.

Source: OECD computations and Bank of Greece (2017), *Report on Operational Targets for Non-Performing Exposures*, December.

Figure 14. **Private sector debt and loans to non-financial corporations are lower than in other OECD countries**



1. Unweighted average of available countries. Includes Euro area countries which are OECD members.

Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database), *OECD National Accounts Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713422

the capacity of households and businesses to service their debts. However, before the crisis the NPL ratio in Greece was 4.5% (in 2007), against 3% for the euro area average (HBA, 2017).

Tightening regulatory policies

Banks' supervisors have taken several steps to improve the regulatory framework of NPLs. Following an assessment of the quality of the loan portfolio, Bank of Greece has issued new and detailed supervisory guidance on NPLs, including a new reporting framework which goes well beyond the European Banking Authority's guidelines (ECB, 2016; BoG, 2016). The introduction in 2016 of quantitative targets to dispose of NPEs and NPLs was an important step forward. Setting and enforcing targets is the approach followed by Japan, in the late 1990s and early 2000s, and Ireland and Cyprus, after the crisis. According to Greek banks' current targets, the stock of NPEs should drop by 37% between June 2017 and December 2019 (BoG, 2017).

So far banks have been able to meet NPL disposal targets, but banks expect NPL inflows to remain high. The targets become more ambitious from 2018. Supervisors should provide robust

and proactive supervision to ensure prudent NPL recognition and provisioning as well as strong capital buffers. Non-compliance with NPL targets should trigger additional supervisory measures, speeding up bank restructuring. Moreover, efforts should be pursued to enhance the capacity of banks to manage NPLs internally, which is still low. As requested by supervisors all major banks need to have independent internal units specialising in the management and recovery of NPLs. Supervisors should ensure they are well staffed and resourced.

Supervisors (the Bank of Greece and the Single Supervisory Mechanism) should ensure that as the disposal of NPLs gathers pace banks remain well capitalised. The banks' stress tests to be conducted in 2018 should be able to identify potential capital shortfalls before the end of the ESM Stability Support Programme. In the event capital shortfalls are identified that cannot be covered by the private sector, ESM Programme's funds should be used to ensure banks remain well capitalised.

Developing a market for distressed debt

The lack of a distressed debt market and weak demand for distressed debt explain why to date there have been few non-performing loan sales. The first two NPL sales by Greek banks took place in the second half of 2017; additional NPL sales are expected to be completed in 2018. Regulation and lack of competition has severely hindered the development of a loan servicing (i.e. loan administration) industry in Greece. New law and regulations were approved in 2015-16, lowering barriers to entry and allowing non-bank entities to be licensed as loan servicers, in-line with international best practices (IMF, 2015). Licensed servicers will be able to manage, transfer (i.e. purchase) and refinance large corporate loans. The BoG has licenced 10 loan servicers at the end of 2017. The licensed loan services will help develop distressed debt markets. Allowing loan services to manage or purchase SME loans is expected to accelerate resolution of distressed debt given the large number of distressed SME borrowers. Japan provides a good example of developing a distressed debt market in a relationship banking environment with many SMEs as detailed in Chapter 1.

Tax incentives for banks to dispose of NPLs need to be streamlined. The new loan servicing legislation introduced some tax-related provisions, but these are less advantageous and partly inconsistent with those provided by the 2003 securitisation law. Aligning the tax incentives provided by the loan servicing legislation with those of the securitisation law would enhance tax transparency and encourage the disposal of NPLs. Tax incentives can be an important tool to encourage the disposal of NPLs (KPMG, 2016). Making such incentives temporary, for instance with sunset clauses, will accelerate their effects and ensure such incentives expire when no longer needed.

Higher growth, prudent fiscal policy and debt restructuring will reduce the public debt

Greece's government debt level as a share of GDP has stabilised. Yet, despite restructuring efforts early in the crisis, the public debt at 180% of GDP is still among the highest in the world. Under different assumptions (Table 5) debt will remain high, calling for additional debt restructuring (Figure 15). The results of such simulations depend on GDP growth, interest rate and other assumptions. The baseline scenario takes into account the effect of selected reforms undertaken by the Greek government and short-term debt relief measures being implemented by the ESM announced in December 2016 (Table 6). The primary surplus is assumed to reach 3.5% from 2018 to 2022, then to stay at 2.2% of GDP from 2025 onwards. Under this scenario the debt ratio will gradually decline to about 120% of GDP

Table 5. **Assumptions of different scenarios for debt sustainability analysis**

		2016	2022	2026	2030	2040	2050	2060
Primary budget balance	% GDP	3.5	3.5	2.2	2.2	2.2	2.2	2.2
GDP deflator	%, annual	-0.9	1.2	1.5	1.9	2.0	2.0	2.0
Real GDP growth								
Baseline	%, annual	-0.3	2.3	2.2	1.8	0.9	0.7	0.8
Expanded reform programme	%, annual	-0.3	2.3	2.3	2.3	1.8	1.3	1.2
Benchmark interest rate (Germany Bund 10 year rate)	%	3.8	1.6	2.8	3.8	3.8	3.8	3.8
Effective market nominal interest rate	%	8.4	3.3	4.3	5.3	5.3	5.3	5.3
Official creditor interest rate	%	1.0	2.0	3.2	4.2	4.2	4.2	4.2
Effective official creditor interest rate								
Baseline	%	1.0	1.0	3.2	4.2	3.2	2.4	4.2
First restructuring programme (official creditor interest rate fixed at 2% from 2020)	%	-	1.1	2.5	2.6	1.8	1.7	2.0
Second restructuring programme (official creditor interest rates fixed at 2% from 2020 and ESFS repayments postponed until 2031)	%	-	1.1	2.5	2.5	1.8	1.7	2.0
Effective interest rate (all public debt)								
Baseline	%	1.8	1.6	3.5	4.7	4.7	5.0	5.3
First restructuring programme (effective official creditor interest rate fixed at 2% from 2020)	%	1.8	1.7	3.1	3.8	4.1	4.7	5.3
Second restructuring programme (effective official creditor interest rates fixed at 2% from 2020 and ESFS repayments postponed until 2031)	%	1.8	1.7	3.0	3.4	3.8	4.5	5.3

Note: All scenarios take into account the effect of the short-term debt relief measures announced in December 2016. These include: 1) Smoothening of the EFSF repayments within the current weighted average maturity; 2) Waiving the step-up interest rate margin on the EFSF debt-buyback tranche for 2017; 3) Using the EFSF/ESM funding strategy to fix interest rates on EFSF loans at the currently low market interest rate. As regards using the EFSF/ESM funding strategy to fix interest rates, simulations assume that EUR 50 billion of EFSF loans are fixed at 1.5% for 35 years (EUR 20 billion in 2017 and rising progressively to EUR 50 billion by 2022). The effective official interest rate includes the effects of deferred interest payments on EUR 95 billion of EFSF loan until 2022 and the short-term relief measures.
Source: OECD calculations.

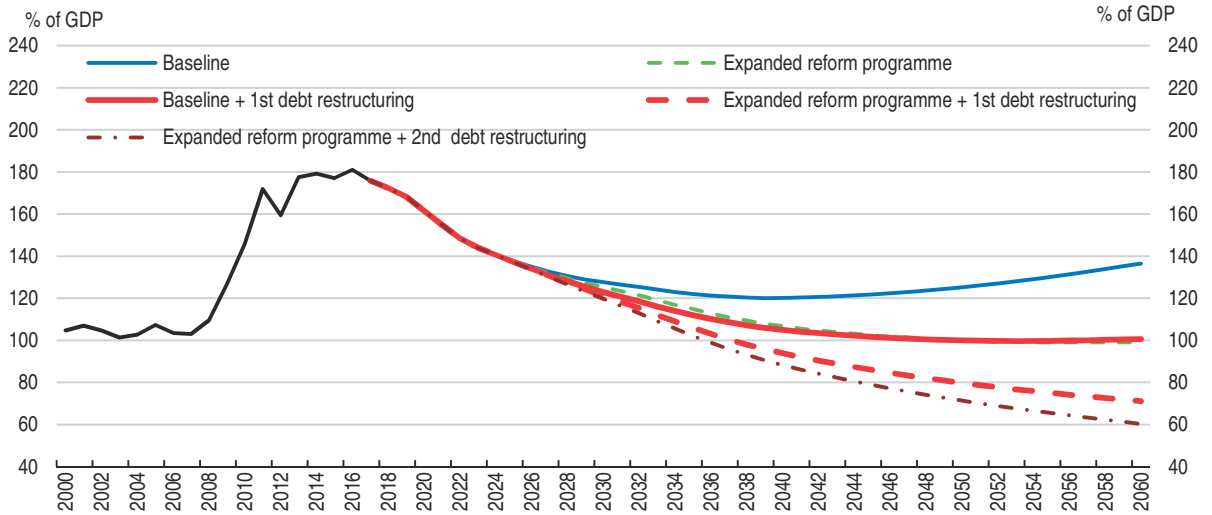
Table 6. **Impact of structural reforms on GDP level**

	2025	2030	2040	2060
Baseline (based on legislated and ongoing reforms)				
Effective retirement age increases by 3 years to the OECD average (65 years) by 2030 (based on estimated impact of legislated pension reforms)	0.8	3.0	6.9	7.5
Product market reforms lowers the PMR index by 0.107 to 1.63 2019 (OECD average in 2013 of 1.48)	0.3	0.7	1.3	2.1
Corporate tax rate: -3 pp in 2019 (from 29% to 26%)	0.0	0.1	0.3	0.4
Labour market reform reduces excess coverage from 20.5 pp of the workforce to 10.5 pp	0.3	0.4	0.6	0.7
Public administration and judicial reform raise the rule of law index from 0.24 to 0.8 (pre-crisis level) in 2025	2.1	4.2	8.8	14.7
Expanded reform programme scenario (in addition to baseline)				
Effective retirement age increases by 4 years by 2030	1.1	4.0	9.5	10.4
Product market reforms lowers the PMR index by 0.25 in 2020 to 1.38 (close to the level of Belgium in 2013)	1.8	2.7	4.2	6.0
ALMP spending (per unemployed person, as % of GDP per capita) increases from 6.72% to 15% in 2020 and then to 25% in 2020	0.6	1.4	2.3	2.6
Family benefits rise by 0.25 pp in 2020, then 0.08 pp each year until 2025 to reach 0.75% of GDP (EU average in 2014 was 0.8% of GDP)	0.4	0.9	1.3	1.5
Public administration and judicial reform raise the rule of law index from 0.24 to 1.2 (the OECD average) in 2030	2.2	5.7	14.0	25.6

Note: The decline of the Product Market Regulation index in the baseline scenario is based on a preliminary assessment of the effect of reforms passed since 2013. The additional decline in the PMR in the expanded reform programme is predicated on further improvements in the following areas: scope of state owned enterprises (gas transmission); licences and permits system (silence-is-consent rule and single contact points); barriers in network sectors (entry regulation in the gas sector); differential treatment of foreign suppliers.
Source: OECD calculations based on Guillemette, Y. et al. (2017), "A revised approach to productivity convergence in long-term scenarios", *OECD Economics Department Working Papers*, No. 1385, OECD Publishing, Paris.; Cavalleri, M., and Y. Guillemette (2017), "A revised approach to trend employment projections in long-term scenarios", *OECD Economics Department Working Papers*, No. 1384, OECD Publishing, Paris.; Guillemette, Y., A. de Mauro and D. Turner (forthcoming), "Saving, Investment, Capital Stock and Current Account Projections in Long-Term Scenarios", OECD Economics Department Working Papers; European Commission (forthcoming), "2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)", Directorate General for Economic and Financial Affairs, Economic Policy Committee.

Figure 15. **Locking-in lower interest rates and additional reforms will help reduce the public debt**

General government debt as % of GDP, Maastricht definition



Note: The historical data and projections to 2019 follow the *Economic Outlook* No. 102 and updates (for the forecast). In all scenarios, the primary budget surplus is projected to be 3.5% of GDP until 2022, then decrease to 2.2% of GDP by 2025 and remain at that level. The GDP deflator growth is expected to gradually rise to 2% by 2023. The effective market interest rate is projected to gradually rise to 5.3% by 2029. The effective interest rate of official creditors' loans (EFSF, ESM and GLF) is projected to rise to 4.2% by 2029. The baseline assumes the near-complete implementation of the current reform programme (Table 6); this raises annual real GDP growth to average 1.7% from 2020 to 2029, slowing to 1.3% over 2030 to 2039, then to 1% over the subsequent period, largely due to demographic factors. The "Expanded reform programme" assumes implementation of the current and additional reforms (Table 6). This raises average growth rates to 2.2% by 2027, before gradually slowing after 2031 to 1.4% by 2043. In the 1st debt restructuring scenario the effective interest rates of official creditors' loans is fixed at 2% from 2020 onwards. In the 2nd debt restructuring scenario the effective interest rates of official creditors' loans is fixed at 2% from 2020 onwards and the EFSF repayments are postponed until 2031. The projections consider the short-term relief measures described in the May 2016 and June 2017 Eurogroup statements. These include: smoothening the EFSF repayment profile under the current maximum weighted average maturity; waiving the step-up interest rate margin on the EFSF debt-buyback tranche for 2017; diversifying the ESM funding strategy to reduce interest rate risk (the ESM has started implementing this measure through interest rate swaps; these projections assume that this measure will set the interest rate of EUR 50 billion in EFSF loans to 1.6% for 34 years). All scenarios include privatisation receipts of EUR 10 billion in total from 2020 to 2040.

Source: Calculations based on OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink *http://dx.doi.org/10.1787/888933713441*

by the mid-2030s. Afterwards, it will start increasing as concessional official loans – given under favourable financing conditions to ensure low refinancing needs for the next decade – are refinanced on market terms. Market interest rates are assumed to gradually return to historical norms and remain 1.1 percentage points above the concessional interest rate.

Under the expanded reforms scenario (Table 6) the debt ratio will decline to about 100% of GDP by mid-2050 and level off afterwards. The baseline and expanded reform scenarios above assume a primary surplus of 2.2% of GDP from 2025 onwards. Raising the primary surplus would accelerate the debt reduction, but historical comparisons suggest that this scenario is unrealistic since the likelihood of sustaining high primary surplus over the long term decreases rapidly as the primary surplus increases (Eichengreen and Panizza, 2014; Zettelmeyer et al., 2017). For instance, over a 20 year period, the probability of maintaining an average primary surplus above 1.5% of GDP is 25%, and the probability is close to zero for an average primary surplus above 3.5% of GDP (Zettelmeyer et al., 2017).

Additional debt restructuring in net present value terms would lower the debt ratio under realistic assumptions concerning GDP growth rate and primary surplus. As underlined in the previous OECD survey (OECD, 2016a), converting the outstanding debt with European partners and institutions (Greek Loan Facility, EFSF and ESM) to fixed-interest debt would lock in currently low interest rates for an extended period (Figure 15).

Under the expanded reform programme scenario, locking in low interest rates on concessional loans would lead to a faster and continued decline in the debt ratio throughout the projection period, which would fall below 80% by 2060. This policy would have the additional benefit of lowering the uncertainty relating to concessional loans' interest rate movements, which might result in a lower Greek bond spread on benchmark rates than projected and further accelerate the debt reduction. Reducing the interest rate risk is already being partially undertaken as part of the short-term relief measures announced in December 2016, which these projections take into account. Rescheduling principal payments of European partners and institutions loans until 2031 will contribute to lower the debt ratio but only marginally (Figure 15).

Overall, this analysis suggests that durably reducing the public debt hinges on a three-pronged strategy: additional reforms to boost GDP growth, large but realistic primary surpluses (close to 2% of GDP) for an extended period, and additional debt restructuring, as needed, by for instance locking in currently low interest rates. To this end and to enhance trust, the government is designing a long-term National Growth Strategy with key commitments for the post-programme period in different areas, including strategic and private sector investments, use of European structural funds, infrastructure and entrepreneurship. Wide and strong political ownership of this strategy is key for its credibility and to maintain confidence in Greece's reform momentum. The strategy will be finalised before the end of the programme.

Redressing public finance to bolster inclusive growth

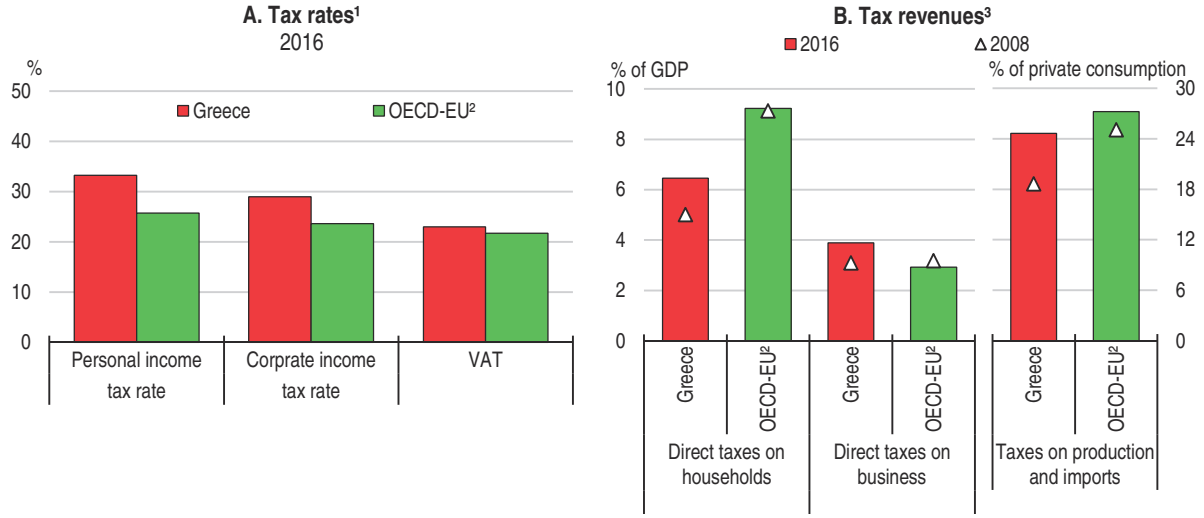
Enlarging the tax base to build a fairer and pro-growth taxation system

The tax system relies on high rates and narrow bases. Following repeated increases, the rate of all major taxes are now higher than in other European countries but tax collection is lower relative to GDP (Figure 16). Also, the average tax wedge on labour for families with children is one of the highest among OECD countries. The tax wedge for households without children is lower but still ranks in the top half of OECD countries (OECD, 2017a).

Most tax expenditures have been eliminated, but tax evasion results in a narrow tax base. For instance, in 2015 the VAT revenue ratio was one-third below the OECD average (Figure 17) because of low collections but also reduced VAT rates and exemptions. Some exemptions are without any social rationale as for instance exemptions for casinos and betting offices. Also, post office services and national broadcasting networks are VAT exempted whereas hotels enjoy a reduced VAT rate of 13% (from 6.5% in 2016). According to the Ministry of Finance, VAT exemptions account for 0.5% of GDP (those for casinos and betting offices amount to 0.2% of GDP). The tax-free personal income threshold is high (at about EUR 8 600 annual income) and is above the median private sector wage.

Base broadening is more growth friendly than increases in tax rates (IMF, 2013; Gale and Samwick, 2016). The government is aware of this and is taking initiatives in this direction. In 2016 Greece moved from a dual to a comprehensive personal income tax by taxing labour remuneration, pensions and personal business income jointly instead of taxing these income categories under separate rate schedules (OECD, 2017a). The legislated medium-term fiscal strategy indicates that the tax-free personal income threshold will fall by 35% in 2020, and, if fiscal targets are met, the corporate, personal and property tax rates will also fall in a revenue-neutral way. VAT collection has increased as some reduced rates have been raised, some exemptions closed and collection approaches have improved. In 2016, the preliminary

Figure 16. **Tax rates are high whereas tax revenues are low**



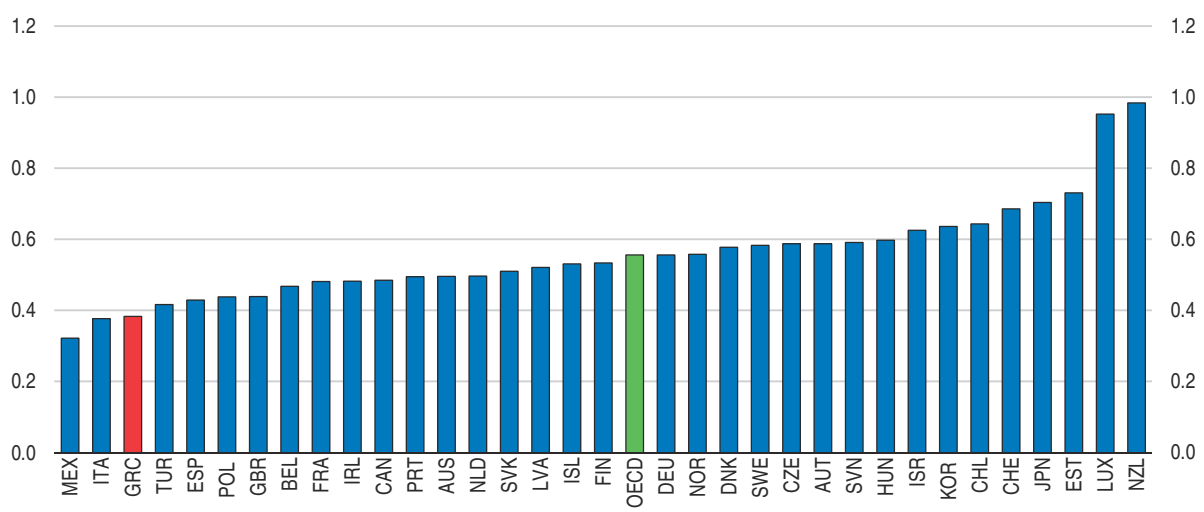
1. Average of the marginal tax rates of the different income brackets for personal income tax rate; the combined corporate income tax rate for corporate income tax rate; and the standard rate for VAT rate.
2. Unweighted average of 22 EU countries which are OECD members. The aggregates for both direct taxes on households and on business include data in 2015 for Estonia, Hungary, Latvia and Slovak Republic as well as data in 2012 for Luxembourg.
3. National Accounts definition of tax revenues.

Source: OECD (2017), *OECD Economic Outlook: Statistics and Projections* (database), *OECD Tax Statistics* (database) and OECD (2016), *Consumption Tax Trends 2016: VAT/GST and excise rates, trends and policy issues*.

StatLink http://dx.doi.org/10.1787/888933713460

Figure 17. **Value-added tax collection is low**

Value-added tax revenue ratio 2015[1]



1. The VAT revenue ratio (VRR) is the ratio of the actual value-added tax (VAT) revenue collected and the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption. This ratio gives an indication of the efficiency and the broadness of the tax base of the VAT regime in a country compared to a standard norm. It is calculated by the following formula: VRR = VAT revenue/([consumption – VAT revenue] × standard VAT rate). VAT rates used are standard rates applicable as at 1 January. That public consumption is VAT-exempt under EU rules places an upper bound on the attainable VRR, especially in countries with a large public sector. Data for Canada and Japan refer to 2014. For Canada, data cover federal VAT only. For Japan, given the substantial VAT rate hike on 1 April 2014, an average VAT rate was used to calculate the VRR for 2014 i.e. (5X3+8X9)/12=7.25%. The OECD aggregate is an unweighted average of the data shown.

Source: OECD (2016), *Consumption Tax Trends 2016: VAT/GST and Excise Rates, Trends and Policy Issues*, OECD (2018), *OECD Revenue Statistics* (database) and *OECD National Accounts Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713479

Past OECD recommendation on fiscal issues

Recommendations	Action taken since the previous *Survey*
Broaden the tax base and strengthen the tax administration by giving it more autonomy and freeing its resources for audits and enforcement.	The new Independent Authority for Public Revenues started operating in Jan 2017. Actions taken to spread the use of electronic payments include: requiring firms to pay salaries electronically for the cost to be deductible from the corporate tax base; requiring households to demonstrate minimum levels of purchases made by electronic means to be eligible for family tax credits; a monthly lottery based on the number of electronic transactions. Tax-free thresholds have been lowered. Further adjustments have been legislated to be implemented in 2020. In 2017, several social security agencies responsible also for collecting contributions were merged into a new social security agency (Unified Social Security Fund, EFKA). Also, the Centre for the Collection of Social Security Debt (KEAO) became part of EFKA.
Ensure gross financing needs for public debt are sustainable by continuing to credibly implement the ESM reform programme, and thus, if necessary, facilitate reaching an agreement on additional measures with creditors, such as, for example, extended grace and repayment periods	Progress on the ESM Stability Support Programme. Mid-2017 tranche approved. Standby agreement approved in principle by the IMF.
Undertake an expenditure review to create fiscal space for providing a comprehensive social safety net and expanding active labour market policies.	Expenditure review completed in October 2017 and informed the 2018 budget proposal. Dedicated unit established within the Ministry of Finance to conduct regular spending assessments.
Boost investment by frontloading the use of European structural funds, and better exploit available public land through concessions to support logistics investment.	The public investment programme continues to rely heavily on the European Structural Fund. The sale of 14 airports, agreed in 2015, was finalised in March 2017. Sale of the operating licence for the second largest port was agreed in April 2017. The train operator has been privatised. Structural funds have been allocated to expanding the cadastre. Approval of Law 4399/2016 ("Regulatory framework for the establishment of state aid schemes for private investments for the regional and economic growth of the country") providing a wide range of tax incentives to boost private-sector investment.

estimated VAT revenue ratio (net of arrears) was 42.3% against 35.9% in 2014. The 2018 budget abolished VAT exemptions for casinos and betting offices and is phasing out the discounted rates applied in some islands.

The complex tax system discourages compliance, encourages informality and reduces revenues

The complexity of the tax system and the weak though improving tax administration discourage participation in the formal economy and lowers tax compliance. The World Bank's "Paying Taxes" indicator ranks Greece 28th among OECD countries for the number and time spent completing tax payments and 27th for tax post-filing procedures covering VAT refunds, tax audits and administrative tax appeals. Low tax compliance and the crisis have led to the accumulation of a large tax debt. In 2015, the total accumulated tax debt was more than 190% of net revenue collections, one of the largest among OECD countries. Over 75% of tax debt was older than 12 months, which is more difficult to collect (OECD, 2017a).

In Greece, tax compliance methods have traditionally relied on punitive fines as well as audits and controls. Until recently, fines were set with no reference to the capacity to pay and often proved impossible to collect. Old fines significantly contribute to the large share of tax debt older than 12 months as in the past they were rarely written off even when impossible to collect. In 2017, they still accounted for more than 35% of total tax debt (down from 40% in previous years). As regards audits, in economies with a large share of cash transactions, such as Greece, they are less effective tools to uncover hidden income (Slemrod, 2007). In such environments access to third-party information is crucial to fight tax evasion. The widespread use of cash has abetted a large informal sector in Greece that, according to some estimates, could account for more than 25% of GDP (Bitzenis et al., 2016). Using bank lending

data, Artavanis et al., (2016) estimated that more than 40% of self-employment income goes unreported and for 2009 alone the foregone tax revenues amounted to more than 10% of total revenue. The informal economy might have increased substantially during the crisis. Had the informal economy not expanded so much, the required increases in tax rates would have been smaller (Dellas et al., 2017).

Recent reforms have stepped up efforts against tax evasion and improved collection approaches based on better enforcement procedures and encouraging voluntary tax compliance. Better enforcement procedures require extending the use of risk analysis and targeted audits, and access to third-party information. Enhancing tax compliance depends on raising trust in the tax administration and tax awareness (Muehlbacher et al., 2011). The establishment of the independent revenue agency (Independent Authority for Public Revenues), as recommended in the previous OECD Survey, in early 2017 is a big step in this direction. In addition to extending the use of risk analysis and targeted tax audits the new agency has introduced a systematic approach to deal with the tax debt by systematically pursuing the largest possible number of debtors, prioritising new tax debts, large taxpayers, and enforcement against strategic defaulters. At end 2017 60% of tax debtors who could be pursued, about 1 million debtors, were under some enforcement measure.

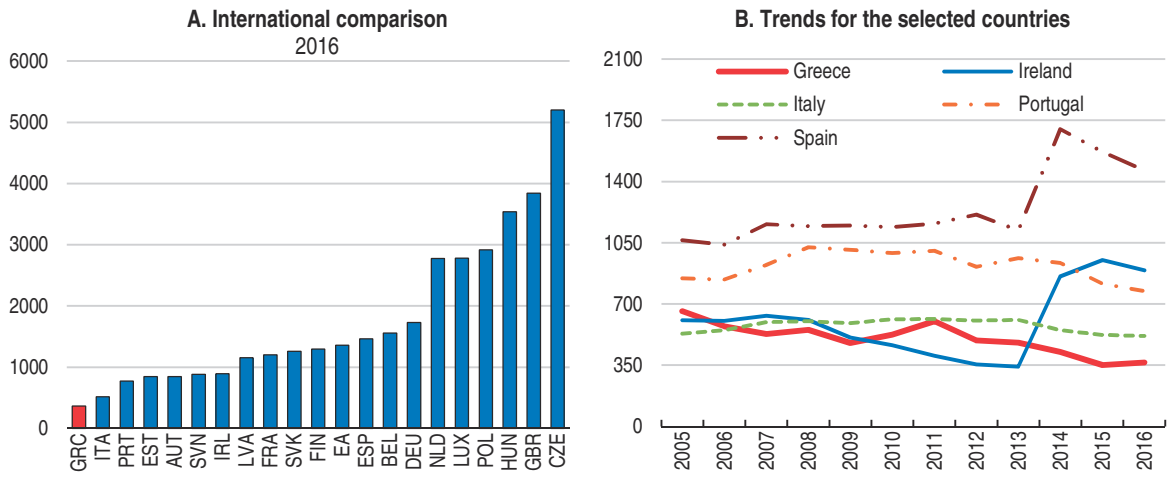
These efforts are yielding results and should be pursued. The gross new tax debt declined markedly to EUR 11.5 billion in 2017 (from EUR 14 billion in 2016 and nearly EUR 16 billion in 2015). The growth of the total tax debt declined to 6% in 2017 and 9% in 2016 from double digit growth rates in the previous two years. The old tax debt is being managed in a more systematic way, focussing on collectable tax arrears and progressively writing off those arrears deemed uncollectable (to a large extent old punitive fines). Punitive fines have been abolished and are now based on the capacity to pay. A voluntary scheme introduced in 2016 has led to the disclosure of hitherto unreported income of EUR 9.5 billion.

Raising the share of non-cash payments, which is low by international standards, is essential to combat tax evasion. Capital controls have increased the share of non-cash payments, reversing the downward trend that started in 2011 (Figure 18), thus boosting VAT revenue significantly (Hondroyiannis and Papaoikonomou, 2017). The cash-payment threshold for retail transactions is already low (EUR 500) but electronic payments need to become the norm given the government's plan to lift capital controls as the economy improves. The government has taken innovative steps to encourage electronic payments: firms have to pay salaries electronically for the cost to be deductible from the corporate tax base; households have to demonstrate minimum levels of purchases done electronically to be eligible for family tax credits. This approach emulates Korea's cash receipt system, which reduced hidden payments (Krever, 2014). At a macroeconomic level, it also has the advantage of shifting taxation from personal income to consumption. Besides, the government has introduced a monthly lottery based on the number of electronic transactions. A similar scheme introduced in Chinese Taipei has raised VAT revenue by up to 20%. Other recent experiences in Portugal and Slovakia however indicate modest effect on revenues (European Commission, 2015).

These innovative approaches to combat tax evasion are welcome and represent a change with the past. However, they should better target those industries most prone to tax evasion, such as professional services (Artavanis et al., 2017). From mid-2017, commercial and most professional activities are obliged to have a point-of-sale terminal. The use of point-of-sale terminals can be further extended by ensuring all the self-employed have an electronic cash register. The introduction of e-invoicing will also help stanch tax evasion. Italy introduced e-invoicing for sales to the public administration in 2014 and will phase it in

Figure 18. **There is large scope to increase non-cash payments**

Non-cash payments as % of GDP



Note: Electronic payments include credit transfers, direct debits, and card payments with cards issued by resident payment service e-providers, e-money payment transactions, cheques and other payment services.
Source: European Central Bank Payment Statistics.

StatLink http://dx.doi.org/10.1787/888933713498

for business-to-business transactions from mid-2018. The experience of Korea and Portugal with the introduction of e-invoicing suggests it can significantly increase tax revenues if accompanied by improvements in tax administration (Lee, 2016). Other OECD countries have also taken decisive actions to tackle tax evasion (Table 7).

Table 7. **Selected examples of recent actions taken to reduce cash payments and tax evasion**

Austria	From 1 January 2016: Compulsory introduction of electronic cash registers or other electronic recording systems for digitally recording business cases and for printing receipts for all businesses with annual turnover of more than EUR 15 000 provided that annual cash turnover exceeds EUR 7 500. Each cash register must draw up a data collection log (DCL) to record and store each individual cash transaction. The DCL has to be exportable without delay in case of a request from the tax authorities. From 1 April 2017: A secure signature creation device has to be implemented in the cash register. All receipts have to be signed. The cash register has to have a cumulative memory, meaning that the transactions recorded in the cash register are summed continuously. The cumulative memory is part of the signature and constitutes another measure for the prevention of manipulation.
Belgium	In 2014, Belgium introduced legislation for certified cash registers, designed to address VAT fraud. The solution consists of four important pillars: technical securing of the data (making tempering detectable); certification of the devices; registration of all devices by the different stakeholders with the Ministry of Finance; and auditing in the field.
Finland	ATM withdrawals are monitored. Withdrawals are summarised by credit / debit card number and cardholders are identified by card number (for domestically issued cards) or other means (cards issued abroad). A photograph is taken at the ATM to identify the person withdrawing the cash, and this is available to the tax authority through online networks. If necessary, the photograph will be used for identification purposes at a later stage and this can be used as a risk indicator and / or in conjunction with other information during an investigation.
France	In order to fight against VAT fraud related to the use of fraudulent software, the 2016 Finance Bill obliges merchants and other professionals subject to VAT to use a secure and certified cash register system or accounting software. As of 1 January 2018, the use of a secure system will have to be attested by a certificate issued by an accredited organisation or by the publisher.

Source: OECD (2017), *Technology Tools to Tackle Tax Evasion*, OECD Publishing, Paris.

Better managing the state's assets and completing the land registry

The management of the state's non-financial assets has for a long time been poor, hindering the privatisation programme. This is attributable to the lack of comprehensive

information on the state's assets and of an overall management strategy linked with socio-economic goals as well as deficient corporate governance standards in many state-owned enterprises (SOEs). Because of budgetary constraints, the management of the state's assets has mostly focussed on identifying assets to be privatised, with the sale price being the sole criterion to assess offers. Three large privatisation deals have been signed (regional airports, Port of Piraeus, the railway), totalling EUR 1.5 billion (0.8% of GDP). Other disposals have been stymied by administrative and regulatory burdens, combined with the incomplete land registry, thus curtailing privatisation receipts.

To improve the management of the state's assets, the government has recently established a state-asset holding agency (Hellenic Corporation of Assets and Participations, HCAP). HCAP's overall main objectives are implementing Greece's investment and economic growth strategy and contributing to the reduction of public debt. HCAP has developed a state-asset management strategy linked with socio-economic goals, which is yet to be published. The strategy is based on comprehensive information on the state's assets, which is a crucial element to effectively manage them (Bova et al., 2013). The asset-sale agency (Hellenic Republic Asset Development Fund) has been incorporated into HCAP. This is a positive development as it offers the opportunity to develop and update the state-asset management strategy taking into account the privatisation and the public investment programmes. This will enable the government to assess privatisation offers against wider development objectives and build complementarities among state assets, increasing their social and economic value. For instance, public investment decisions strengthening intermodal transport nodes would raise the efficiency and value of transport infrastructure.

The government should continue to ensure the HCAP's corporate governance is aligned with international best practices. Setting a clear division of roles and responsibilities among various governing bodies, as well as operational independence for managers and supervisors with appropriate checks and balances is key to building legitimacy, reducing the risk of fraud and mismanagement, and forming a competent investment organisation (Al-Hassan et al., 2013). HCAP could be crucial to improving corporate governance standards in state-owned enterprises.

The absence of a comprehensive land registry may contribute to incomplete or inconsistent zoning, hampering the effective management of state (and non-state) assets and hindering the privatisation programme. For instance, the privatisation and redevelopment of Athens's former airport (Hellenikon) was delayed because of uncertain land-use designation. The incomplete land registry often delays land acquisition procedures, hindering infrastructure projects. Completing the land registry should become a national priority. A complete registry is necessary to clearly identify all of the state's non-financial assets and to develop a strategy to maximise their social and economic value (Bova et al., 2013). Completing the land registry, as mandated by the 2018 law, would allow for more effective land use management and environmental protection policies (OECD, 2010). Combined with real estate market transaction data, it would allow property ownership tax to be based on recent market values. The land registry is envisaged to be completed by the end of 2020.

Improving spending effectiveness through spending reviews and public administration reform

Reforming the public administration is a high priority to improve the effectiveness and quality of public spending as well as revenue collection. The ongoing public administration reform aims at depoliticising the public administration by replacing political appointees in top

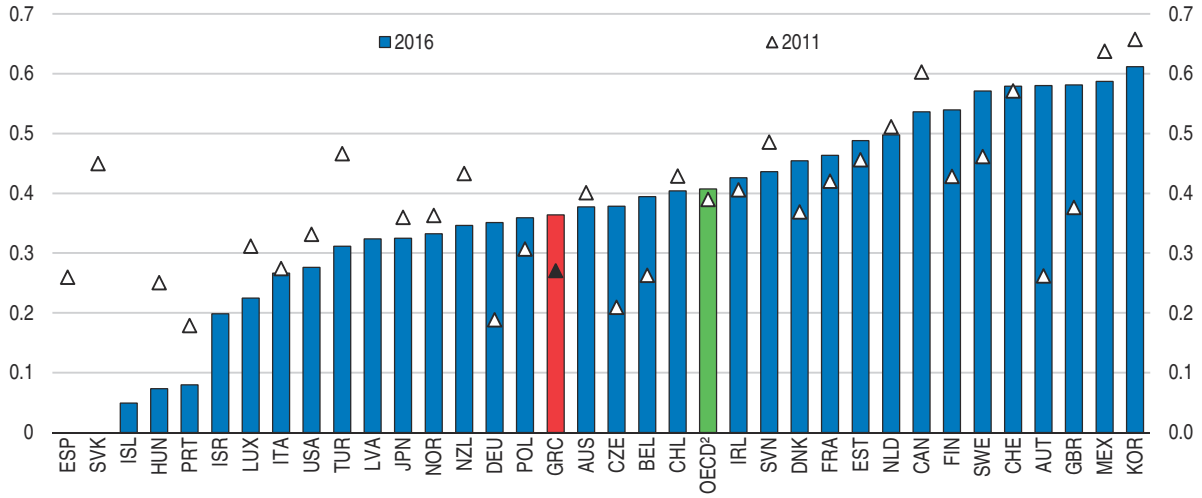
ministerial positions with career civil servants, facilitating work mobility within the public administration, and introducing new systems for selecting top managers and evaluating performance. The fight against corruption and bribery, as detailed below, is an integral part of the ongoing public administration reform.

Effective and evidence-based policies require timely and high quality statistics. The government is committed to strengthening the statistical agency (ELSTAT), and safeguarding its independence. Recent efforts in this direction include giving ELSTAT's president more autonomy and an indemnity to cover costs incurred following legal challenges, strengthening ELSTAT's financial autonomy and its freedom to reallocate personnel as well as hire specialised staff (EC, 2017b).

Cross-country experience suggests that spending reviews can improve prioritisation and identify the fiscal space for new spending priorities. The comprehensive spending review completed in 2017 has identified savings to fund the expansion of family allowances, school meals and early childhood education and care. In-depth spending reviews are planned for 2018 in the ministries of health, culture, and transport and infrastructure. Such reviews should be conducted regularly. The establishment of a new directorate in the Ministry of Finance responsible for conducting spending reviews on a regular basis goes in this direction. OECD country experience (OECD, 2017b) indicates that the success of spending reviews hinges on closely tracking their implementation. Also, integrating spending reviews in the budget process would help avoid across-the-board cuts in discretionary spending disconnected from structural priorities, making fiscal policy more inclusive and growth friendly. Spending reviews could also be accompanied by greater use of performance budgeting procedures. Between 2011 and 2016 Greece improved its performance budget practices in the central government, but these still remain below the OECD average (Figure 19).

Figure 19. **Performance budgeting procedures can be used more extensively**

Index on use of performance budgeting practices from 0 to 1 (highest)[1], central government



1. Composite index of 10 variables that cover information on the availability and type of performance information developed, processes for monitoring and reporting results, and whether (and how) performance information is used. The index does not measure the overall quality of performance budgeting systems. Due to differences between the 2011 and 2016 surveys, some weights have been adjusted for comparability.
2. The OECD aggregate excludes Iceland, Israel, Latvia, Spain and the Slovak Republic.

Source: OECD (2016), *Survey of Performance Budgeting* and OECD (2017), *Government at a Glance 2017*.

StatLink http://dx.doi.org/10.1787/888933713517

Raising public administration efficiency and using spending reviews are crucial instruments to successfully undertake many of the reforms discussed above. The projected fiscal impact of selected reforms not yet legislated and conducive to more inclusive growth is reported in Table 8.

Table 8. **Fiscal impacts of selected reforms**

Percent of annual GDP

	2019	2020	2025	2030
Balance:	**0.8**	**0.6**	**-0.4**	**0.0**
Revenue:	**0.7**	**0.8**	**1.4**	**1.9**
Revenue collection	*0.7*	*0.8*	*1.4*	*1.9*
Cut VAT rate exemptions and raise VAT collections, to reach 90% of OECD average collection rate by 2030	-	0.12	0.69	1.25
Cut remaining tax exemptions (e.g., fuel tax exemptions, various profit tax exemptions)	0.68	0.68	0.68	0.68
Expenditures:	**-0.1**	**0.2**	**1.8**	**2.0**
Spending effectiveness	-0.7	-0.7	-0.6	-0.7
Consolidate further small social protection programmes, ongoing family benefit programmes, in-kind holiday, travel and camp programmes, and remaining heating subsidy; halve spending on direct job creation programmes.	-0.39	-0.39	-0.39	-0.39
Net rationalisation in public spending through annual expenditure reviews	-0.01	-0.03	-0.10	-0.17
Green growth: Phase out fossil fuel subsidies	-0.32	-0.23	-0.12	-0.12
Social protection	0.4	0.4	1.4	1.5
Planned strengthening in housing benefits	0.33	0.33	0.33	0.33
Increase SSI income disregard from 20% to 40%, then develop in-work low income support.	0.05	0.05	0.72	0.80
Improve disability support	0.05	0.05	0.38	0.42
Active labour market programmes	0.1	0.1	0.3	0.4
Expand capacity and activities of public employment services	0.03	0.05	0.12	0.13
Expand scale and scope of job-skill training programmes	0.05	0.09	0.21	0.23
Education	0.1	0.3	0.7	0.7
Expand ECEC participation and quality for under-4s	0.02	0.03	0.08	0.09
Improve quality of schooling	0.08	0.16	0.37	0.41
Strengthen university education	0.02	0.04	0.10	0.11
Raise quality and youth participation in vocational and technical education	0.01	0.02	0.04	0.05
Increase access to post-secondary non-tertiary courses for adults	0.02	0.03	0.08	0.08

Note: For revenues: the VAT revenue increase comes from gradually improving the VAT revenue ratio from 0.42 (preliminary estimate) in 2016 to 90% of the OECD mean of 0.56 by 2030; the reported revenue increase is the increase in annual revenues in the year indicated relative to a baseline of no improvement; the tax exemption cuts concern subcategories of tax expenditures for firms and capital (totally 0.46% of GDP in 2018), households (0.02% GDP), car registration (0.04%) and special consumption (0.16%). For expenditures: savings from consolidating social protection programmes come from World Bank (2016), "Greece Social Welfare Review – Weathering the crisis: Reducing the gaps in social protection in Greece" and reducing by 50% existing public job creation and employment subsidy programmes; net savings from public spending rationalisation are estimated to average 0.014% of GDP per review after accounting for additional spending identified in the reviews, and these net savings are assumed to accumulate; estimates for the phasing out of fossil fuel support measures come from ODI (2017), "Cutting Europe's lifelines to coal – Tracking subsidies in 10 countries" and are assumed to decline over time relative to the baseline; strengthening housing benefits comes from World Bank (2017) "Greece Social Welfare Review – Reforming Social Welfare in Greece"; the increased SSI income disregard is based on EUROMOD modelling; the additional increase in the programme cost is based on gradually developing an earned income credit valued at 0.8% of GDP by 2030 or about two-thirds of the size of existing schemes in countries with strong earned income benefit programmes such as the UK; the increase in disability benefit spending reflects convergence to 90% of the average spending of OECD-EU members; strengthening the public employment office comprises employment service spending converging to the average of OECD-EU members; training programmes spending consists of spending converging to the average of OECD-EU members on training (0.08%), supported employment and rehabilitation (0.14%), and start-up incentives (0.02%); spending on education increases from 4.3% to 5% of GDP, as enrolment rates increase to OECD averages in the areas of education where Greece is below the OECD average and spending per student rises to 70% of the OECD average, reflecting Greece's GDP per capita at 66% of the OECD average (adjusted for purchasing power parity).
Source: OECD calculations.

Boosting employment, reducing poverty and improving skills

Supporting employment growth through more effective social dialogue

Rebuilding employment is essential for the recovery in activity and for reducing poverty. Substantial changes to wage setting during 2010 to 2013 focused primarily on giving firms

the flexibility to adjust wages and employment. Collective agreements were frozen, and the mechanism to extend agreements to non-signatory workplaces was suspended. The principle of giving precedence where work agreements overlapped to the terms most generous to the employee (favourability principle) was also suspended, allowing firms to negotiate lower wages. "Associations of persons" representing at least 60% of an affected workforce were given standing to enter agreements at the firm level in the absence of a union representative. The minimum wage was given statutory status and reduced, a youth subminimum wage was introduced and additional allowances were suspended or ended. Collective dismissal procedures were made more transparent and systematic.

Following these changes, employment started to recover, salaries adjusted (Figure 20) and firms no longer report wages limit competitiveness. The labour market changes have led to wage cuts that were deep but rapidly restored Greece's competitiveness. However, a growing share of jobs have been temporary or part-time and are paid at the minimum wage; as a result almost half of workers' salaries are below the poverty line for a family of four (Figure 21) (OECD, 2017c). Enhancing workers' skills and ensuring they match workplace needs as well as strengthening firms' incentive to invest and innovate are crucial to raising wages and reducing in-work poverty. The labour market changes have improved the allocation of labour across firms, as more productive firms were able to attract or retain more workers (OECD, 2017k). This has not yet translated into wage growth because of high unemployment and workers' weak bargaining position.

Figure 20. **Wages have moved more closely with employment and productivity since changes to the wage-setting framework**

Employment, wages and salaries, and productivity in the non-agriculture business sector, index 2014 Q1 = 100

1. The reference industry is aggregated according to the NACE Rev. 2. Wages and salaries are seasonally and calendar day adjusted.
2. Annual real gross value added per person employed. The reference industry is the non-agriculture business sector excluding real estate based on the ISIC Rev. 4.

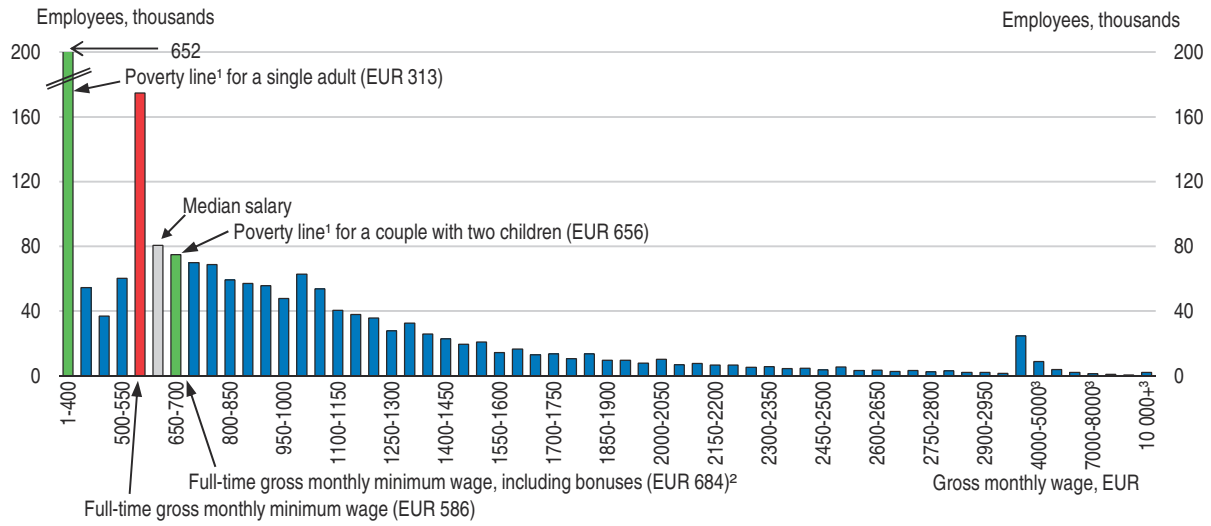
Source: OECD (2018), *OECD National Accounts Statistics* (database) and Eurostat (2018), *Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713536

The favourability and extension arrangements are suspended to the end of the ESM Stability Support Programme. Greece's labour market framework was reviewed by an expert panel in 2016 (van Ours et al., 2016), and the government intends to review in 2018 the arbitration systems for collective negotiations and to launch a project to simplify the labour law (European Commission, 2018). These reviews offer a good opportunity to establish a new

Figure 21. **Many private-sector employees earn less than the poverty line**

Number of private-sector employees earning gross monthly salaries within specified ranges, September 2017



1. The poverty line refers to 50% of the median disposable income in 2016. Household income is adjusted for household size.
2. Private sector workers receive two 1-month bonus salaries, paid at Christmas and Easter, which are not included in the salary data presented in this figure.
3. At EUR 3 000, salary segments increase from EUR 50 to EUR 1 000.

Source: OECD calculations based on the *ERGANI database* from the Greek Ministry of Labour, Social Insurance and Social Solidarity, and Eurostat (2017), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933713555

wage bargaining framework covering a wide range of topics, including broad working conditions and continuous vocational training, and promoting inclusiveness while maintaining the flexibility of the current system.

Sector-level collective agreements without automatic extensions can bring significant efficiency and equity benefits by fostering social dialogue and reducing the costs of negotiating wages and other working conditions, especially for small firms (OECD, 2017c). Smaller firms may particularly benefit if sectoral collective agreements can adapt to their characteristics, including being less organised into unions and employers' associations, fewer resources for workplace negotiations and lower productivity (OECD. 2017c). This is especially important for Greece given that small firms employ most workers. In Portugal, where smaller firms similarly dominate employment, crisis-period reforms lowered the minimum size of firms able to derogate from sectoral collective agreements from 500 to 150 employees (OECD, 2017n).

Past OECD recommendations on labour markets

Recommendations	Action taken since the previous *Survey*
Reform labour market institutions and review the minimum wage taking into account fairness and efficiency considerations. Simplify the labour code.	Collective dismissal processes and approvals have become more transparent. No reforms made to minimum wage levels or setting processes. No reforms made to broader processes for agreeing workplace condition. Experts Group on Greek labour market institutions reviewed and submitted report in September 2016. Project to review and simplify labour code launched.

Extending sectoral collective agreements to non-signatory workplaces, on a case-by-case basis in clearly and objectively defined circumstances, can improve efficiency and equity. Following the examples of other OECD countries (OECD, 2017c), Greece could require that extensions only be granted when, for instance, the original agreement is signed by representatives of minimum shares of both workers and of firms. This will ensure smaller employers have a voice in negotiations and encourage workers and employers to organise. In its reforms, Portugal introduced representativeness thresholds for extensions that require that employers who sign a collective agreement employ at least 50% of the workers that would be affected by the extension or that at least 30% of the signatories be micro-, small- and medium-sized enterprises (OECD, 2017n). Some OECD countries that allow agreements to be extended to non-signatories also enable individual workplaces to determine some details of working conditions, for example by allowing lower wages or flexible hours in smaller firms. Requiring an independent body to approve extensions based on economic and social considerations may avoid the adverse consequences of extending agreements automatically.

Requiring social partners to include in sector-level collective agreements prescriptions of acceptable ranges for negotiations while respecting minimum standards, so-called "framework agreements", can provide sufficient flexibility for the diversity of firms and workers. Social partners at the firm level can then negotiate, within the agreed ranges, mutually beneficial trade-offs across pay and other working conditions reflecting their specific needs. Firm-level bargaining processes need to be easily actionable for smaller firms to be able to adapt a framework agreement to their circumstances (OECD, 2017c). Greece can also better protect employment from future shocks by including clauses in sectoral collective agreements that allow firms to temporarily opt out in clearly defined circumstances. A number of OECD countries have adopted these clauses and German experience demonstrated their effectiveness during the crisis (OECD, 2017c).

Greece adopted a statutory minimum wage as part of the early 2010s labour market changes. The minimum wage rate was frozen in 2012. In 2016, for all employees it stood at 48% of the median wage, lower than most other OECD countries. After the ESM Stability Support Programme concludes, the government may adjust the rate following consultations with key social partners, expert bodies, and taking into considerations competitiveness and labour market conditions and prospects. Adopting a specialised pay commission would improve on this process, and help ensure minimum wage adjustments are based on evidence and consensus, as the experience of such commissions in France, Germany, Ireland and the United Kingdom suggests. These countries' commissions publish recommendations and in some cases determine the minimum wage adjustments. They consider a range of perspectives by including representatives of large and smaller firms, workers, and independent academics and analysts, and by holding regular public consultations, including with advocates for the unemployed and others facing disadvantage accessing work. In Greece, the final decision on minimum wage adjustments could rest with the government, which, however, should publically explain its reasons when it deviates from the Commission's recommendations.

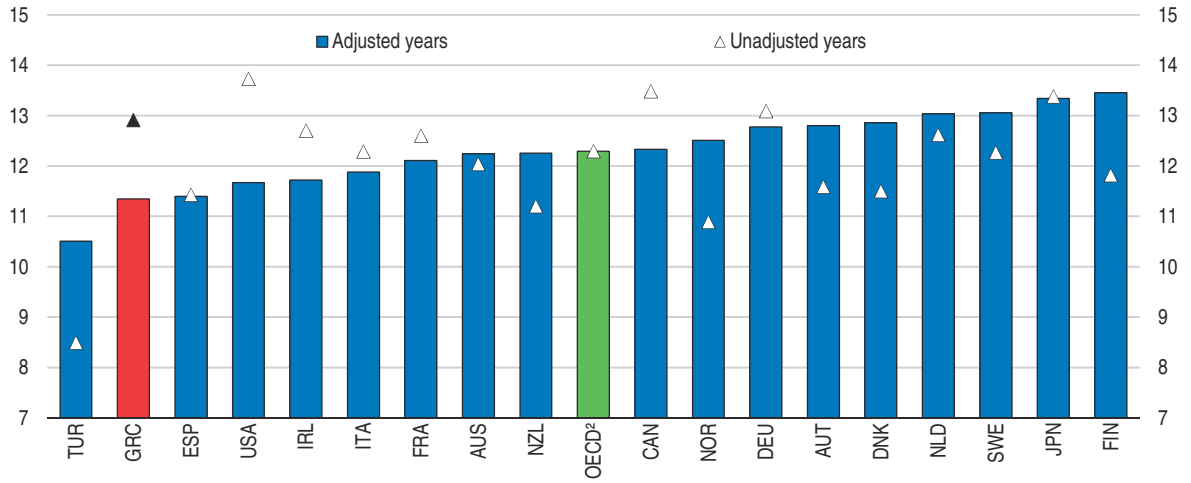
Increasing opportunities by improving education and skills

Participation in education compares well with other OECD countries, and completion rates for high school and tertiary education among younger cohorts are above most other EU members. Greece's top students go on to perform well on a global stage. Greece ranks tenth globally in patents issued to its emigrants, taking into account the size of the population of

origin (WIPO, 2013). However, many students gain less from their time in education than their peers elsewhere, as indicated by standardised assessment results, or their professional skills (Figure 22; OECD, 2017c; OECD, 2017d). At the same time an unusually large share of Greece's workers report being over-skilled for their job, reflecting low demand for skills from workplaces and high skill mismatch. Adults have few opportunities to re-skill via on the job-training or professional courses (Figures 23, 24).

Figure 22. **Years of schooling are above average**

Average years of schooling, 25-29 year olds, 2010[1]



1. Unadjusted years of schooling are based on Barro and Lee (2016). Years of schooling are adjusted for the strength of educational outcomes using the PIAAC mean numeracy assessment in the following way: a country's unadjusted years of schooling are multiplied by the ratio of its median PIAAC numeracy score to its average years of schooling, divided by the benchmark ratio of the OECD median score to OECD average years of schooling. The benchmark ratio is calculated by dividing the median PIAAC numeracy score across available OECD countries by the average years of schooling across available OECD countries. The median PIAAC scores are from the 2012 assessment for 25-29 year olds, while estimates of average years of schooling are for 2010, also for 25 to 29 year olds.
2. Unweighted average of data shown.

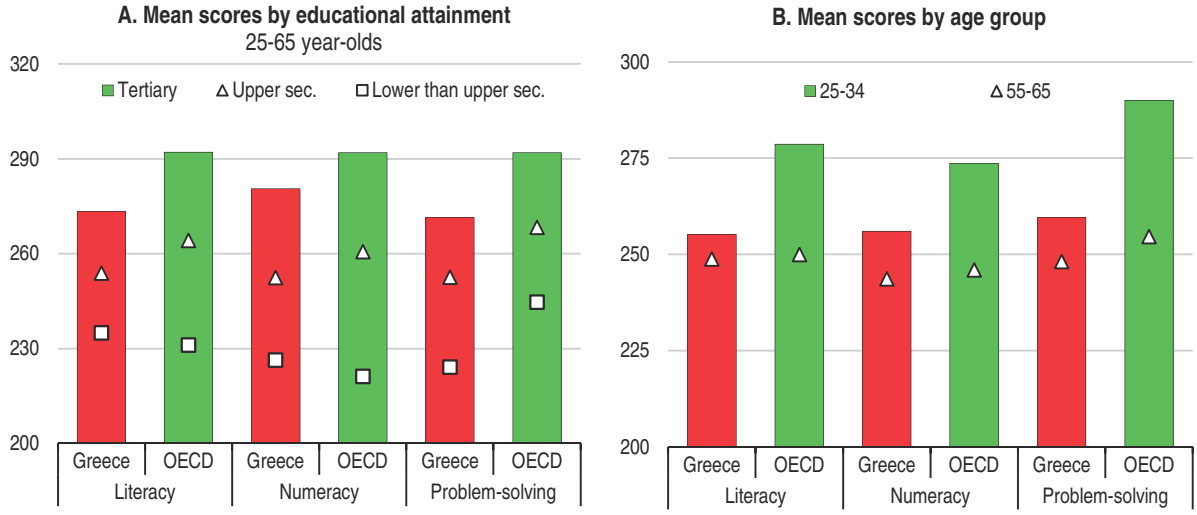
Source: Barro and Lee (2016), *Education Attainment Dataset*, February, OECD (2016), *Skills Matter: Further Results from the Survey of Adult Skills* and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933713574

Improvements in education are impeded by the system's legacy of highly centralised management, fragmented institutions, and limited capacity to assess and improve its performance. Results from past governments' reform efforts have disappointed, through limited ownership, inadequate resources, or the lack of long-term policy continuity (OECD, 2017e). Reduced resources and shifting demands for workforce skills following the economic crisis, and the need to integrate refugees, add to the pressures on the system. Currently the government is implementing a three-year reform plan, and is developing a longer-term agenda with the support of an OECD Education Review and in pursuit of the Europe 2020 Strategy goals. It is piloting trial policies in key areas, such as better support for school performance evaluation. Identifying and expanding successful approaches and building them into a comprehensive, long-term strategy supported by regular evaluation will provide a path to an equitable and quality education system.

Figure 23. **Adults' skills lag the OECD average**

Mean PIAAC proficiency scores, 2014-15[1]



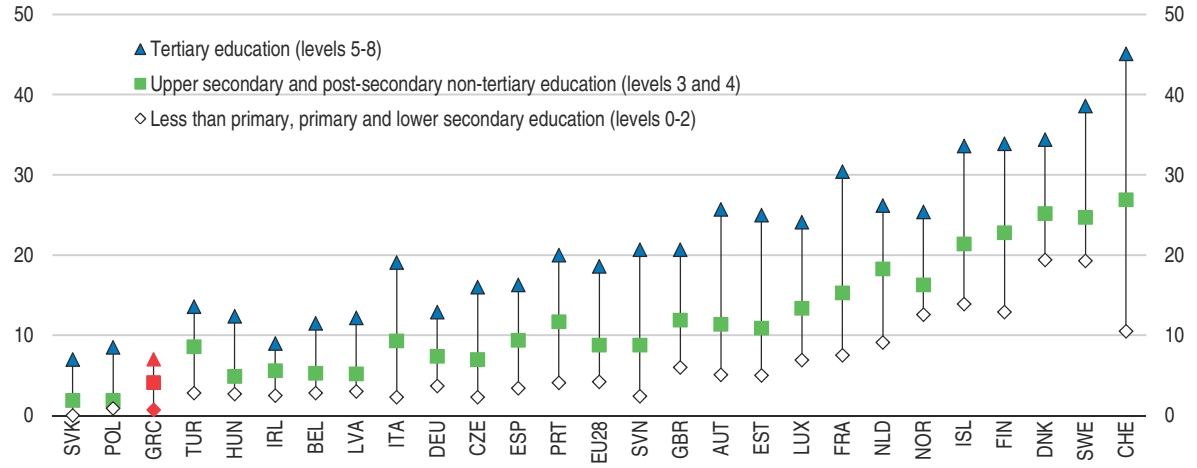
1. 6 OECD member countries including Greece took part in the second round of the assessment from April 2014 to end-March 2015. OECD average covers all OECD member countries participating in the first and second round of the assessment.

Source: Calculations based on the *PIAAC database*.

StatLink http://dx.doi.org/10.1787/888933713593

Figure 24. **Adults' participation in life-long learning is low**

% of population aged 26-64, 2016



Note: Participation in life-long learning includes formal as well as non-formal education and training.

Source: Eurostat (2017), *Education and training* (database).

StatLink http://dx.doi.org/10.1787/888933713612

Providing a strong start to education

Efforts to strengthen the education system are starting from early childhood. Participation in early childhood education and care is low among children younger than compulsory school age, currently 5 years. Childhood education and care places are scarce, especially in urban areas and for families that are not eligible for social assistance (OECD, 2017f; OECD, 2017g; World Bank, 2016). For infants, the focus is on care rather than pedagogical activities. The system's administration has been split by age group between local authorities, the private sector and different national ministries, like in many other OECD countries.

Consolidating supervision of the systems within the Ministry of Education, Research and Religious Affairs (MoERRA) would facilitate strengthening the pedagogical content of early childhood care and its role as a foundation for school. The government will make enrolment compulsory at the age of four over coming years, bringing Greece into line with other European countries. Higher enrolment should be pursued for younger groups. Increasing participation will require expanding the early education and care system's capacity. Part-time enrolment would aid this.

Past OECD recommendations on education

Recommendations	Action taken since the previous *Survey*
Increase the supply of childcare services and encourage flexible work arrangements.	Programme being developed for compulsory enrolment of 4 year old children in ECEC, under the supervision of MoERRA. Recipients of SSI, rolled out in February 2017, have prioritised access to childcare places.

Improving the quality of schooling and tertiary education

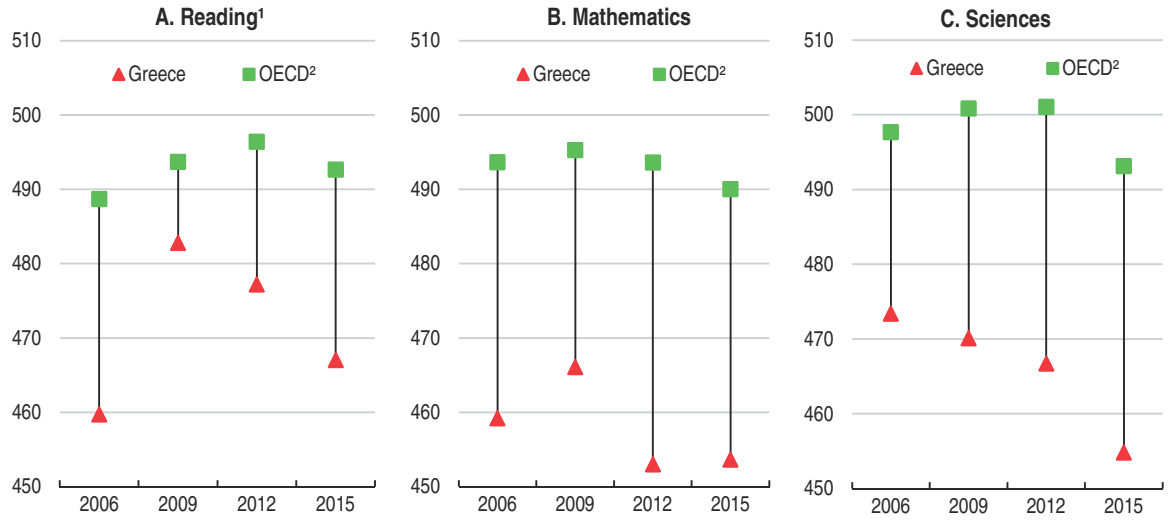
School students' performance has significant scope for improvement relative to other countries, and is little changed since the early 2000s, according to the PISA survey of 15 year olds (Figure 25; OECD, 2016b). Weaknesses in Greece's schools contribute to poorer professional skills and to lower lifetime social well-being than in most other OECD countries (OECD, 2015a). Student assessment is focused on the competitive university entrance exam, and its importance and structure has led to a large and inequitable shadow education sector. University enrolment demand is high but course supply does not reflect institutions or students' preferences or employers' needs. This contributes to the lower employability and wage premiums of Greek graduates than in most other OECD countries, and this situation has changed little with the crisis.

Greece's legacy of unusually strong centralisation of curriculum and resource management decisions at MoERRA constrains the education system's ability to improve teaching outcomes (OECD, 2017e) (Figure 26). Teachers' working conditions and confidence in the administration are low and were reduced by some of the crisis-management measures (OECD, 2017i). The school curriculum is being reviewed. In primary and secondary schools, systems to assess and improve the quality of student performance and schools are now being developed and trialled. Professional support and development for teachers are planned to be introduced in the coming years (OECD, 2017i; MoERRA 2017a). Consolidation of fragmented universities and technical colleges is incomplete and the frameworks to track and improve teaching effectiveness are limited (OECD, 2017e).

The MoERRA is developing a reform programme giving school teachers and principals greater pedagogical and managerial autonomy. This will be accompanied by evaluation frameworks that help teachers, schools and central bodies identify successes and collegially work to improve outcomes. Linking evaluation frameworks with in-service support focusing on practical skills will be beneficial and could contribute to improve the conditions of the substitute teacher workforce. Students' performance should be assessed continuously; combined with a general skills assessment, continuous assessments could replace the current university entrance examination. Refugees need specialised language support to successfully integrate into the general education system and the workforce (OECD, 2015c).

Figure 25. **Student performance at school is below the OECD average**

Mean PISA score in reading, mathematics and sciences



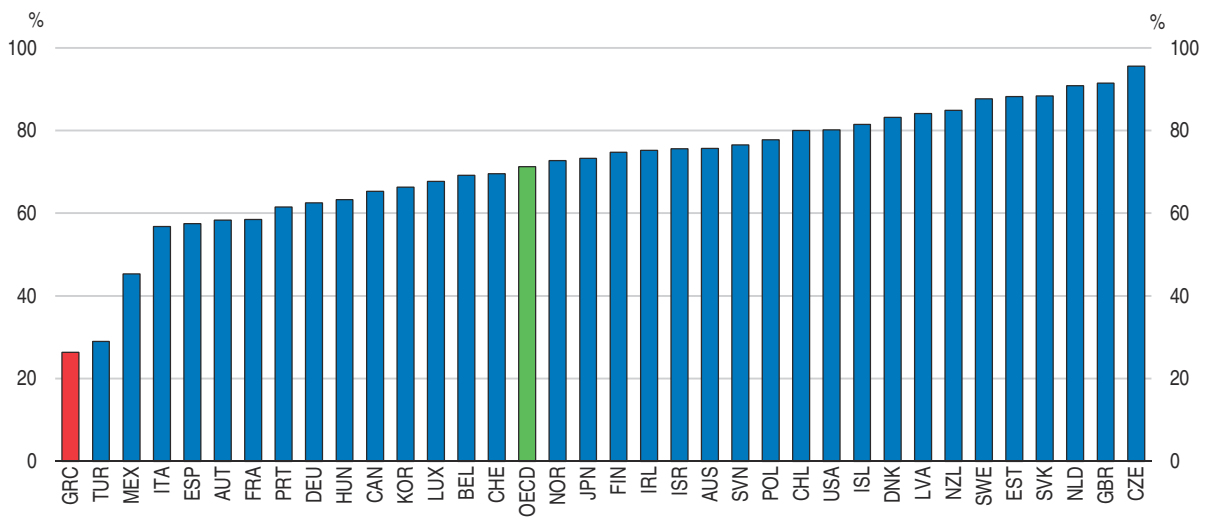
1. The PISA reading assessment is comparable across years.
2. The OECD aggregate covers all OECD countries except Austria and the USA for reading and all OECD countries excluding the USA for mathematics and sciences.

Source: OECD, *PISA 2006, 2009, 2012* and *2015* databases.

StatLink http://dx.doi.org/10.1787/888933713631

Figure 26. **Schools and teachers have limited influence over resource and curriculum management**

Index of school autonomy[1]



1. % of tasks for which the principal, the teachers or the school governing board have considerable responsibility, including allocating resources to schools (appointing and dismissing teachers; determining teachers' starting salaries and salary raises; and formulating school budgets and allocating them within the school) and responsibility for the curriculum and instructional assessment within the school (establishing student-assessment policies; choosing textbooks; and determining which courses are offered and the content of those courses). Results based on school principals' reports.

Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools* and *PISA 2015* database, Table II.4.5.

StatLink http://dx.doi.org/10.1787/888933713650

In tertiary education, both universities and technical education institutions would also benefit from more autonomy in their governance and resource use. Current efforts to connect tertiary institutions with regional employers can make it easier to adapt courses

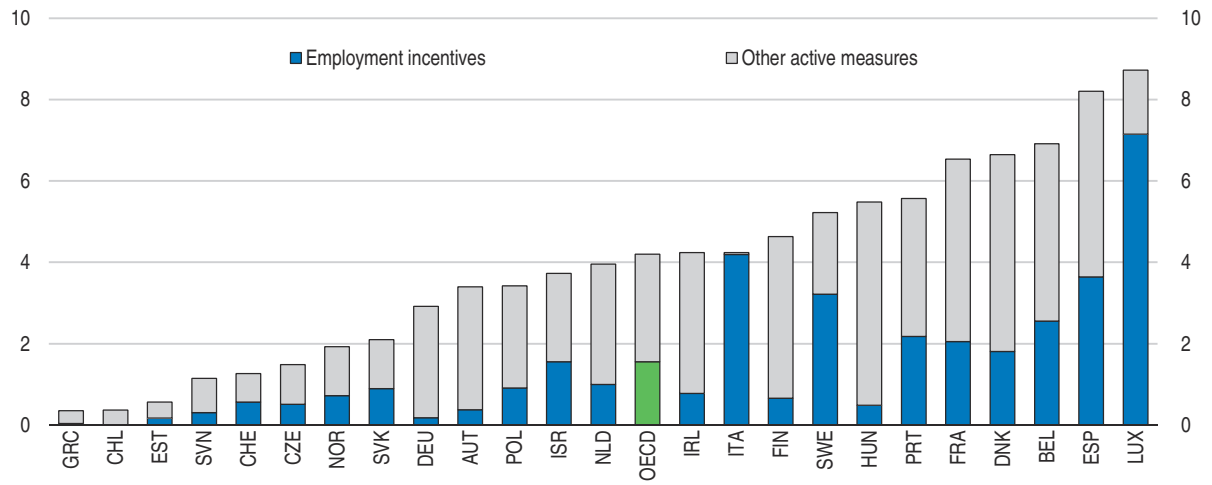
to the evolving needs of the labour market while ensuring the education system provides strong horizontal skills. Institutions should be encouraged to merge, resuming earlier consolidation efforts, and giving teaching programmes and institutions scale. Transparent and well-designed financing mechanisms could encourage institutions to provide courses that match students' demands and employers' needs, by for instance adapting elements of the reformed Australian approach to university funding (OECD, 2017l). Clearer information about the quality and benefits of different courses and projected skill demand should accompany these efforts (OECD, 2016b).

Active labour market programmes to support re-employment

Participation in active labour market programmes (ALMPs) is low (Figure 27), as capacity, scope and resources are limited. Passive measures have absorbed most of the limited funding for labour market programmes. Modest increases in spending and involvement in ALMPs and skill developments can bring high returns and improve jobseekers' likelihood of finding work (OECD, 2015b).

Figure 27. **Participation in active labour market programmes is limited**

Participants in active labour market programmes, % of labour force, 2015[1]



1. Active labour market programmes include all social expenditure (other than education) which is aimed at the improvement of the beneficiaries' prospect of finding gainful employment or to otherwise increase their earnings capacity. This category includes spending on public employment services and administration, labour market training, special programmes for youth when in transition from school to work, labour market programmes to provide or promote employment for unemployed and other persons (excluding young and disabled persons) and special programmes for the disabled. Employment incentives consist of job rotation and job sharing schemes as well as programmes making payments for a limited period only to facilitate the recruitment, or continuing employment in the case of restructuring, of unemployed persons and other target groups into jobs where the majority of the labour cost is covered by the employer. Other active measures consist of training, sheltered and supported employment and rehabilitation, direct job creation and start-up incentives, excluding programmes related to public employment services. 2014 for Estonia and OECD average. 2012 for Greece. Average of 2011 and 2013 for training in 2012 in Greece due to lack of data.

Source: OECD (2017), *OECD Employment and Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713669

Greece's ALMPs are adapting to the diverse needs of different groups of job-seekers and focusing on the long-term unemployed, but their capacity needs to expand. Funding for expanded employability and job matching programmes can be reallocated from public works and employment subsidy programmes, which tend to be less effective in contexts other than immediate responses to a crisis than other interventions (Card et al., 2015; OECD, 2015b).

ALMP reforms should ensure that those out-of-work can access effective programmes. Such programmes need to:

- Enhance employability; adults with work experience benefit from programmes that strengthen practical skills; training courses are better integrating with local employers, but their scale is still modest and needs expanding.
- Better match job seekers' skills with employers' needs; the public employment service is being re-engineered to connect better with employers, and would benefit from capacity dedicated to SMEs; new community service centres can improve access across the country; new requirements that social benefit recipients who are able to work engage in job search improves their likelihood of finding work; the Ministry of Labour and Social Inclusion's improved IT platforms can support this engagement.
- Bring youth into work; programmes that first ensure strong general skills, and then provide practical sector-specific skills and experience, generate the best results; these have been limited but are now a priority and successful programmes to improve youth work-experience now being piloted (MoERRA, 2017b) should be expanded.

Past OECD recommendations on labour market programmes

Recommendations	Action taken since the previous *Survey*
Condition access to unemployment benefits on stricter obligations for participation in training and employment service programmes. Extend this principle to active job search as the economy improves. Strengthen sanctions for non-compliance.	Eligibility and job search requirements for unemployment benefits were tightened for most cases, and extended to those in employment disputes. Guaranteed minimum income programme designed to include obligatory engagement with labour market programmes among recipients able to work..
Bring forward to the extent possible the implementation of the restructuring plan of the public employment service (OAED). Monitor closely the post-programme outcomes (such as job characteristics and earnings) of the activation programmes, and focus spending on those that prove successful.	Re-engineering of OAED is underway, including improved communications with employers to identify skill needs, and improved IT systems to allow staff to take a more active role in job matching. Labour and social security IT systems now allow better tracking of outcomes, but are yet to be used for performance assessments.
Consider over the longer term and the fiscal situation allowing, increasing the duration of unemployment insurance benefits by another year, but tapering the benefits over time. The net replacement rate of unemployment insurance benefits could also be brought closer to the international average.	No action. National roll-out of SSI may support the unemployed.

Lowering poverty and protecting households

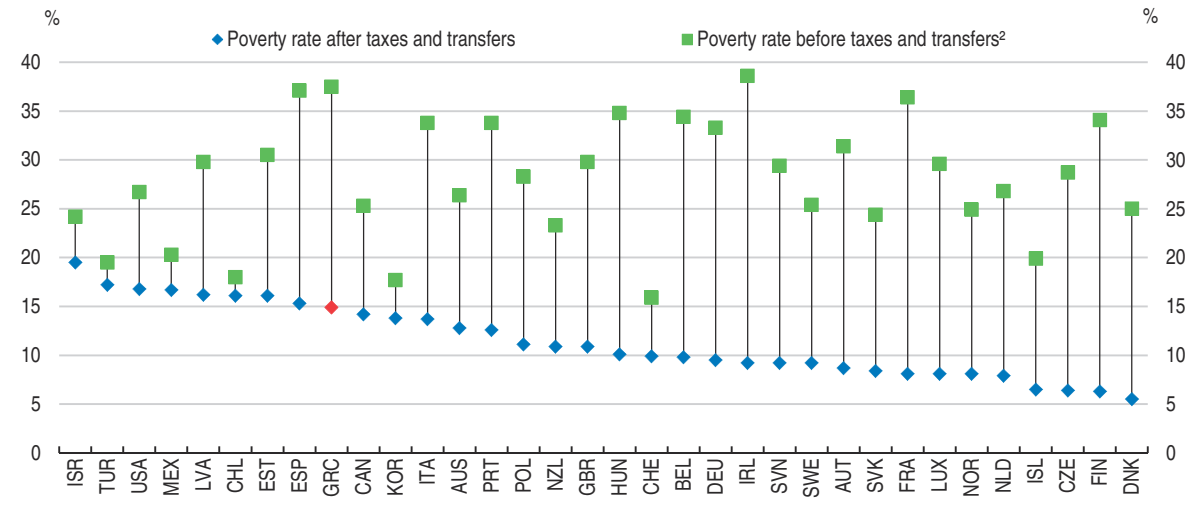
Jobs are the best antidote against poverty (Causa et al., 2016). The loss of jobs and wage cuts through the crisis has led to a surge in poverty. Younger households without work and with children have been most severely affected, while poverty rates have fallen among retirees. Rising and more entrenched child poverty brings significant risks for long-term well-being and opportunities. Recent reforms improved the sustainability and targeting of social expenditure, but inequality and poverty after taxes and transfers remain high (Figure 28).

Consolidating and improving targeting of social protection

Greece's social expenditure system is large and remains dominated by pensions (Figure 29). Public social expenditure, at 27% of GDP in 2016 or nearly half of government expenditure, is above the average of OECD and European countries (OECD, 2017j). A series of reforms to delay retirement, reduce pension allowances, increase contributions, and lessen inequalities between beneficiaries and across generations, have improved the sustainability of the pension system. Merging agencies and funds have improved collections of

Figure 28. **Poverty remains high despite extensive redistribution through taxes and benefits**

Poverty rate at 50% of median income, before and after taxes and transfers, 2015 or latest year[1.]



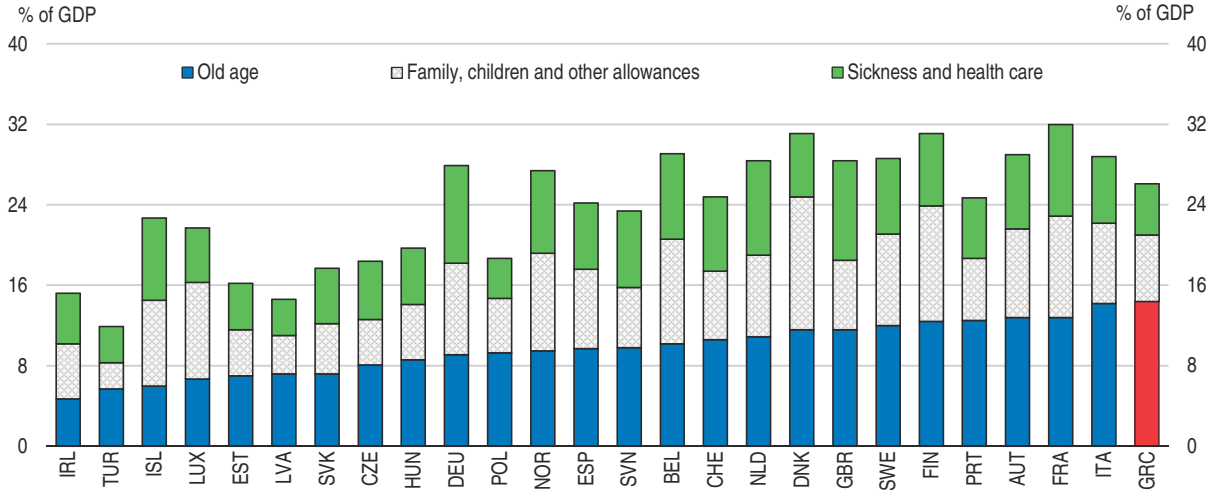
1. The poverty line refers to 50% of the median disposable income. Household income is adjusted for household size.
2. Poverty rate after taxes and before transfers for Hungary, Mexico and Turkey.

Source: OECD (2018), *OECD Social and Welfare Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713688

Figure 29. **Pensions dominate Greece's social spending**

Social protection expenditure by function of social protection, 2015 or latest year



Note: Social protection encompasses interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a simultaneous reciprocal nor an individual arrangement involved. The eight main risks or needs are: old age, sickness/healthcare, survivors, disability, family/children, unemployment, housing, and social exclusion not elsewhere classified (n.e.c). The category "family children and other allowances" includes social expenditure on unemployment, housing and social exclusion n.e.c.

Source: Eurostat (2018), *Social Protection Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713707

contributions. However, pension spending relative to GDP remains significant, reflecting the deep fall in the latter. EU projections suggest that as the economy recovers and pension reforms produce their full effect, pension spending will fall from 17% of GDP in 2017 to 13% in 2020 and to 10.5% in 2070 (European Commission, forthcoming).

Over the crisis, the structure of social spending and fragmentation of programmes allowed poverty to rise among young families relative to retirees. The effectiveness of social spending has been hampered by underfunding and splintered responsibility across ministries and between levels of governments and weaknesses in administrative systems, especially for in-kind benefits, creating gaps and overlaps in mandates and activities, and raising administrative costs (OECD, 2013a; Stefan, 2015; World Bank, 2017). Means-tests were applied to 5.4% of all social spending (including pensions) in 2015. Consolidation efforts and introduction of comprehensive, targeted cash-benefit programmes backed by rebuilt administrative systems are addressing these issues. The 2017 and 2018 reforms to consolidate and strengthen family benefits and rationalise several other overlapping anti-poverty programmes represent important progress in improving targeting. Supporting these programmes are electronic payment systems, new IT platforms and administrative processes, enhancing efficiency and equity of access for households in need. Families in poorer regions are now being supported by an expanding school meal programme.

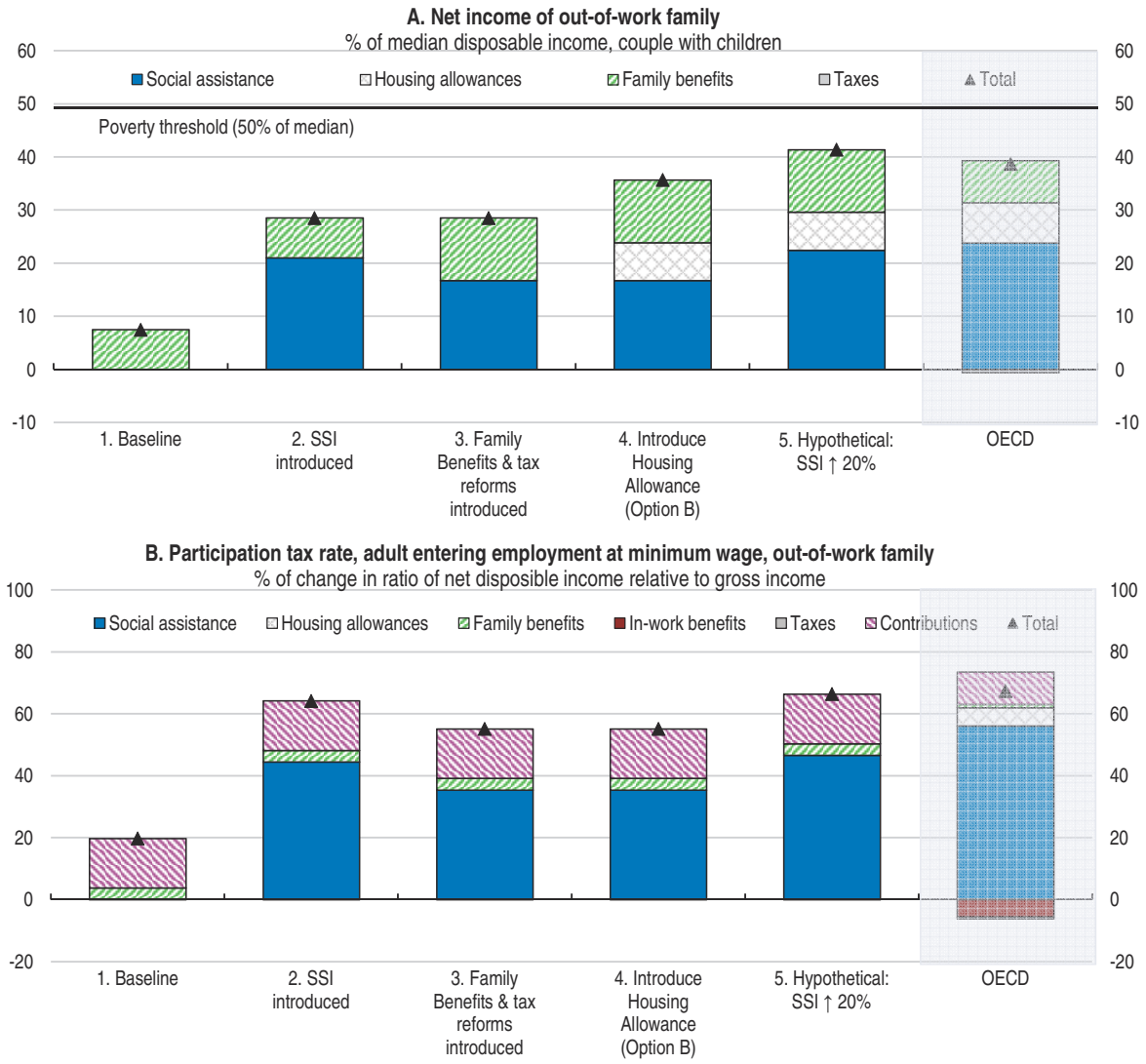
Disability support is the next priority for reform, as the existing system is small and fragmented across at least 24 different programmes. These can be complicated to access and offer levels of assistance that vary between municipalities (World Bank, 2017). The government with World Bank support is preparing a roadmap to consolidate these programmes and to better identify disabled individuals' needs. Developing a coherent administrative system will be central to these reforms. Existing housing benefits are minimal despite the high rates of housing stress. These are planned to be replaced by a means-tested allowance that complements the other new targeted cash benefits.

Other social protection programmes found in most OECD countries are still to be developed in Greece. Unemployment benefits are weak, and reforms tightened eligibility criteria such that only 12% of the unemployed receive benefits. The unemployed should be encouraged to register, obtain support, and participate in active labour market programmes by making these more accessible and unemployment benefits conditional on participation. Among the elderly, improvements in welfare have been slower for survivors, due to the structure of pensions. Further pension reforms should consider their needs. There are many other small, mostly in-kind programmes which are often poorly targeted and expensive to administer that could be consolidated and their funding reallocated to better targeted programmes.

Helping low-income households while encouraging labour force participation

The national roll-out of the Social Solidarity Income (SSI) in February 2017, with the strengthened family benefits introduced in 2018, are important steps to better support the poorest households. The safety net ensures that households can access a minimum income, even if they are not supported by other social protection programmes. The SSI transfers are modest, at EUR 200 per month for the first household member, EUR 100 for the second and EUR 50 for children, and the eligibility thresholds are low. These amounts reduce the severity of poverty, even if, like other OECD countries' guaranteed minimum income schemes, they are insufficient to lift a household above the poverty line (Figure 30 – Panel A). Two service delivery pillars complement the income transfer. These seek to improve households' access to labour market programmes and to other social support services. The government intends to link social benefits with participation in active labour market programmes if beneficiaries are able to work. This will require greater capacity to enforce such obligations. The strengthened family benefit's eligibility thresholds are higher than the SSI, and it provides households in the lowest income tier EUR 70 per month for

Figure 30. **The social solidarity income, family benefit and housing allowance reforms support poor households' incomes but also raise participation tax rates**



Note: Each bar indicates an additional policy reform that adds to the existing policies. "Baseline" reflects the full set of tax and benefit policy rules at 1 July, 2016, excluding the Rent Allowance that concluded in February 2017. "SSI introduced" adds the Social Solidarity Income scheme rolled out nationally in February 2017 to the baseline. "Family benefits & tax reforms" adds the strengthened family benefit scheme introduced in 2018 and the reforms to personal income tax and social solidarity contribution rates legislated to be introduced in 2020. In the simulations the family would not be liable for income tax. "Introduce Housing Allowance (Option B)" adds a housing allowance scheme with the SSI's income definition and equivalence scale and eligibility threshold 4 times those of the SSI, i.e., EUR 9 600 for a family of 2 adults and 2 dependent children, and provides a monthly allowance of EUR 50 for the first member, EUR 25 for the 2nd adult or 1st child, and EUR 12.50 for subsequent children. "Hypothetical: SSI 20%" adds a 20% increase in SSI allowances and eligibility thresholds and in the Housing Allowance income eligibility thresholds, and an increase from 20% to 40% in the SSI labour earnings disregard for determining SSI eligibility. The simulations apply the tax and benefit policy settings to a hypothetical family of two unemployed adults with two dependent children. The participation tax rate is the percentage change in net income relative to the change in the gross income when one adult shifts to permanent, full-time private sector employment at the minimum wage. Further details of the simulations are presented in Chapter 2, Box 2.5 and Figures 2.32 and 2.33.
Source: OECD calculations based on the OECD tax-benefit model.

StatLink http://dx.doi.org/10.1787/888933713726

the first and second children and EUR 140 for additional children, further reducing the severity of poverty. Access and eligibility assessments for these programmes have been improved relative to pre-existing programmes.

OECD Tax-Benefit Model simulations demonstrate how the SSI and strengthened family benefits, and a potential housing allowance, would reduce the risk of poverty for a family of two unemployed adults with two children (Figure 30 – Panel A). By improving targeting, these measures also increase the participation tax rate faced by beneficiaries as they start working (Figure 30 – Panel B), although having different eligibility thresholds across different allowance programmes can reduce the participation tax rate, as demonstrated by the family benefit reforms relative to the SSI (Figure 30 – Panel B). Increasing the disregard of earned income to 40% when assessing eligibility for the SSI would reduce the risk households being trapped in dependency on these benefits. Increasing the earnings disregard would also have limited fiscal cost (Table 8).

Past OECD recommendations on social protection

Recommendations	Action taken since the previous *Survey*
Make economic growth more inclusive by urgently adopting policies to reduce poverty and inequality and boost employment in the short run.	Pension spending continues to be curtailed, with benefit and contribution rules made more equitable. Social Solidarity Income (SSI) programme, transferring funds to low income households and improving their access to other social benefits, rolled out nationally in February 2017.
Implement the guaranteed minimum income, and introduce a targeted school meal programme and a housing assistance programme targeted at the poor.	Guaranteed minimum income, SSI, rolled-out nationally in February 2017 following pilots and trials. Take-up has been rapid. Service delivery components are being strengthened. A school meal programme targeting poor regions was trailed in the 2016-17 school year, and is legislated to expand during the 2017-19 school years. Various programmes to redesign housing assistance are being explored, to be implemented from 2019 subject to macroeconomic conditions. A modest rent relief targeted at very low income households expired at the end of 2016.
Conclude the reform of the pension system including a review of special regimes and introducing a basic pension in a fiscally sustainable way.	Pension reforms have progressed and continue as 2016 legislation is progressively implemented, including the ongoing consolidation of programmes and administration and adjustment of allowances rates. . Reforms in 2016: Integrated all public main pension funds into one Single Agency of Social Insurance (EFKA) and integrated all public supplementary pension and lump sum benefit funds; introduced a common 20% contribution rate for old-age pensions and 6.95% for health insurance; introduced a social solidarity allowance of [euro] 360 for uninsured elderly persons; introduced a state-funded guaranteed national pension equal to the annual poverty threshold for a single person for 20 years of contributions; established a contributory pension; introduced a rule for increases in pension allowances linked with growth and inflation, to apply from 2022; decreased the upper ceiling for pensions; tightened eligibility rules for survivors' pensions; gradually phase-out the means-tested Social Solidarity Allowance (EKAS). EFKA also has responsibility for collecting all social security contributions and debt. Consolidating the debts should improve collection rates, which rose to EUR 1 billion in 2017, and lead to uncollectible debt being written off. May 2017 legislation introduced reforms to be implemented in January 2019: curtailing early retirement and unifying benefit formula; rationalising current pensions; increasing and harmonising contribution rates; and, retaining the guaranteed basic pension.
Introduce a well-targeted housing benefit.	Tentative progress. A modest rent relief targeted at very low income households expired at the end of 2016. A replacement, more generous programme is legislated to be implemented from January 2019 subject to macroeconomic conditions, but the programme design is still being determined.
Intensify controls on recipients of welfare benefits by increasing the frequency of re-assessments, as envisaged, and by ensuring effective monitoring and timely data.	Improvements to information systems and monitoring of labour income improve the tracking of beneficiaries' eligibility and receipts. No changes to the practical assessments for eligibility of various disability allowances, which are generally fragmented and vary across regions.
Strengthen the management of social welfare benefits by exerting more central control of earmarked grants to local authorities. Increase the accountability of local governments for the allocation of social spending through a more rigorous auditing system and by enhancing transparency with regard to the use of the grants.	Municipalities are now required to hold all funds in a consolidated treasury account. No action on auditing, or on broader consolidation of social protection systems managed by municipalities with central systems.
Intensify controls on recipients of welfare benefits, especially of disability benefits, by increasing the frequency of re-assessments, as envisaged, and by ensuring effective monitoring and timely data.	Strengthened database systems across labour and social welfare ministries, accompanied by broader push to electronic payments, improving ability to monitor beneficiaries' eligibility. Local one-stop service centres being established, to improve contact with beneficiaries.

Over time, as administrative capacity improves, the government should consider introducing working tax credits as a way to reduce in-work poverty, encourage labour force participation and formalise the shadow economy. Such systems already in place in some OECD countries, such as the United States, the United Kingdom, France and the Netherlands, have proved effective if targeted and designed well (OECD, 2005; Immervoll and Pearson, 2009). Increasing the earned income disregard applied to the SSI could be a step in this direction.

Greening the economy

Greece's per capita greenhouse gases emissions have declined for several years and are now significantly below the OECD average. This is mostly due to the recession as CO_2 intensity has remained broadly stable (Figure 31). Increased use of low-carbon energy has also played a part. The share of final energy from renewable sources is 15%, close to the EU28 average. Greece's per capita levels of solar power (both for photovoltaic and solar thermal) is among the top five in the world (REN21, 2017).

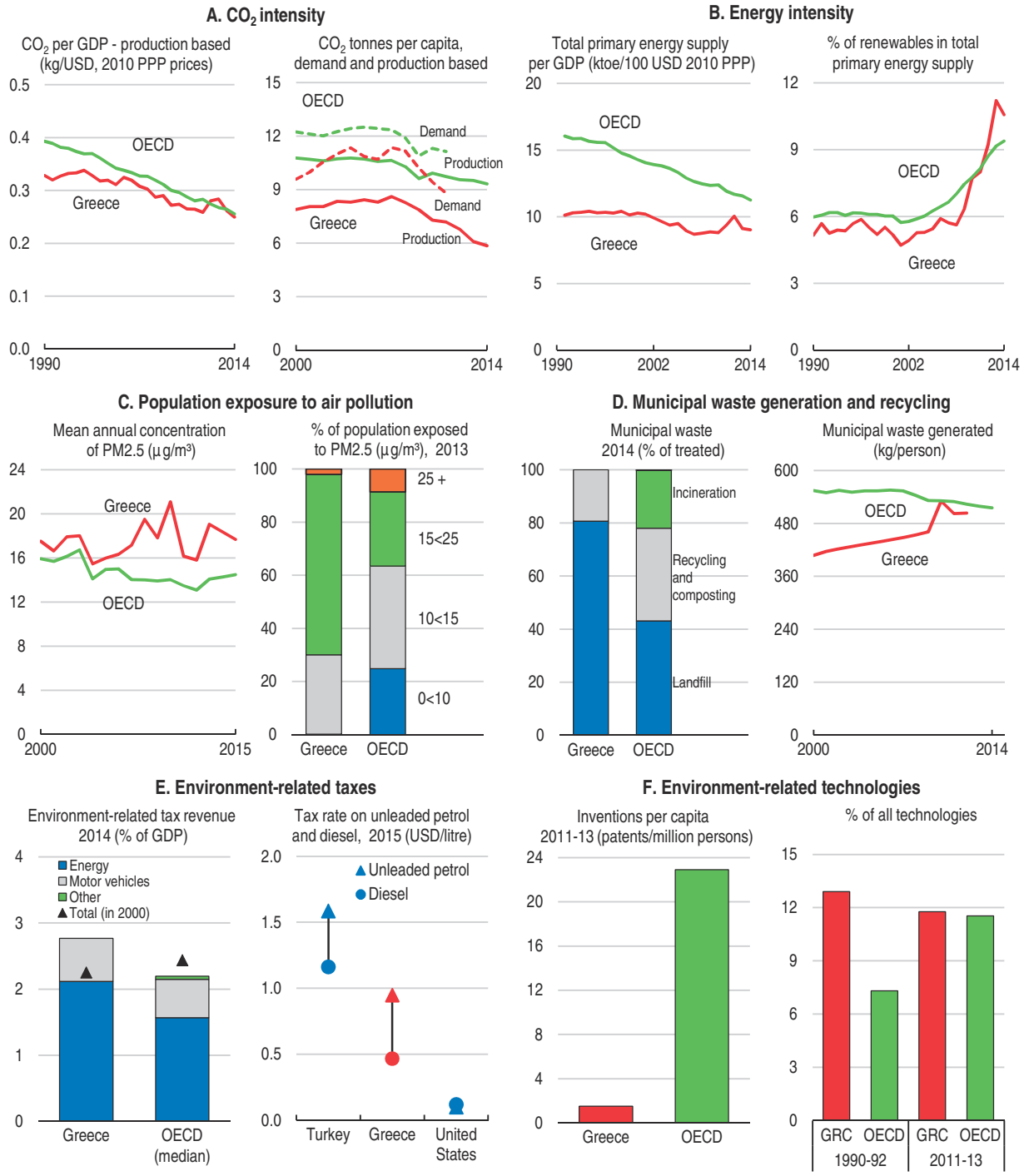
Average air pollution, measured in terms of particle pollution, is above the OECD average, although pollution hotpots are somewhat less prominent than in the average OECD country. Road traffic, heating and other human activities are the main source of air pollution. Also, pollution from local biomass burning has increased despite declining fossil fuel use (Emmanouil, et al., 2017).

Bathing water is among the best in the EU (EEA, 2017). Drinking water quality is generally good, but some areas lack comprehensive sewage treatment. Landfill remains by far the most common destination for waste and household waste production is rising, in contrast to many countries. There is still much unregulated and illegal dumping of household waste. Greece's Waste Management Plan of 2012 foresaw the introduction of a landfill tax from 2014 but it is unclear whether it has been implemented (EC, 2017a).

The EU Court of Justice has repeatedly fined Greece because of numerous unregulated landfill sites and breaching the urban waste water treatment directives. The 2018 budget allocates EUR 1 billion for unforeseen and urgent spending, including environmental fines relating to landfill sites and sewage collection and treatment. Making all waste disposal sites and urban waste treatment conform to EU regulations is urgent to lower local pollution and avoid using scarce budget resources to pay fines.

Greece is one of the few countries where environment-related tax revenues have increased relative to GDP over the last decade. However, revenue from taxes other than on energy and motor vehicles remains negligible, as in most countries. The tax on diesel fuel is less than half that on petrol. Also, Greece grants several excise tax and VAT reductions for fossil fuels used in industrial and residential sectors. According to OECD's data, Greece is one of the OECD countries with the largest fossil fuel support measures (i.e. measures encouraging the production and consumption of fossil fuels) as a share of government spending and total taxes. Greece also provides support to the development of coal-fired electricity plants, locking in carbon-intensive capital assets and increasing the risk of stranded assets. Phasing out fossil-fuel support measures would accelerate the shift towards renewable energy and facilitate the implementation of the new EU Emission Trading System Directive and the Industrial Emissions Directive.

Figure 31. **Greece's top green growth challenges are waste disposal and air pollution**



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

StatLink http://dx.doi.org/10.1787/888933713745

Improving the business environment to raise investment

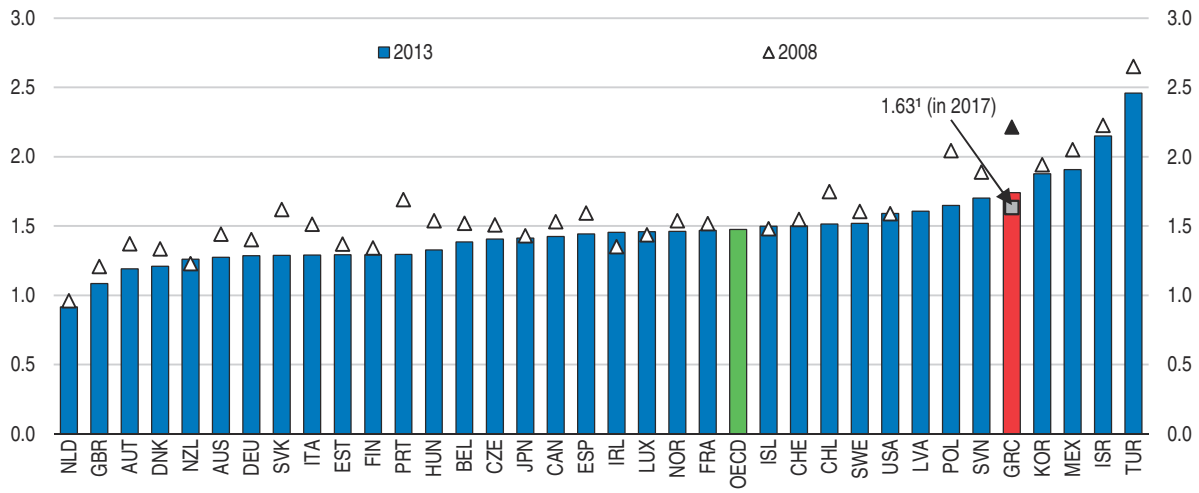
Lowering product market regulation

Since the start of the crisis, cuts in barriers to entry, trade and investment and reduced state control have made Greece's product markets more open to competition. Between

2008 and 2013 reduced barriers to trade and investment contributed most to improving competitiveness by lowering the product market regulation (PMR) index (Figure 32). A preliminary and conservative assessment of reforms implemented since 2013 suggests that product market restrictions have eased further (Figure 32).

Figure 32. **Product market regulation has eased but remains above most OECD countries**

Index scale from 0 to 6, from least to most restrictive



1. Preliminary calculations of the product market reforms since 2013.

Source: OECD (2017), *Product Market Regulation Database* and OECD calculations

StatLink http://dx.doi.org/10.1787/888933713764

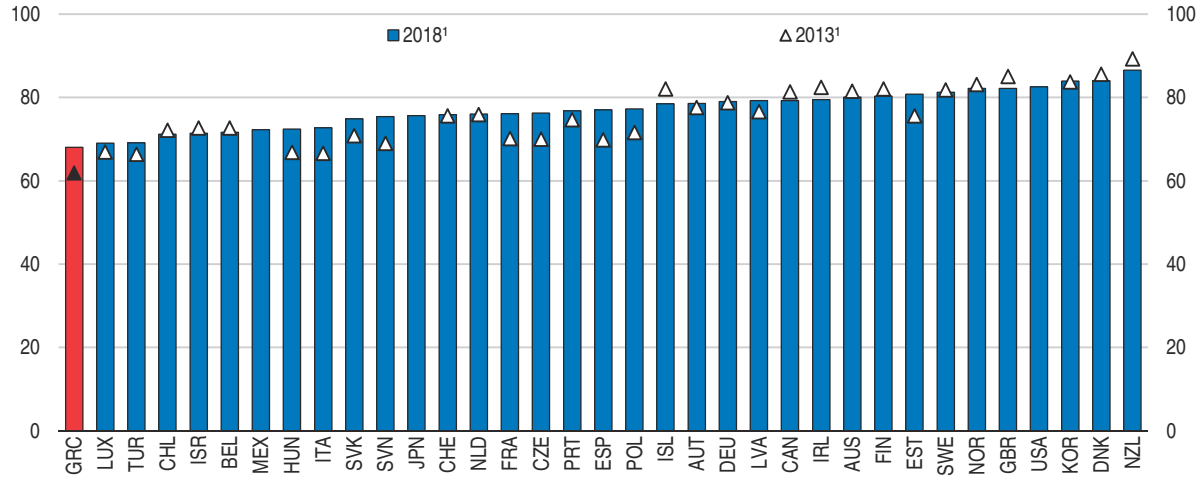
The drop in the PMR indicator might not reflect all the progress made since 2013 as the PMR indicator covers mostly horizontal regulations while the product-market reforms passed concern mostly sector specific regulations. Despite significant progress, Greece's business environment still lags other OECD countries as corroborated by the World Bank Doing Business indicator (Figure 33). From 2010 Greece undertook an extensive legislative reform to streamline regulation of regulated professions including easing entry. The reform opened up to competition 75% of the 350 regulated professions in Greece. An assessment of the reforms in 11 professions suggests they supported employment (Athanassiou et al., 2015). As highlighted in previous Surveys (OECD, 2013b; OECD, 2016a), and as detailed in Chapter 1, liberalisation of regulated professions could go further.

The OECD is working with Greece to boost product market competition. Between 2013 and 2016, the OECD conducted, in co-operation with the Hellenic Competition Commission (HCC), three Competition Assessment Reviews that helped identify barriers to competition in selected sectors and ways to improve the overall regulatory framework. The Reviews covered 14 sectors, accounting for about 30% of GDP and 39% of employment, and made 773 recommendations (see Box 1.1 in Chapter 1).

Most of the recommendations of the three Competition Assessments have been legislated. As at January 2018, only one of the 366 recommendations of the third Competition Assessment had yet to be legislated (Figure 34). Progress was uneven across sectors: it was faster in pharmaceuticals, manufacturing and wholesale trade, and took longer in media, construction and e-commerce. Ownership of reforms has improved in some instances. On e-commerce the Greek government has worked with the OECD and the European institutions

Figure 33. **Recent reforms have improved the business environment, which however remains poor**

Ease of doing business indicator, distance to frontier, from 0 (lowest performance) to 100 (best performance)



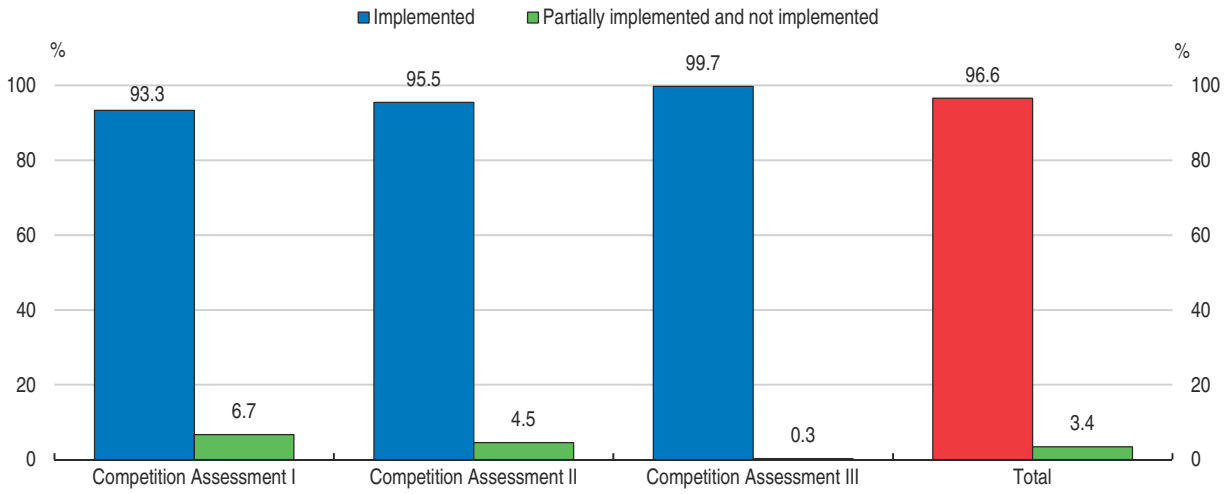
1. Reference year of database. The 2018 database reports the data collection completed in June 2017.

Source: World Bank (2018), *Doing Business 2018* (database).

StatLink http://dx.doi.org/10.1787/888933713783

Figure 34. **Implementation of OECD Competition Assessments' recommendations has progressed**

2013-17



Note: The OECD's Competition Assessments aim to help governments eliminate barriers to competition by providing a method for identifying unnecessary restraints on market activities and developing alternative, less restrictive measures that achieve government policy objectives.

Source: EC (2017), "The ESM Stability Support Programme: Greece, First & Second Reviews July 2017 Background Report", *Institutional Paper 064*, November 2017. EC (2018), *Compliance Report of ESM Stability Support Programme: Third Review*, January 2018, European Commission, DG ECFIN, available at *www.esm.europa.eu/assistance/greece*.

StatLink http://dx.doi.org/10.1787/888933713802

to transform a set of e-commerce specific recommendations into a far-reaching review of consumer protection legislation. This is expected to lead to the codification of the 1994 law on consumer protection; the new code has already been drafted.

Full implementation of the legislated product market reforms, in the context of strong domestic ownership, would be an important step to promote competition and strengthen

incentives to invest. Reducing horizontal product market restrictions would help the implementation of such reforms. One-stop shops now provide newly created companies with electronic access to the tax authority's online platform and automatically make the founders' details available to the social security agency (EFKA) to speed up the social security registration process. Moreover, the 2016 investment law has allowed for the registration of new companies remotely through the e-one-stop shop and simplified licensing procedures. By the end of 2018 a more complete version of the electronic system covering licensing procedures is expected to be in place. The new system is also expected to make inspections more effective by, among other things, prioritising them based on risk assessments and enabling the exchange of information among competent authorities. The e-one-stop shop is expected to provide services for free during the first year of operation. The government should make sure one-stop shops have the resources and capabilities to perform their tasks effectively.

Also, reaping the full benefits of recent progress will require streamlining cumbersome regulation and improving the public administration efficiency. The "silence is consent" rule, whereby licences are automatically issued if the competent authority does not act within the statutory period, could be expanded.

Greece attracts little foreign direct investment (FDI) despite lower FDI restrictions than many OECD countries (Figure 35; Figure 36). Attracting more FDI hinges on improving the business environment by lowering product market restrictions, improving the quality of institutions and the efficiency of the public administration. The World Economic Forum (WEF, 2017) ranks Greece 130th out of 137 countries for the burden of government regulation, 112th as regards FDI and technology transfer and 61st for the protection of intellectual property rights in 2017.

Improving the business environment will enable to reap the full benefit of the 2016 law establishing state aid schemes for private investment. This law introduces a range of financial incentives covering tangible and intangible capital with the aim of attracting FDI in addition to encouraging entrepreneurships, innovative SMEs and innovation clusters. Incentives for major investment projects include a fixed corporate income tax rate for 12 years, tax exemption equal to 10% of eligible expenditure (capped at EUR 5 billion) and fast track licencing procedures.

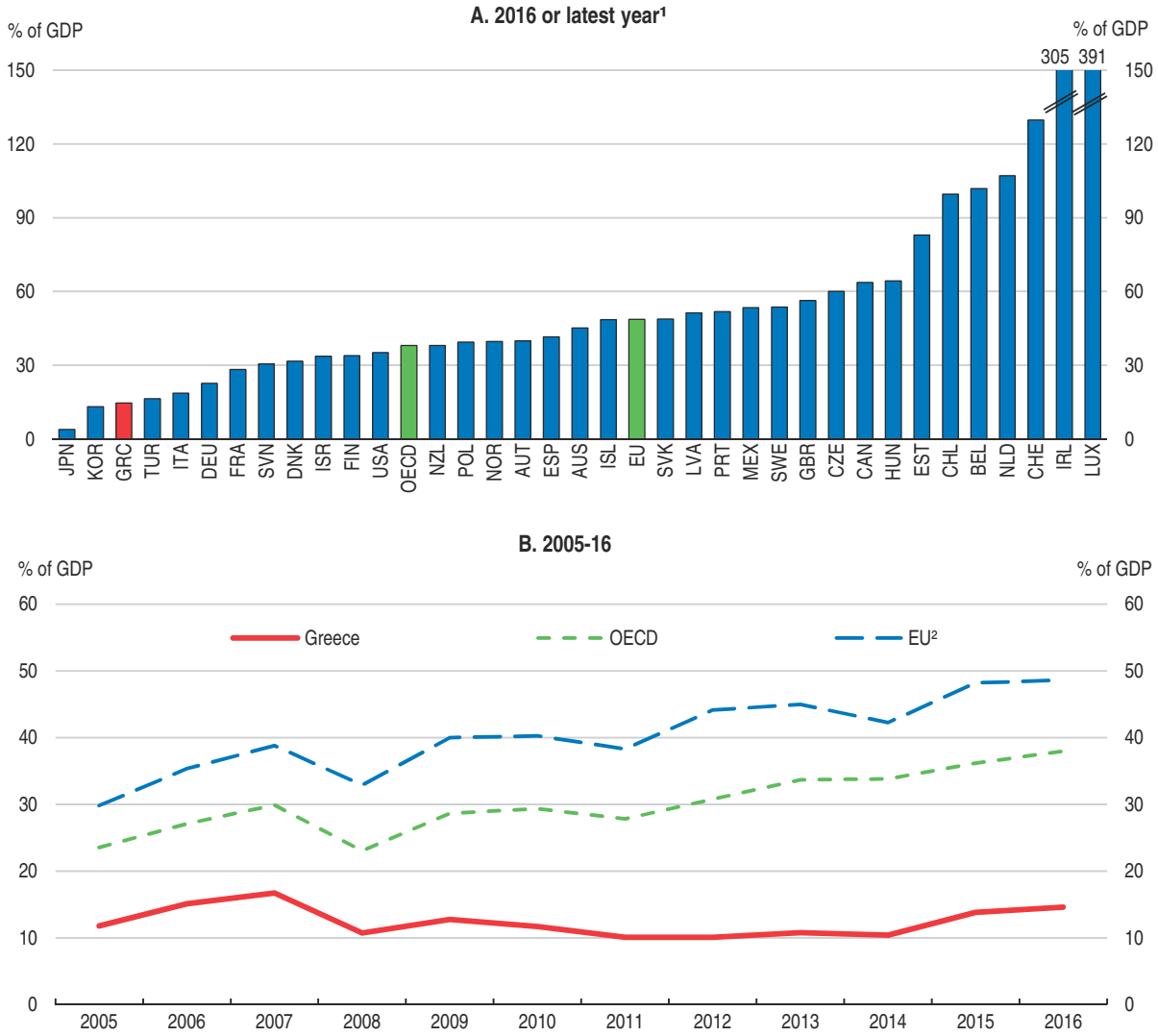
Improving the quality of regulation and fighting corruption

Greece has a well-developed framework to ensure the quality of regulation. The 2012 law on Better Regulation states basic principles for regulation, such as efficiency and transparency. Draft regulations are published on a portal (*www.opengov.gr*). Public consultations are usually informal but it is unclear how comments received are considered. The law also requires an *ex ante* regulatory impact assessment (RIA) for every legislative draft or amendment to existing regulations and an *ex post* impact assessment. *Ex post* reviews of existing regulations have been used rarely (Figure 37). To address this, the Ministry of Administrative Reconstruction is beginning an extensive evaluation of existing legislation, with a view to curtail the large "stock" of regulations.

Major challenges, however, persist in fully implementing the law on Better Regulation (OECD, 2015d). The Better Regulation Office (BRO) lacks budget and skills. RIA quality is often poor due to the limited time to develop new drafts. Responsibilities for regulatory policy are fragmented between the Ministry of Interior, the Ministry of Administrative

Figure 35. **Greece's inward FDI stocks are low but have improved recently**

FDI inward stocks



1. 2015 for Mexico.
2. EU25 for data between 2004 and 2006, EU27 for data between 2007 and 2012 and EU28 from 2013.

Source: OECD (2018), "FDI statistics according to Benchmark Definition 4th Edition (BMD4): Foreign direct investment: Main aggregates", *OECD Globalisation Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713821

Reconstruction, the General Secretariat of the Government (by means of the BRO), the Ministry of Finance, and other bodies in individual ministries. The BRO oversees the quality of RIAs but has no power to reject low-quality draft RIAs. To address these issues, the Greek Government is currently preparing a study, in co-operation with the European Commission, on the creation of a data analysis unit, which would provide quantitative analysis underpinning *ex ante* and *ex post* assessment of business-related legislation.

The government should simplify the allocation of responsibilities among the different agencies assessing the quality of regulation. Training civil servants on regulatory quality would build the skills of staff at the BRO and other agencies and facilitate the implementation of the Better Regulation framework. Creating internal networks of civil servants having

Past OECD recommendations on product markets

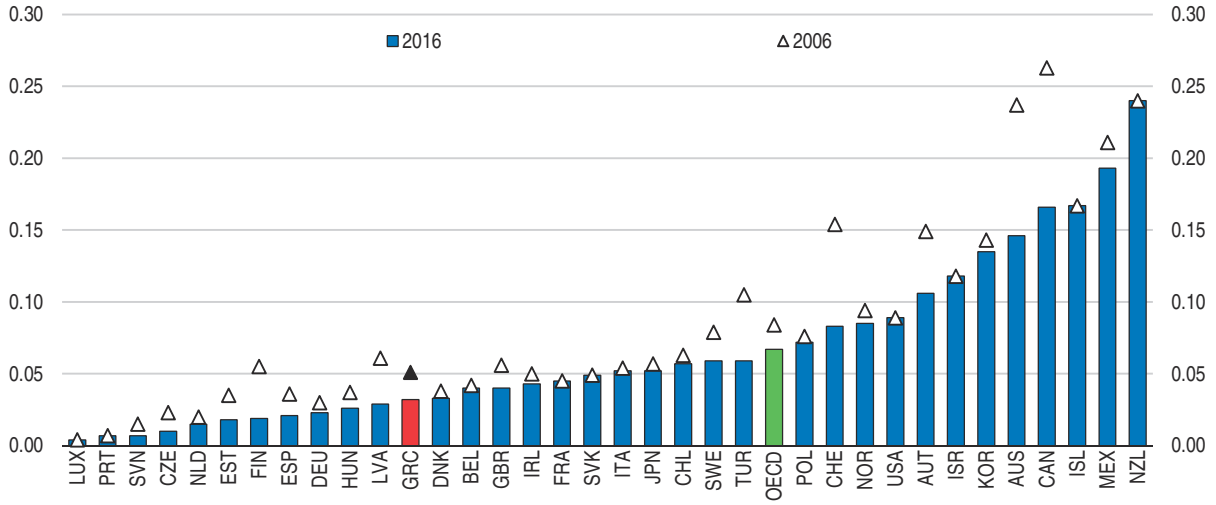
Recommendations	Action taken since the previous *Survey*
Ease regulations in network industries and strengthen the capacity and independence of regulatory agencies.	Easing of regulation to facilitate entry is in progress for the electricity and gas sectors (see below); the train operator has been privatised; horizontal review of independent agencies is ongoing which should lead to changes in primary and secondary legislation.
Swiftly implement the planned creation and privatisation of new competitors in the electricity market. Further promote competition in the gas supply sector.	The market share of the incumbent in the electricity sector for lignite-fired generation sets to decrease to below 50% through disinvestment and increase of auctions for electricity generation by the incumbent; in the gas market the liberalisation process continues to be implemented; customers will be able to choose their supplier from Jan 2018.
Fully operationalise the national single window for exports as foreseen by the National Trade Facilitation Strategy.	Not yet fully implemented; the upgrading of the "Agora" information portal into a unified platform to help exporters link with foreign markets is facing delays; the upgrading of helpdesk service is in progress; training programmes for exporters started in March 2017; workshops have spread information about export promotion activities and existing financial measures; new incentives and financial tools in co-operation with EIB have been introduced to help SMEs to export;
Liberalise cabotage and eliminate discriminatory port charges to reduce times for export.	Law 3872/2010 as amended by 4072/2012 eliminated cabotage for cruise ships.
Strengthen the Hellenic Competition Commission's advocacy work by allocating more resources to its work outside the area of law enforcement.	Some progress. The HCC opened a call centre in November 2016, staffed by competition law and economics experts.
Reduce restrictions to competition in sectors such as manufacturing, construction and wholesale.	Ongoing progress. 365 out of the 366 OECD Competition Assessment (Toolkit 3) recommendations on reducing restrictions to competition were adopted up to January 2018. Inconsistencies in regulations have been addressed.
Facilitate licensing by implementing a one-stop shop for operating a business and reduce regulatory burdens by using regulatory impact assessments and policies such as "one-in-two-out" more systematically.	One-stop shops for starting a business are operating and their mandate has been expanded to tax- and insurance-related procedures, under law 4441/2016. Law 4442/2016 has simplified the licensing procedure and, by the end of 2018, most non-financial sectors will fall under the simplified procedure, allowing businesses to operate via electronic start-up notification. A new law was introduced in January 2018 to set common rules on inspections for all sectors of the economy. The framework for regulatory impact assessments is in place, but the process is complex and human resources are lacking.
Ease the remaining barriers to trade and investment that prevent Greece from expanding its exports, such as limitation on foreign equity participation in maritime services or airport regulations.	No specific progress but 14 regional airports have been privatised and a terms of reference for a general transport master plan has been approved (covering road, railways, maritime, air and multi-modal, including logistics aspects) which will form the basis for establishing a long-term strategy for the transport sector.
Fully implement the new export promotion action plan to promote exports and help SMEs reach international markets.	Ongoing progress. The upgrading of helpdesk services is in progress. The upgrading of the "Agora" information portal into a unified platform to support exporters' links with foreign markets is facing difficulties related to co-operation between Greek authorities. Training programmes for exporters started in March 2017. Entrepreneurship guides have been prepared. Workshops have disseminated information about export promotion activities and existing financial tools. SMEs are financially supported through a range of options covering EU structural funds, new investment incentives (set in the 2016 Investment Law) and financial tools in co-operation with EIB i.e. Equifund.
Further reduce regulatory procedures and administrative burdens on start-ups to enhance productivity and investment.	Limited progress. Web platform "StartupGreece" established, to provide information and networking for entrepreneurs.
Plan an assessment of the recent Hellenic Competition Commission's reform over the next two-to-three years to assess whether HCC's capacity for determining its case priorities is working.	Some progress. Classification System for the prioritisation of pending cases upgraded by Directorate-General for Competition (GDD) at the HCC. Electronic filing of cases established.

expertise on regulatory quality, as in the Netherlands and the United Kingdom (OECD, 2015d), could be beneficial to spread knowledge and best practices.

The ongoing fight against corruption and bribery is a key element of public administration reform and is paramount to improving the business environment. Across countries effective control of corruption is positively associated with the capacity to innovate and retain talented people (Figure 38). In 2015, the government established the General Secretariat Against Corruption (GSAC) inside the Ministry of Justice, Transparency and Human Rights, replacing national co-ordinator against corruption under the Prime Minister,

Figure 36. **FDI regulatory restrictiveness are low compared to other OECD countries**

FDI regulatory restrictiveness index, scale from 0 (open) to 1 (closed)



Note: The index reports statutory restrictions on foreign direct investment across the four main types of restrictions: foreign equity limitations; discriminatory screening or approval mechanisms; restrictions on the employment of foreigners as key personnel; and, other operational restrictions. The overall restrictiveness index is the average of sectoral scores.

Source: OECD (2017), *OECD FDI Regulatory Restrictiveness Index Database*.

StatLink http://dx.doi.org/10.1787/888933713840

and it revised the National Anti-Corruption Action Plan (NACAP). It is receiving technical assistance from the OECD to implement the NACAP (Box 1). Progress so far highlights the importance of a whole-of-government and society-wide approach to advancing anticorruption efforts and the NACAP. Specific strategies to fight fraud and corruption should target high-risk policy fields and sectors, such as public procurement – including public works – local governments, state aid and subsidies, and health and social welfare services. Ongoing efforts should also focus on developing a robust corruption and fraud risk-management system across public organisations, within a legal framework that is robust and stable.

Accelerating insolvency proceedings

Long and costly insolvency procedures trap capital and other resources in low productivity firms. Evidence suggests that a nontrivial share of the collapse in aggregate business investment in Greece is attributable to the survival of non-viable "zombie" firms (i.e. firms having problems meeting their interest payments) (Adalet McGowan et al., 2017; Figure 39).

Greece's Bankruptcy Code governs the legal framework of insolvencies. Recent changes to the insolvency framework, as detailed in Chapter 1, have aimed at accelerating bankruptcies, enhancing pre-bankruptcy rehabilitation plans and facilitating the discharge of entrepreneurs (i.e. second chance). In 2017 the Greek Parliament legislated to facilitate out-of-court dispute resolution and speed up the settlement of debt of non-financial corporations and professionals. It allowed a debt settlement agreement to be binding on all creditors if it has been concluded between the debtor and creditors representing three-fifths of all claims and two-fifths of secured claims and ratified by the court. The last amendments on simplifying SME-related insolvency procedures were enacted in 2017. Also, electronic auctions are finally underway and are expected to accelerate enforcement procedures and to deter strategic defaulters.

Figure 37. **Regulatory governance can be improved, especially by extending the use of *ex post* evaluations**

Composite indicator,[1] 2014

1. The vertical axis represents the total aggregate score across the four separate categories of the composite indicators. The maximum score for each category is one, and the maximum aggregate score for the composite indicator is four.
2. This figure excludes the United States where all primary laws are initiated by Congress. In the majority of countries, most primary laws are initiated by the executive, except for Mexico and Korea where a higher share of primary laws are initiated by parliament or congress (respectively 90.6% and 84%).

Source: OECD (2015), *OECD Regulatory Policy Outlook 2015*.

StatLink http://dx.doi.org/10.1787/888933713859

Box 1. **The National Anti-Corruption Action Plan and Greece-OECD project on anti-corruption**

The main objective of the Greece-OECD project on anti-corruption activities is to strengthen and empower Greek authorities responsible for the implementation of the National Anti-Corruption Action Plan (NACAP). The overall aim of the NACAP is to better integrate anti-corruption activities in the government's reform agenda and private sector business models, as well as raising public awareness of anti-corruption efforts. It identifies key areas and detailed actions for reform.

The OECD's technical assistance has 10 objectives, including: the modernisation of internal and external audit mechanisms; development of specific anti-corruption approaches for high-risk policy areas; strengthening the General Secretariat against Corruption; enhancing anti-corruption awareness across all stakeholders; strengthening whistleblower protection in the public and private sectors; improving processing of corruption complaints; improving integrity safeguards through enhanced Asset Declaration and Political Financing systems; enhancing mutual legal assistance and asset recovery arrangements; empowering law enforcement agencies; and promoting anti-corruption corporate compliance programmes.

Following the plan and its main objectives, the OECD is helping to improve internal audit across central administration so as to enhance accountability and good governance. Activities on specific high-risk areas cover health, tax and customs, public procurement, local government entities, defence procurement, and public and private investments. The Ministry of Health has fully endorsed the OECD proposals and included them in the Ministry's action plan. Other activities with the Ministry of Education aim at developing approaches to integrate anti-corruption related concepts within the education system.

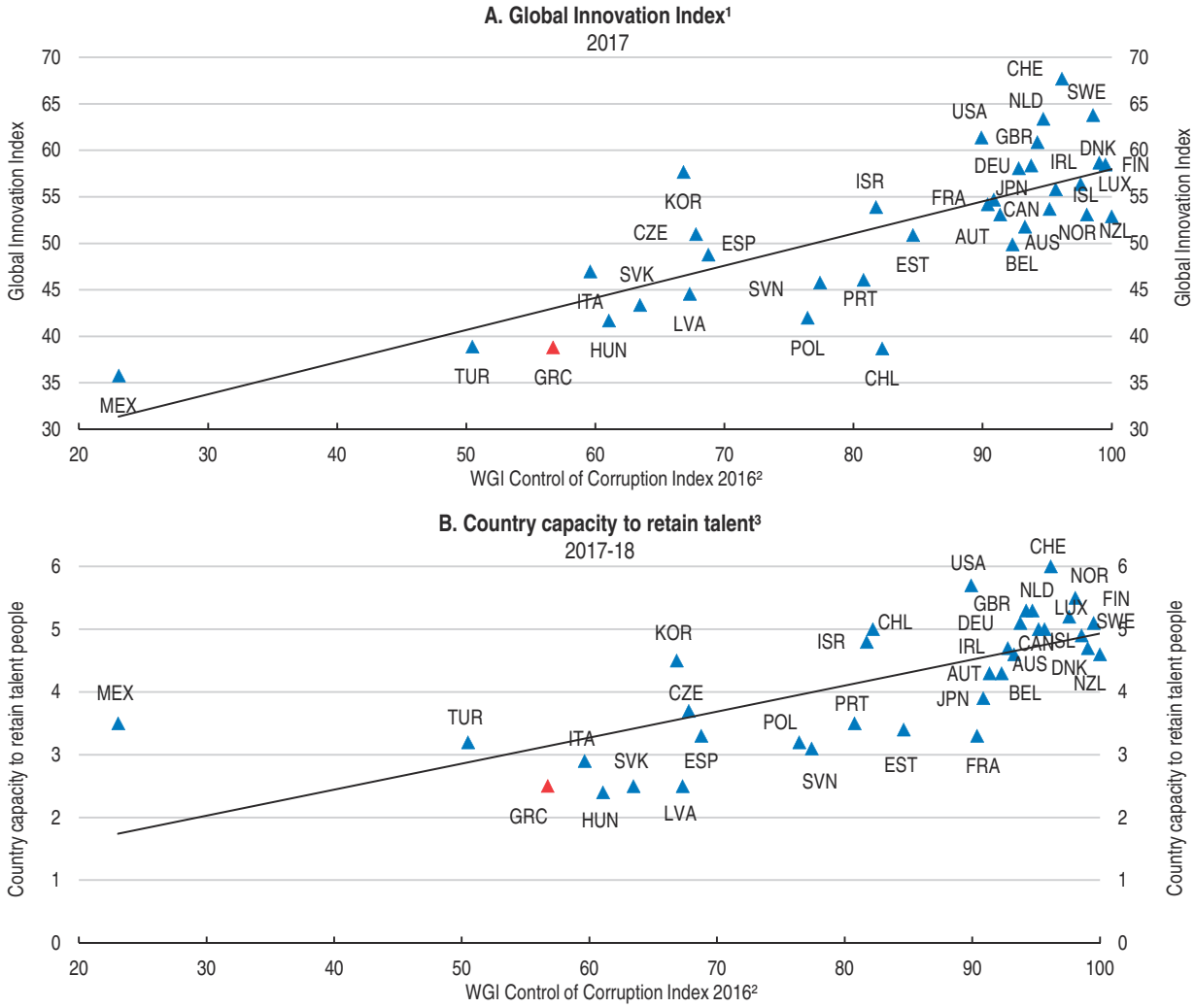
Activities to enhance anti-corruption awareness across all stakeholders have involved highly visible activities such as a nation-wide public opinion survey on corruption experiences, a public integrity hackathon to identify innovative tools to foster transparency and integrity, the first Public Integrity Forum, which attracted more than 400 participants, and a series of workshops to engage the private sector and law enforcement.

Source: Report from the 3rd Steering Committee of the project "Technical Support on Anti-Corruption in Greece", held on 13 July 2017.

OECD recommendations on public sector efficiency and government reforms

Recommendations	Action taken since the previous *Survey*
Adopt key structural reforms to boost growth and enhance administrative capacity to improve overall reform implementation.	Public administration reforms have continued in different areas such as introducing mobility of civil servants and performance evaluation system, and the depoliticisation of secretary generals.
Speed up the modernisation of the public employment service.	A law to introduce a mobility scheme of civil servants across the public administration was approved in 2016 (Law 440/2016) and is being implemented. A law to rationalise specialised wage grids following the methodology of the unified wage grid has been approved. A new system has been introduced for the selection of public sector managers based on clear job descriptions, recognition of private sector experience and structured interviews. A performance evaluation scheme is being implemented, and is planned to be digitalised in 2018.
Reduce delays and backload of cases in the judiciary by using more e-justice tools, training judges, expanding out-of-court settlements, model cases and specialised competition courts.	Out-of-court settlements have been developed; priority is being given to develop specialised judges rather than specialised courts.
Increase reform ownership by quantifying and communicating the benefits of reforms. Improve data collection and dissemination to better monitor implementation and outcomes of structural reforms.	The General Secretariat for Coordination has been established. Website www.opengov.gr provides updated information on different government initiatives including recruitment, almost all legislation and policy initiative by the government but not quantification of reforms. Improved data collection through the labour and social security IT systems is ongoing.
Build capacity to assess the impact of reforms and reinforce co-ordination across line ministries.	Individual ministries and agencies are quantifying the effects of specific reforms, but not in a consistent or co-ordinated manner.
Empower the General Secretariat responsible for steering the reforms within the Prime Minister's office, with adequate resources to arbitrate, co-ordinate and supervise implementation of the reforms.	General Secretariat for Co-ordination is intended to fulfil this role.

Figure 38. **Control of corruption is positively associated with capacity to innovate and retain talent**



1. The Global Innovation Index measures the innovation performance of 127 economies and comprises 81 indicators over a broad vision of innovation, including political environment, education, infrastructure and business sophistication. It ranges from 0 to 100 (best performance).
2. The Control of Corruption Index is a component of the Worldwide Governance Indicators. It reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The data is percentile rank among 127 countries, ranging from 0 to 100 (highest rank).
3. Refers to a component of the World Economic Forum Global Competitiveness Index, which ranges from 1 (not at all) to 7 (to a great extent).

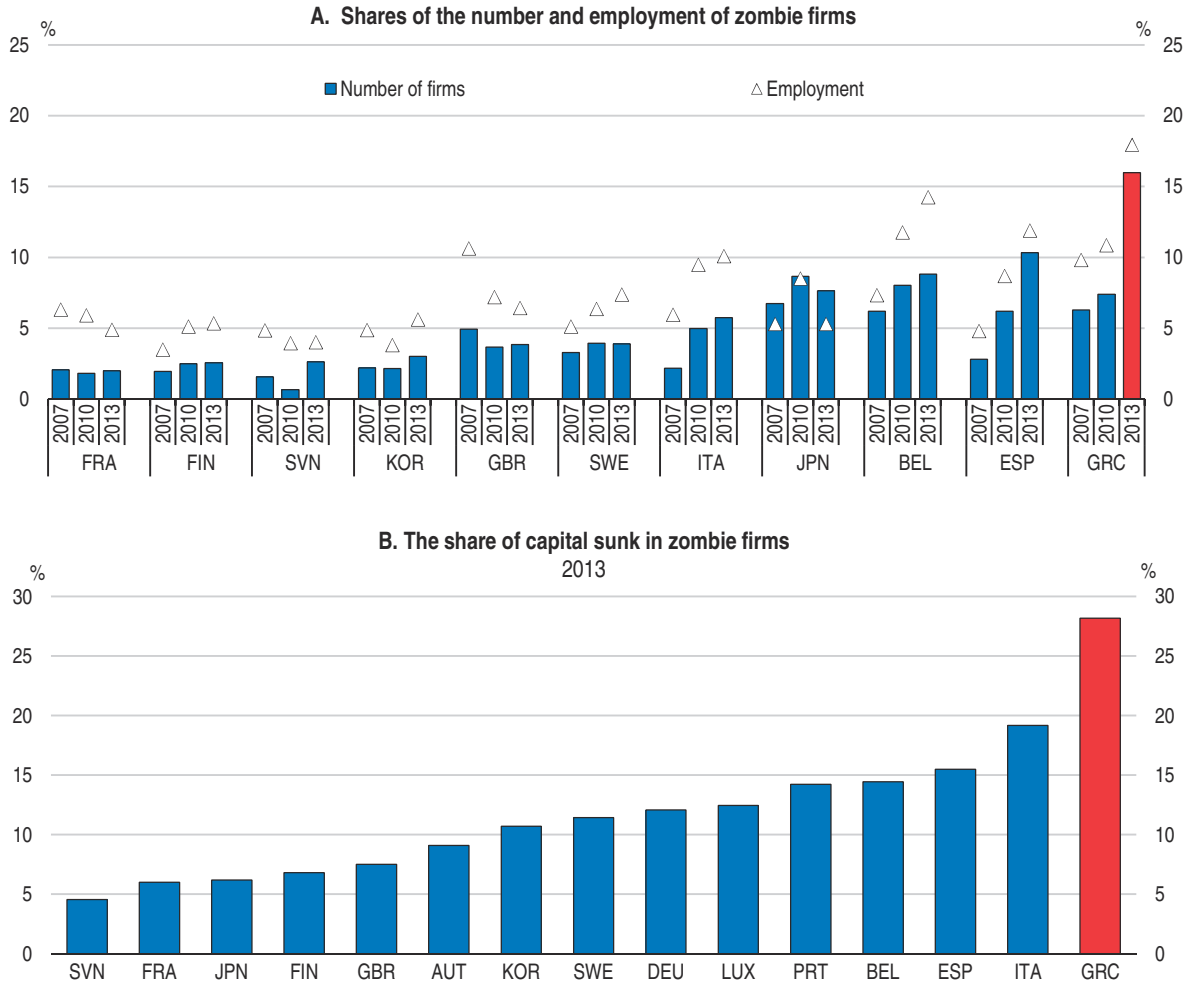
Source: World Bank (2017), *Worldwide Governance Indicators* (WGI); Cornell University, INSEAD and WIPO (2017), *Global Innovation Index 2017*; and World Economic Forum (2017), *Global Competitiveness Index 2017-2018*.

StatLink http://dx.doi.org/10.1787/888933713878

Overall, these changes to the insolvency framework and out-of-court business dispute resolution mechanism go in the right direction and Greece's insolvency regime has improved markedly since 2010 (Figure 40). Despite this progress however, recovery rates remain low and insolvency proceedings slow compared to most OECD countries (Figure 41).

The government should ensure that approved reforms are effectively and timely implemented. For instance, the first electronic auctions started in November 2017, though the legislation and a pilot version of the platform was ready in mid-2017. The results of the

Figure 39. **Large shares of employment and capital are trapped in zombie firms**



Note: Zombie firms are defined as firms aged 10 years or older and with an interest coverage ratio less than 1 over three consecutive years. Capital stock and employment refer to the share of total capital and labour that are in zombie firms. The sample excludes firms that are larger than 100 times the 99th percentile of the size distribution in terms of capital stock or number of employees.
Source: Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

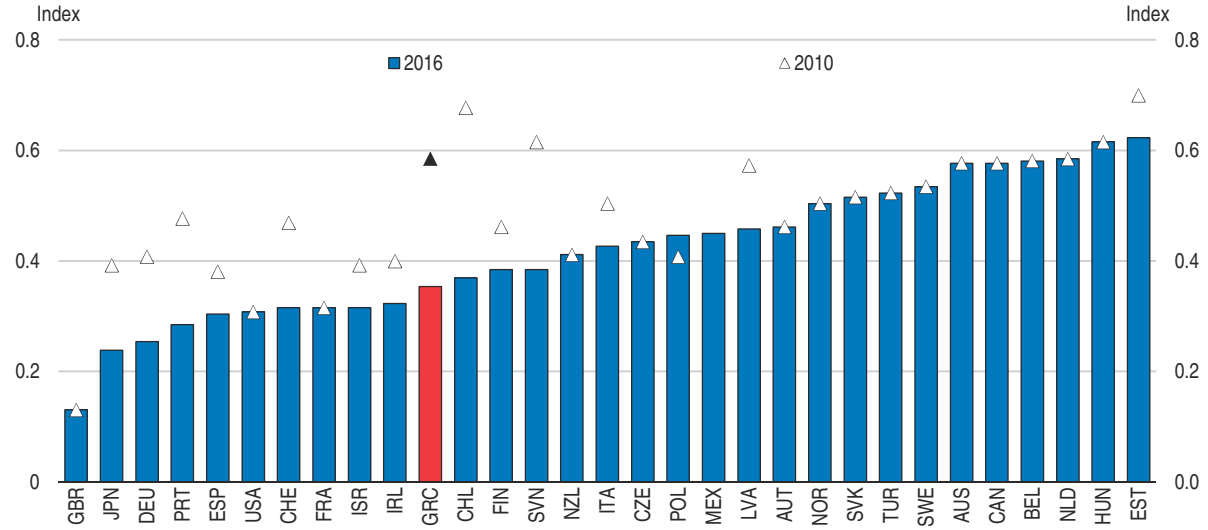
StatLink http://dx.doi.org/10.1787/888933713897

first electronic auctions show they have the capacity to push strategic defaulters to repay loans. The government should ensure electronic auctions proceed unimpeded. Besides, the government should ensure sufficient well-trained insolvency professionals are available. The first cohort of insolvency professionals became available in September 2017. Training should cover not only insolvency laws and regulations but also finance and economics so as that insolvency professionals can effectively and efficiently steer liquidation and restructuring processes. The government also needs to make further progress on establishing an insolvency registry, following international best practices.

The efficiency of the insolvency regime is intertwined with that of the judicial system. This is especially important in Greece as the new insolvency framework passed in 2016 applies only to proceedings started after 22 December 2016, meaning that the previous regime continues to apply to existing cases. Greece is among the countries with the lengthiest trials and highest litigation rates (OECD, 2013b). The World Bank's Doing Business

Figure 40. **Greece's insolvency framework has improved**

Insolvency indicator



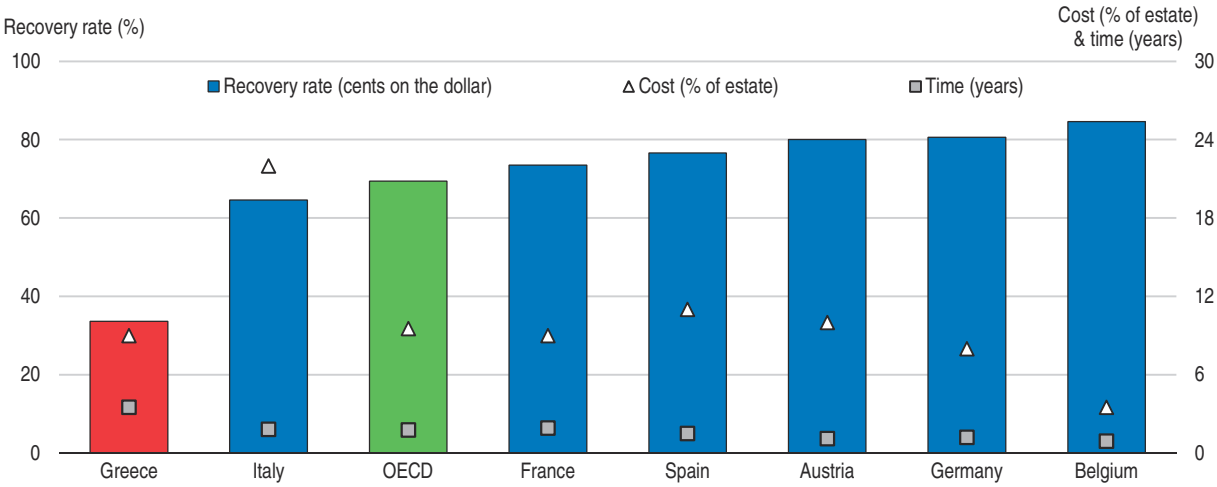
Note: The indicator is a composite that aggregates 13 insolvency indicators across 4 dimensions: treatment of failed entrepreneurs; prevention and streamlining; restructuring tools; and other factors. Calculations are based on the OECD questionnaire on insolvency regimes which collected specific information (mostly in the form of Yes/No questions and numbers) about personal and corporate insolvency regimes for 35 OECD member and 11 non-member countries.

Source: Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933713916

Figure 41. **Insolvency proceedings in Greece are slow and the asset recovery rate is low**

2018[1]



Note: Time for creditors to recover their credit is recorded in calendar years and the period of time is measured from the company's default until the payment of some or all of the money owed to the bank. Potential delaying tactics by the parties, such as the filing of dilatory appeals or requests for extension, are taken into consideration. The cost of the proceedings is recorded as a percentage of the value of the debtor's estate. The cost is calculated on the basis of questionnaire responses and includes court fees and government levies; fees of insolvency administrators, auctioneers, assessors and lawyers; and all other fees and costs. The recovery rate is calculated based on the time, cost and outcomes of insolvency proceedings and is recorded as cents on the dollar recovered by secured creditors. The calculation takes into account whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. The costs of the proceedings are deducted. The value lost as a result of the time the money remains tied up in insolvency proceedings is also deducted. The recovery rate is the present value of the remaining proceeds.

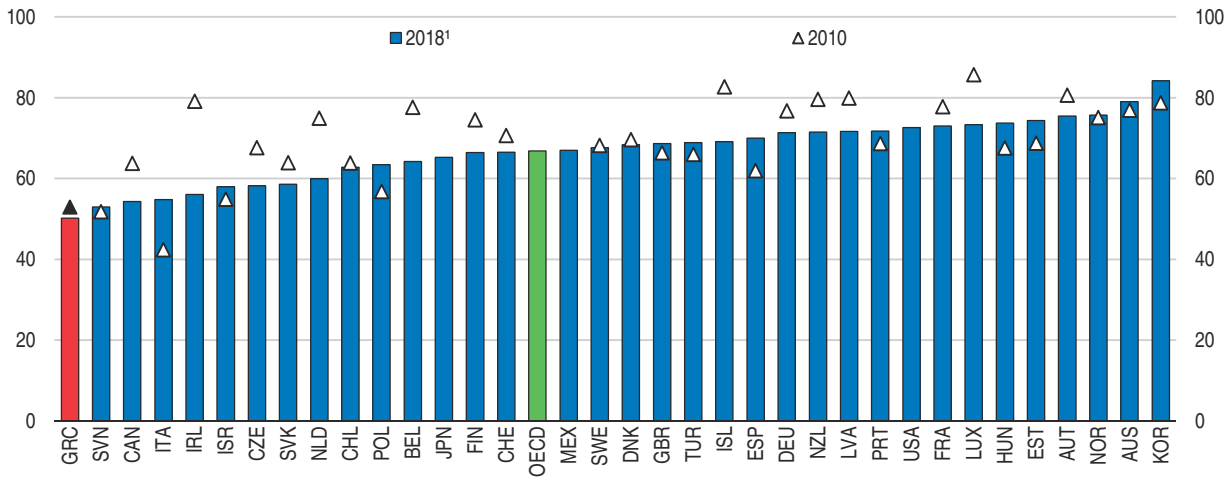
1. Reference year of database. The 2018 database reports the data collection completed in June 2017.

Source: World Bank (2018), *Doing Business 2018* (database).

StatLink http://dx.doi.org/10.1787/888933713935

Figure 42. **Enforcement of contracts is weak**

Index scale from 0 to 100, 100 indicating strongest performance



Note: The index reports the distance of each economy from the best performance observed on each of the indicators across all economies.

1. Reference year of database. The 2018 database reports the data collection completed in June 2017.

Source: World Bank (2018), *Doing Business 2018* (database).

StatLink http://dx.doi.org/10.1787/888933713954

Indicator also suggests that enforcing contracts is difficult in Greece relative to OECD countries (Figure 42).

The digitalisation of the justice system is an important and thus far underutilised tool to improve the efficiency of Greece's justice system. Across countries, the budget devoted to digitalisation is associated with a shorter trial length (Palumbo et al., 2013). Finland's Insurance Court provides a successful example of applying case-flow management along with an advanced time-frame alarm system enabled by digital technologies (Pekkanen et al., 2015).

References

Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

Al-Hassan, A., M. Papaioannou, M. Skancke and C. Sung (2013), "Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management", *IMF Working Paper*, No. 13/231, *www.imf.org/en/Publications/WP/Issues/2016/12/31/Sovereign-Wealth-Funds-Aspects-of-Governance-Structures-and-Investment-Management-41046* (accessed 7 December 2017).

Artavanis, N., A. Morse and M. Tsoutsoura (2016) "Measuring Income Tax Evasion Using Bank Credit: Evidence from Greece", *The Quarterly Journal of Economics*, Vol. 131, No. 2, pp 739-798.

Athanassiou, E., N. Kanellopoulos, R. Karagiannis and A. Kotsi (2015), "The Effects of Liberalization of Professional Requirements in Greece", Centre of Planning and Economic Research (KEPE), *mimeo*, October.

Bank of Greece (2016), "Greek banks after the recapitalisation: The agenda for NPL resolution", presentation, EBRD / BoG Workshop: "Distressed loans in the Greek banking system: Restructuring portfolios, reviving enterprises", Athens, 10 March 2016.

Bank of Greece (2017), *Report on Targets for Non-Performing Exposures*, December, Bank of Greece, Athens.

Bitzenis, A., V. Vlachos and F. Schneider (2016), "An exploration of the Greek Shadow Economy: Can its Transfer into the Official Economy Provide Economic Relief amid the Crisis", *Journal of Economic Issues*, Vol. L(1), 165-196.

Bova, E., R. Dippelsman, K. Rideout, and A. Schaechte (2013), "Another Look at Governments' Balance Sheets: The Role of Nonfinancial Assets", IMF *Working Paper*, 13/95, *www.imf.org/external/pubs/ft/wp/2013/wp1395.pdf*.

Card, D., J. Kluve and A. Weber (2015), "What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations", *IZA Discussion Paper*, No. 9236, *www.ftp.iza.org/dp9236.pdf*.

Causa, O., M. Hermansen and N. Ruiz (2016), "The Distributional Impact of Structural Reforms", *OECD Economics Department Working Papers*, No. 1342, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jln041nkpwc-en*.

Dellas, H., D. Malliaropulos, D. Papageorgiou and E. Vourvachaki (2017), "Fiscal Policy with an Informal Sector", *Bank of Greece Working Paper*, No. 235.

EBA (2017), *Risk Dashboard Data as of Q3 2017*, European Banking Authority, available at *www.eba.europa.eu/risk-analysis-and-data/risk-dashboard*.

Eichengreen, B. and U. Panizza (2014), "A Surplus of Ambition: Can Europe Rely on Large Primary Surpluses to Solve its Debt Problem?", *NBER Working Paper*, No. 20316.

Emmanouil, C., E. Drositi, V. Vasilatou, E. Diapouli, K. Krikonis, K. Eleftheriadis and A. Kungolos (2017), Study on particulate matter air pollution, source origin, and human health risk based of PM10 metal content in Volos City, Greece", *Toxicological & Environmental Chemistry*, 99:4, 691-709, *http://dx.doi.org/10.1080/02772248.2016.1242005*.

European Central Bank (2016), "Stocktake of national supervisory practices and legal frameworks related to NPLs", September, European Central Bank, Frankfurt am Main.

European Central Bank (2017), "Opinion of the European Central Bank of 15 March 2017 on Certain Amendments to the deferred Tax Assets Legal Framework in Greece", CON/2017/7.

European Commission (2014), *Guide to Cost-Benefit Analysis of Investment Projects: Economic appraisal tool for Cohesion Policy 2014-2020*, European Commission, Directorate-General for Regional and Urban policy, Brussels, December 2014, *http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf* (accessed 13 September 2017).

European Commission (2015), *Improving VAT compliance – random awards for tax compliance*, European Union: Brussels, *http://ec.europa.eu/taxation_customs/taxation/index_en.htm*.

European Commission (2017a), "The EU Environmental Implementation Review Country Report – GREECE", *European Commission Staff Working Document*, SWD (2017) 41 final, *http://ec.europa.eu/environment/eir/pdf/report_el_en.pdf*

European Commission (2017b), "Compliance Report of the Third Economic Adjustment Programme for Greece: Second Review – June 2017", Directorate General for Economic and Fiscal Affairs, *https://ec.europa.eu/info/sites/info/files/compliance_report-to_ewg_2017_06_21.pdf* (accessed 20 November 2017).

European Commission (2018), "Compliance Report: ESM Stability Support Programme for Greece – Third Review, January 2018", Directorate General for Economic and Financial Affairs, *https://ec.europa.eu/info/sites/info/files/economy-finance/compliance_report_-_3rd_review.pdf* (accessed 2 February 2018).

European Commission (forthcoming), "2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)", Directorate General for Economic and Financial Affairs, Economic Policy Committee.

European Environment Agency (2017), *Greek bathing water quality in 2016*, European Environment Agency Country Report, *www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water/country-reports-2016-bathing-season/greece-2016-bathing-water-report/view* (accessed 10 October 2017).

Gale, W. and A. Samwick (2016), "Effects of Income Tax Changes on Economic Growth", *Brookings Papers*.

Hellenic Bank Association (2017), *Documentation Data on the Operation of the Greek Banking System*, *www.hba.gr/UplDocs/HBA_GreekBankingSystem_January2017_EN.pdf* (accessed on 20 November 2017).

Hellenic Financial Stability Fund (2010), *HFSF operational strategy*, *www.hfsf.gr/files/operationalstrategy.pdf* (accessed 20 November 2017).

Hellenic Financial Stability Fund (2016), "Updated Analysis of Non-Regulatory Constraints and Impediments for the development of an NPL market in Greece", September.

Hondroyiannis, G. and D. Papaoikonomou (2017), "The Effect of Card Payments on VAT Revenue in Greece", *Economic Letters*, Vol. 157, 17-20.

IMF (2006), "Greece: Financial System Stability Assessment, including Reports on the Observance of Standards and Codes on the following topics, Banking Supervision, Insurance Supervision, Securities Regulation, and Anti-Money Laundering and Combating the Financing of Terrorism", *IMF Country Report*, No. 06/6.

IMF (2013), "Reassessing the Role and Modalities of Fiscal Policy in Advanced Economies", *Policy Paper*.

IMF (2015), "Euro Area Policies: Selected Issues", *IMF Country Report*, No. 15/205, *www.imf.org/external/pubs/ft/scr/2015/cr15205.pdf*.

Immervoll, H. and M. Pearson (2009), "A Good Time for Making Work Pay? Taking Stock of In-Work Benefits and Related Measures across the OECD", *OECD Social, Employment and Migration Working Papers*, No. 81, OECD Publishing, Paris, *http://dx.doi.org/10.1787/225442803245*.

KPMG (2016), *Sales of distressed portfolios*, Presentation at the Bank of Greece conference "*Distressed loans in the Greek banking system: Restructuring portfolios, reviving enterprises*", *www.bankofgreece.gr/BoGDocuments/EBRD_Sales%20of%20Distressed%20Portfolios.pdf* (accessed August 2017).

Krever (2014), "Combating VAT Fraud: Lessons from Korea?", *British Tax Review*, Vol. 3, 303-315.

Lee, H. (2016), "Can Electronic Tax Invoicing Improve Tax Compliance? A Case Study of the Republic of Korea's Electronic Tax Invoicing for Value-Added Tax", *World Bank Policy Research Working Paper*, No. 7592.

Ministry of Education Research and Religious Affairs (2017a), *Three Year Plan*, *www.minedu.gov.gr/news/28206-19-05-17-to-trietes-sxedio-gia-tin-ekpaidefsi-plaisio-katefthynseon-kai-protaseis* (accessed on 06 June 2017).

Ministry of Education Research and Religious Affairs (2017b), *Reform and Upgrading of General Lyceum and New System of Admission to Higher Education (In Greek)*, *www.minedu.gov.gr/rss/29783-28-08-2017-metarrythmisi-kai-anavathmisi-tou-genikoy-lykeiou-kai-neo-systima-eisagogis-stin-tritovathmia-ekpaidefsi-3* (accessed on 31 August 2017).

Moody's (2016), "Moody's Revises Outlook on Greek Banking System to Stable From Negative Amid Profitability and Funding Improvements", *www.moodys.com/research/Moodys-Revises-Outlook-on-Greek-Banking-System-to-Stable-From--PR_358469* (accessed 20 November 2017).

Moody's (2017), "Moody's maintains stable outlook on the Greek banking system amid improved profitability prospects, balanced by still very high problem loans", *www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Greek-banking-system-amid--PR_366708* (accessed 20 November 2017).

Muehlbacher, S., E. Kirchler and H. Schwarzenberger (2011), "Voluntary Versus Enforced Tax Compliance: Empirical Evidence for the 'Slippery Slope' Framework", *Journal of Law and Economics*, Vol. 32(1), 89-97.

OECD (2005), *OECD Employment Outlook*, OECD Publishing, Paris.

OECD (2010), *OECD Environmental Performance Reviews: Greece*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264061330-en*.

OECD (2013a), *Greece: Reform of Social Welfare Programmes*, OECD Public Governance Reviews, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264196490-en*.

OECD (2013b), *OECD Economic Surveys: Greece 2013*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-grc-2013-en*.

OECD (2015a), *How's Life? 2015: Measuring Well-being*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/how_life-2015-e*.

OECD (2015b), *OECD Employment Outlook 2015*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2015-en*.

OECD (2015c), *Immigrant Students at School: Easing the Journey towards Integration*, OECD Reviews of Migrant Education, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264249509-en*.

OECD (2015d), "Greece", in *OECD Regulatory Policy Outlook 2015*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264238770-23-en*.

OECD (2016a), *OECD Economic Surveys: Greece 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-grc-2016-en*.

OECD (2016b), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264252073-en*.

OECD (2016b), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264266490-en*.

OECD (2017a), *Tax Policy Reforms 2017: OECD and Selected Partner Economies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264279919-en*.

OECD (2017b), *Government at a Glance 2017,* OECD Publishing, Paris, *http://dx.doi.org/10.1787/gov_glance-2017-en*.

OECD (2017c), *OECD Employment Outlook 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2017-en*.

OECD (2017d), *Employment by education level (indicator)*, *http://dx.doi.org/10.1787/26f676c7-en* (last accessed on 20 November 2017).

OECD (2017e), *Education Policy in Greece: A Preliminary Assessment*, OECD Publishing, Paris.

OECD (2017f), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264276116-en*.

OECD (2017g), *Family Database: PF3.4: Childcare support*, *www.oecd.org/els/family/database.htm*, update 27 August, 2017.

OECD (2017i), "Education Policy in Greece: Targeted policy recommendations on school and school leader evaluation for improvement", OECD Publishing, Paris.

OECD (2017j), *Social spending* (indicator), *http://dx.doi.org/10.1787/7497563b-en*.

OECD (2017k), "Draft New OECD Jobs Strategy", COM/ECO/CPE/DELSA/ELSA(2017)2.

OECD (2017l), *Financial Incentives for Steering Education and Training, Getting Skills Right*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264272415-en*.

OECD (2017m), *How's Life in Greece,* OECD Publishing, Paris, available at *www.oecd.org/statistics/Better-Life-Initiative-country-note-Greece.pdf*.

OECD (2017n), *Labour Market Reforms in Portugal 2011-15: A Preliminary Assessment*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264269576-en*.

Palumbo, G. et al. (2013), "The Economics of Civil Justice: New Cross-country Data and Empirics", OECD Economics Department Working Papers, No. 1060, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k41w04ds6kf-en*.

Pekkanen et al. (2015), "Timeframe Alarm System: Designing a Practical Tool for Caseflow Management".

REN21 (2016), *RENEWABLES 2015 Global Status Report, www.ren21.net/wp-content/uploads/2015/07/REN12-GSR2015_Onlinebook_low1.pdf* (accessed 10 October 2017).

Slemrod, J. (2007), "Cheating Ourselves: The Economics of Tax Evasion", *Journal of Economic Perspectives*, Vol. 21, No. 1, pp. 25-48, *http://dx.doi.org/10.1257/jep.21.1.25*.

Stefan, G. (2015), "A Brief Analysis of the Administration Costs of National Social Protection Systems in EU member states", *Procedia Economics and Finance*, Vol. 30, pp 780-789, *http://dx.doi.org/10.1016/S2212-5671(15)01327-1*.

van Ours, J., G. Bosch, W. Däubler, I. Koukiadis, A. Fernandes, B. Veneziani, J. Jimeno and P. Martins (2016), "Recommendations Expert Group for the Review of Greek Labour Market Institutions", European Parliament, *www.ypakp.gr/uploads/docs/9946.pdf* (accessed 20 November 2017).

Watson Farley & Williams (2016), "New Regulation Framework for Non-performing Loans in Greece", *Briefing* June.

World Bank (2016), "Greece Social Welfare Review – Weathering the Crisis: Reducing the Gaps in Social Protection in Greece".

World Bank (2017), "Greece Social Welfare Review – Output D5: Reforming Social Welfare in Greece".

World Economic Forum (2017), *The Global Competitiveness Report 2017-2018*, Geneva, Switzerland, available, September 2017, *www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf* (accessed 20 November 2017).

World Intellectual Property Organisation (2013), *World Intellectual Property Indicators: 2013*, *www.wipo.int/edocs/pubdocs/en/intproperty/941/wipo_pub_941_2013.pdf* (accessed 1 December 2017).

Zettelmeyer, J., E. Kreplin and U. Panizza (2017), "Does Greece Need More Official Debt Relief? If So, How Much?", *Peterson Institute for International Economics Working Paper*, No. 17-6, *https://piie.com/system/files/documents/wp17-6.pdf*.

© OECD 2018

ANNEX

Progress in structural reforms

Recommendations	Action taken since the previous *Survey*
Fiscal issues	
Broaden the tax base and strengthen the tax administration by giving it more autonomy and freeing its resources for audits and enforcement.	The new Independent Authority for Public Revenues started operating in Jan 2017. Actions taken to spread the use of electronic payments include: requiring firms to pay salaries electronically for the cost to be deductible from the corporate tax base; requiring households to demonstrate minimum levels of purchases made by electronic means to be eligible for family tax credits; a monthly lottery based on the number of electronic transactions. Tax-free thresholds have been lowered. Further adjustments have been legislated to be implemented in 2020. In 2017, several social security agencies responsible also for collecting contributions were merged into a new social security agency (Unified Social Security Fund, EFKA). Also, the Centre for the Collection of Social Security Debt (KEAO) became part of EFKA.
Ensure gross financing needs for public debt are sustainable by continuing to credibly implement the ESM reform programme, and thus, if necessary, facilitate reaching an agreement on additional measures with creditors, such as, for example, extended grace and repayment periods	Progress on the ESM Stability Support Programme. Mid-2017 tranche approved. Standby agreement approved in principle by the IMF.
Undertake an expenditure review to create fiscal space for providing a comprehensive social safety net and expanding active labour market policies.	Expenditure review completed in October 2017 and informed the 2018 budget proposal. Dedicated unit established within the Ministry of Finance to conduct regular spending assessments.
Boost investment by frontloading the use of European structural funds, and better exploit available public land through concessions to support logistics investment.	The public investment programme continues to rely heavily on the European Structural Fund. The sale of 14 airports, agreed in 2015, was finalised in March 2017. Sale of the operating licence for the second largest port was agreed in April 2017. The train operator has been privatised. Structural funds have been allocated to expanding the cadastre. Approval of Law 4399/2016 ("Regulatory framework for the establishment of state aid schemes for private investments for the regional and economic growth of the country") providing a wide range of tax incentives to boost private-sector investment.
Financial stability policies	
Continue improving the bankruptcy framework to speed-up resolution of non-performing loans. Introduce effective incentives and performance targets for banks to monitor their progress in reducing non-performing loans.	Introduction of NPL reduction targets. Out-of-court restructuring procedures established. Licence regime for facilitating entry into the loan services industry introduced and additional licences being issued. Procedures for SME bankruptcies simplified and accelerated, expediting sales of movable and immovable property. Electronic auctions commenced. Legal protection of bank and public sector executives involved in write-offs of private debt.
Labour markets	
Reform labour market institutions and review the minimum wage taking into account fairness and efficiency considerations. Simplify the labour code.	Collective dismissal processes and approvals have become more transparent. No reforms made to minimum wage levels or setting processes. No reforms made to broader processes for agreeing workplace condition. Experts Group on Greek labour market institutions reviewed and submitted report in September 2016. Project to review and simplify labour code launched.
Education	
Increase the supply of childcare services and encourage flexible work arrangements.	Programme being developed for compulsory enrolment of 4 year old children in ECEC, under the supervision of MoERRA. Recipients of SSI, rolled out in February 2017, have prioritised access to childcare places.
Labour market programmes	
Condition access to unemployment benefits on stricter obligations for participation in training and employment service programmes. Extend this principle to active job search as the economy improves. Strengthen sanctions for non-compliance.	Eligibility and job search requirements for unemployment benefits were tightened for most cases, and extended to those in employment disputes. Guaranteed minimum income programme designed to include obligatory engagement with labour market programmes among recipients able to work..
Bring forward to the extent possible the implementation of the restructuring plan of the public employment service (OAED). Monitor closely the post-programme outcomes (such as job characteristics and earnings) of the activation programmes, and focus spending on those that prove successful.	Re-engineering of OAED is underway, including improved communications with employers to identify skill needs, and improved IT systems to allow staff to take a more active role in job matching. Labour and social security IT systems now allow better tracking of outcomes, but are yet to be used for performance assessments.

Recommendations	Action taken since the previous *Survey*
Consider over the longer term and the fiscal situation allowing, increasing the duration of unemployment insurance benefits by another year, but tapering the benefits over time. The net replacement rate of unemployment insurance benefits could also be brought closer to the international average.	No action. National roll-out of SSI may support the unemployed.
Social protection	
Make economic growth more inclusive by urgently adopting policies to reduce poverty and inequality and boost employment in the short run.	Pension spending continues to be curtailed, with benefit and contribution rules made more equitable. Social Solidarity Income (SSI) programme, transferring funds to low income households and improving their access to other social benefits, rolled out nationally in February 2017.
Implement the guaranteed minimum income, and introduce a targeted school meal programme and a housing assistance programme targeted at the poor.	Guaranteed minimum income, SSI, rolled-out nationally in February 2017 following pilots and trials. Take-up has been rapid. Service delivery components are being strengthened. A school meal programme targeting poor regions was trailed in the 2016-17 school year, and is legislated to expand during the 2017-19 school years. Various programmes to redesign housing assistance are being explored, to be implemented from 2019 subject to macroeconomic conditions. A modest rent relief targeted at very low income households expired at the end of 2016.
Conclude the reform of the pension system including a review of special regimes and introducing a basic pension in a fiscally sustainable way.	Pension reforms have progressed and continue as 2016 legislation is progressively implemented, including the ongoing consolidation of programmes and administration and adjustment of allowances rates. . Reforms in 2016: Integrated all public main pension funds into one Single Agency of Social Insurance (EFKA) and integrated all public supplementary pension and lump sum benefit funds; introduced a common 20% contribution rate for old-age pensions and 6.95% for health insurance; introduced a social solidarity allowance of EUR 360 for uninsured elderly persons; introduced a state-funded guaranteed national pension equal to the annual poverty threshold for a single person for 20 years of contributions; established a contributory pension; introduced a rule for increases in pension allowances linked with growth and inflation, to apply from 2022; decreased the upper ceiling for pensions; tightened eligibility rules for survivors' pensions; gradually phase-out the means-tested Social Solidarity Allowance (EKAS). EFKA also has responsibility for collecting all social security contributions and debt. Consolidating the debts should improve collection rates, which rose to EUR 1 billion in 2017, and lead to uncollectible debt being written off. May 2017 legislation introduced reforms to be implemented in January 2019: curtailing early retirement and unifying benefit formula; rationalising current pensions; increasing and harmonising contribution rates; and, retaining the guaranteed basic pension.
Introduce a well-targeted housing benefit.	Tentative progress. A modest rent relief targeted at very low income households expired at the end of 2016. A replacement, more generous programme is legislated to be implemented from January 2019 subject to macroeconomic conditions, but the programme design is still being determined.
Intensify controls on recipients of welfare benefits by increasing the frequency of re-assessments, as envisaged, and by ensuring effective monitoring and timely data.	Improvements to information systems and monitoring of labour income improve the tracking of beneficiaries' eligibility and receipts. No changes to the practical assessments for eligibility of various disability allowances, which are generally fragmented and vary across regions.
Strengthen the management of social welfare benefits by exerting more central control of earmarked grants to local authorities. Increase the accountability of local governments for the allocation of social spending through a more rigorous auditing system and by enhancing transparency with regard to the use of the grants.	Municipalities are now required to hold all funds in a consolidated treasury account. No action on auditing, or on broader consolidation of social protection systems managed by municipalities with central systems.
Intensify controls on recipients of welfare benefits, especially of disability benefits, by increasing the frequency of re-assessments, as envisaged, and by ensuring effective monitoring and timely data.	Strengthened database systems across labour and social welfare ministries, accompanied by broader push to electronic payments, improving ability to monitor beneficiaries' eligibility. Local one-stop service centres being established, to improve contact with beneficiaries.
Product markets	
Ease regulations in network industries and strengthen the capacity and independence of regulatory agencies.	Easing of regulation to facilitate entry is in progress for the electricity and gas sectors (see below); the train operator has been privatised; horizontal review of independent agencies is ongoing which should lead to changes in primary and secondary legislation.

Recommendations	Action taken since the previous *Survey*
Swiftly implement the planned creation and privatisation of new competitors in the electricity market. Further promote competition in the gas supply sector.	The market share of the incumbent in the electricity sector for lignite-fired generation sets to decrease to below 50% through disinvestment and increase of auctions for electricity generation by the incumbent; in the gas market the liberalisation process continues to be implemented; customers will be able to choose their supplier from Jan 2018.
Fully operationalise the national single window for exports as foreseen by the National Trade Facilitation Strategy.	Not yet fully implemented; the upgrading of the "Agora" information portal into a unified platform to help exporters link with foreign markets is facing delays; the upgrading of helpdesk service is in progress; training programmes for exporters started in March 2017; workshops have spread information about export promotion activities and existing financial measures; new incentives and financial tools in co-operation with EIB have been introduced to help SMEs to export;
Liberalise cabotage and eliminate discriminatory port charges to reduce times for export.	Law 3872/2010 as amended by 4072/2012 eliminated cabotage for cruise ships.
Strengthen the Hellenic Competition Commission's advocacy work by allocating more resources to its work outside the area of law enforcement.	Some progress. The HCC opened a call centre in November 2016, staffed by competition law and economics experts.
Reduce restrictions to competition in sectors such as manufacturing, construction and wholesale.	Ongoing progress. 365 out of the 366 OECD Competition Assessment (Toolkit 3) recommendations on reducing restrictions to competition were adopted up to January 2018. Inconsistencies in regulations have been addressed.
Facilitate licensing by implementing a one-stop shop for operating a business and reduce regulatory burdens by using regulatory impact assessments and policies such as "one-in-two-out" more systematically.	One-stop shops for starting a business are operating and their mandate has been expanded to tax- and insurance-related procedures, under law 4441/2016. Law 4442/2016 has simplified the licensing procedure and, by the end of 2018, most non-financial sectors will fall under the simplified procedure, allowing businesses to operate via electronic start-up notification. A new law was introduced in January 2018 to set common rules on inspections for all sectors of the economy. The framework for regulatory impact assessments is in place, but the process is complex and human resources are lacking.
Ease the remaining barriers to trade and investment that prevent Greece from expanding its exports, such as limitation on foreign equity participation in maritime services or airport regulations.	No specific progress but 14 regional airports have been privatised and a terms of reference for a general transport master plan has been approved (covering road, railways, maritime, air and multi-modal, including logistics aspects) which will form the basis for establishing a long-term strategy for the transport sector.
Fully implement the new export promotion action plan to promote exports and help SMEs reach international markets.	Ongoing progress. The upgrading of helpdesk services is in progress. The upgrading of the "Agora" information portal into a unified platform to support exporters' links with foreign markets is facing difficulties related to co-operation between Greek authorities. Training programmes for exporters started in March 2017. Entrepreneurship guides have been prepared. Workshops have disseminated information about export promotion activities and existing financial tools. SMEs are financially supported through a range of options covering EU structural funds, new investment incentives (set in the 2016 Investment Law) and financial tools in co-operation with EIB i.e. Equifund.
Further reduce regulatory procedures and administrative burdens on start-ups to enhance productivity and investment.	Limited progress. Web platform "StartupGreece" established, to provide information and networking for entrepreneurs.
Plan an assessment of the recent Hellenic Competition Commission's reform over the next two-to-three years to assess whether HCC's capacity for determining its case priorities is working.	Some progress. Classification System for the prioritisation of pending cases upgraded by Directorate-General for Competition (GDD) at the HCC. Electronic filing of cases established.
Innovation	
Enhance access to ICT networks and enable SMEs to engage in e-commerce to allow small firms to participate in global trade.	No progress.
Promote a venture capital system with important direct links to university research and innovation to boost entrepreneurship.	Access to venture capital is being developed in co-operation with external partners.
Public sector efficiency and government reforms	
Adopt key structural reforms to boost growth and enhance administrative capacity to improve overall reform implementation.	Public administration reforms have continued in different areas such as introducing mobility of civil servants and performance evaluation system, and the depoliticisation of secretary generals.
Speed up the modernisation of the public employment service.	A law to introduce a mobility scheme of civil servants across the public administration was approved in 2016 (Law 440/2016) and is being implemented. A law to rationalise specialised wage grids following the methodology of the unified wage grid has been approved. A new system has been introduced for the selection of public sector managers based on clear job descriptions, recognition of private sector experience and structured interviews. A performance evaluation scheme is being implemented, and is planned to be digitalised in 2018.

Recommendations	Action taken since the previous *Survey*
Reduce delays and backload of cases in the judiciary by using more e-justice tools, training judges, expanding out-of-court settlements, model cases and specialised competition courts.	Out-of-court settlements have been developed; priority is being given to develop specialised judges rather than specialised courts.
Increase reform ownership by quantifying and communicating the benefits of reforms. Improve data collection and dissemination to better monitor implementation and outcomes of structural reforms.	The General Secretariat for Coordination has been established. Website *www.opengov.gr* provides updated information on different government initiatives including recruitment, almost all legislation and policy initiative by the government but not quantification of reforms. Improved data collection through the labour and social security IT systems is ongoing.
Build capacity to assess the impact of reforms and reinforce co-ordination across line ministries.	Individual ministries and agencies are quantifying the effects of specific reforms, but not in a consistent or co-ordinated manner.
Empower the General Secretariat responsible for steering the reforms within the Prime Minister's office, with adequate resources to arbitrate, co-ordinate and supervise implementation of the reforms.	General Secretariat for Co-ordination is intended to fulfil this role.
Improving spending effectiveness in health care	
Target medical spending cuts. Further promote use of generics and cut excessive hospital administration costs. The rule imposing the replacement of only one in every five retiring civil servants should be relaxed in the case of nurses. If needed, the negative budget consequence can be offset by imposing a more stringent replacement rule for retiring doctors, given their high number.	Centralised health care procurement system; combat excess spending; hospital cost effectiveness and financial management; training of GP's; Health Technology Assessment Centre; workforce contact. To be implemented in January 2018.
To the extent fiscally sustainable, continue to extend measures to ensure health care access for unprotected and vulnerable groups.	Social solidarity income recipients are eligible for access to free healthcare and pharmaceuticals.

Thematic chapters

© OECD 2018

Chapter 1

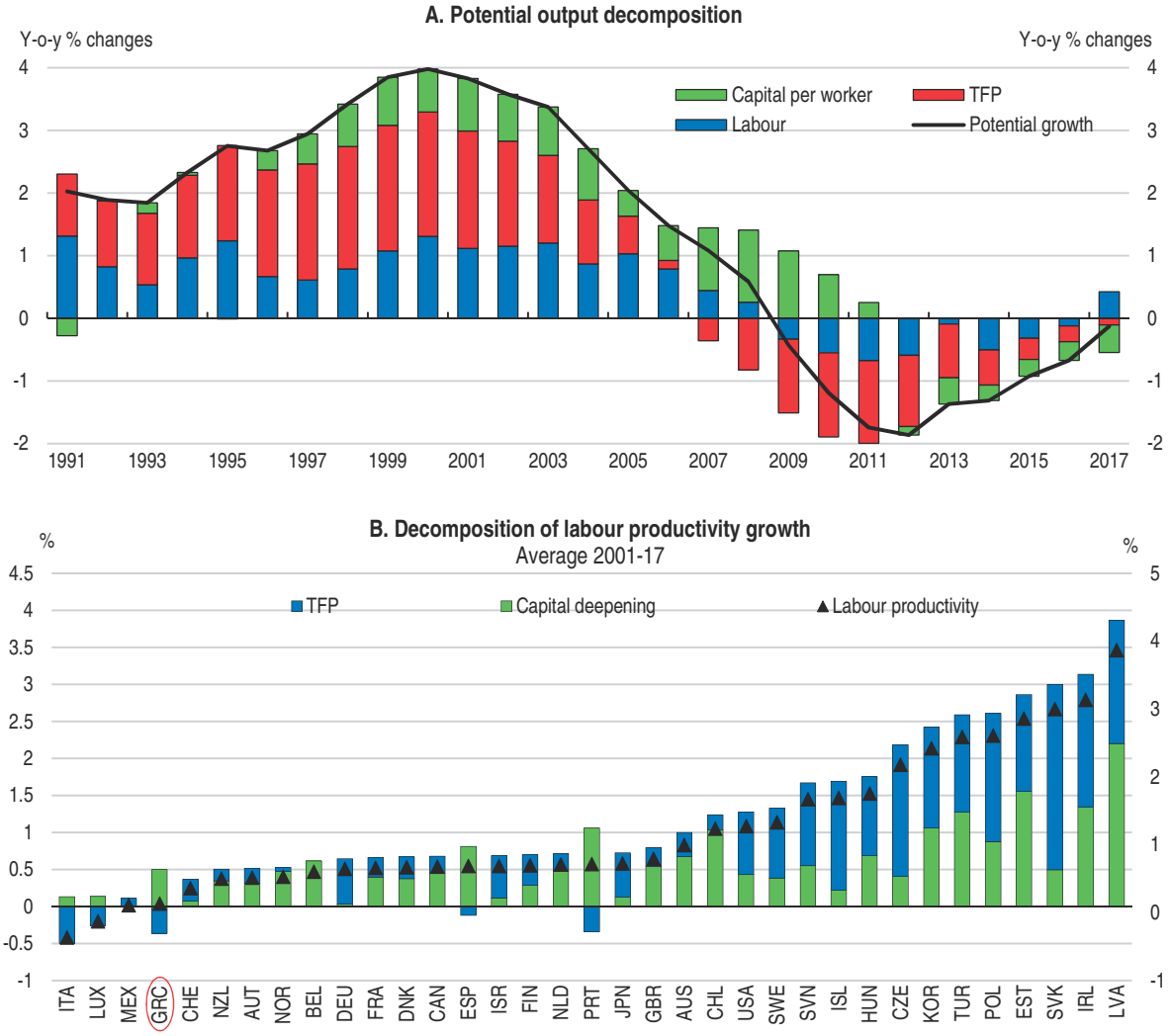
Boosting investment

Aggregate investment has declined markedly over the crisis and has yet to recover. Reviving domestic and foreign investment is crucial to supporting the economic recovery, deepen Greece's integration into global value chains and raising living standards. This will hinge primarily on improving the business environment by lifting barriers to product market competition and enhancing the quality of regulation. Other key policies involve fully implementing the recent insolvency reforms, building an innovation system, overcoming problems in the banking sector and enhancing the quality of public investment through a long-term strategy.

Note by Turkey:
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union:
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

The collapse in investment during the crisis has reduced Greece's stock of productive capital. The fall in the productive capital stock is one of the main factors, along with lower total factor productivity (TFP), behind weak potential output growth. Potential GDP growth started declining in the early 2000s, due to diminishing TFP and employment growth (Figure 1.1 – Panel A). The collapse of investment in the wake of the crisis has been such that the productive stock capital is now shrinking as the capital's deprecation rate exceeds the investment rate, dragging down potential GDP growth. Weak capital accumulation is also holding back labour productivity growth, hurting living standards (Figure 1.1 – Panel B).

Figure 1.1. **Low investment is dragging potential output and labour productivity growth**

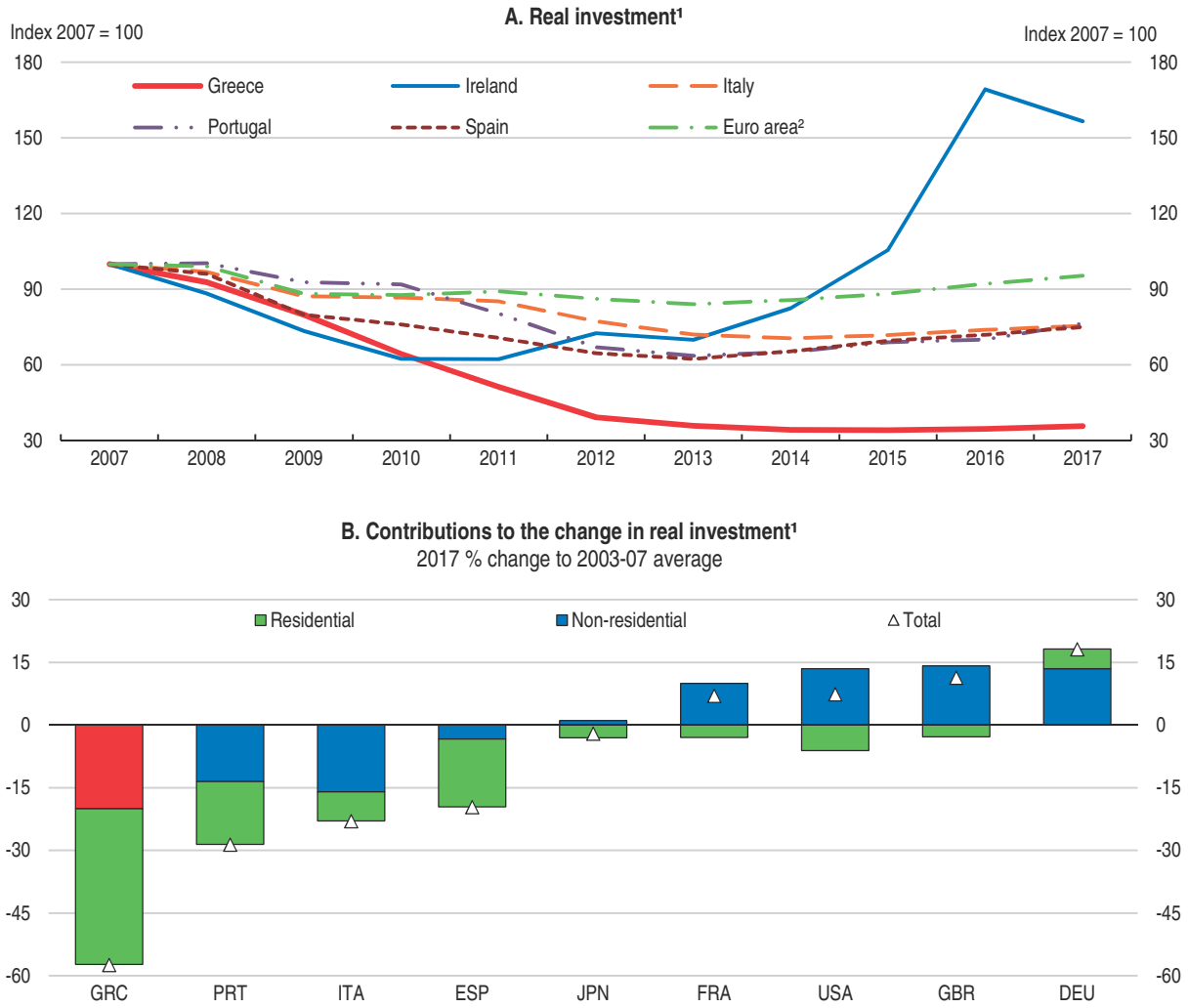


Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713973

In Greece the fall in real investment was larger and more prolonged than in other euro area countries. This large fall is attributable to both residential and non-residential investment (Figure 1.2). In 2017 non-residential real investment was 35% below its 2003-07 average while residential real investment was about 90% below it. The marked drop in residential investment reflects the disproportionate role it traditionally had in the Greek economy. Though Greece did not experience a housing boom in the years immediately preceding the crisis, residential investment (as a share of GDP) had been consistently higher than in most OECD countries for several decades before the crisis. Housing investment accounted for about half of total investment between 1995 and 2007, a much larger share than in other EU countries. The deep rooted perception of housing as a safe asset and the dearth of alternative investment opportunities in productive activities have contributed to this phenomenon, curbing the growth of the productive capital stock and productivity.

Figure 1.2. **Investment dropped more than elsewhere**



1. Real gross fixed capital formation.
2. Includes Euro area countries that are OECD members.

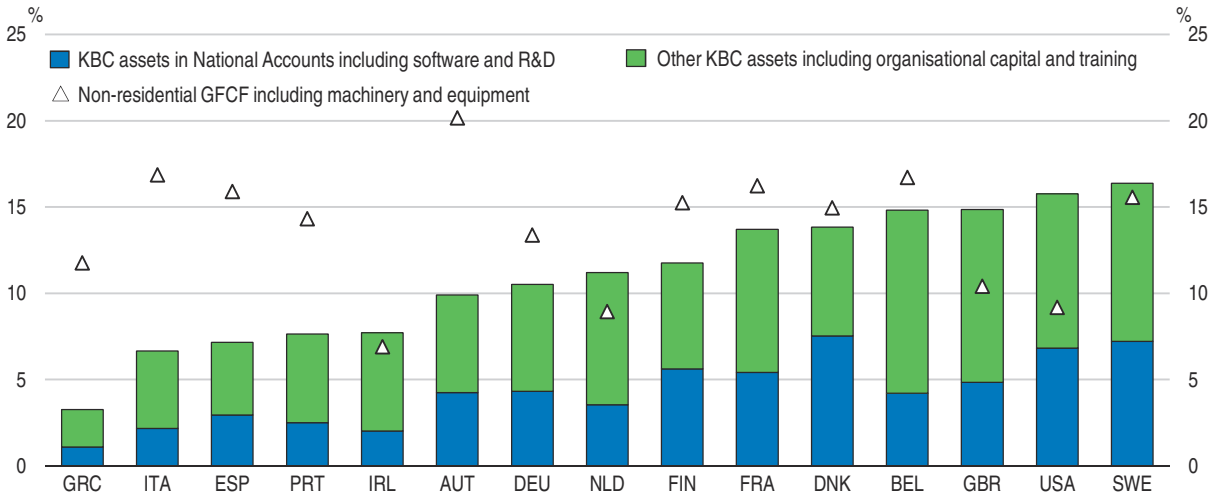
Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933713992

Greece also lags in investment in knowledge-based capital (KBC) including software and databases, new product development and organisational capital (Figure 1.3). In OECD countries, KBC accounts for up to a third of labour productivity growth and in some countries it has outpaced investment in physical capital (Andrews and Criscuolo, 2013; Corrado et al., 2012; Roth and Thum, 2013). Investment in KBC components, such as business processes and organisational capital, significantly contribute to productivity growth in many service industries (Dabla-Noris et al., 2015). Also, for a given level of research and development (R&D) expenditure, manufacturing companies investing heavily in software generate more patents (Branstetter et al., 2015).

Figure 1.3. **Business investment in fixed and knowledge-based capital (KBC) is low**

% of business sectors' gross valued added, 2013



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 (2015), *OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society*.

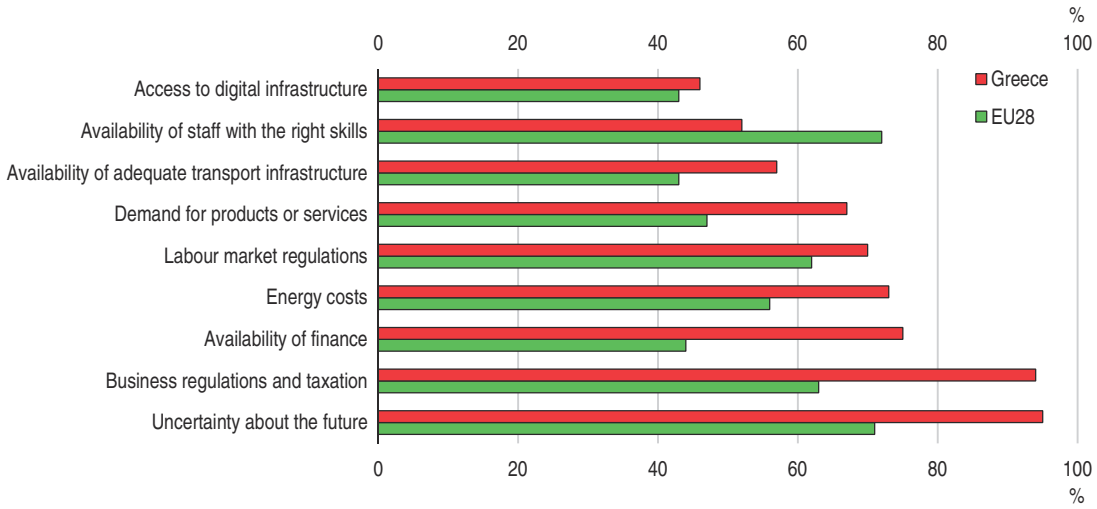
StatLink http://dx.doi.org/10.1787/888933714011

Greece faces several barriers to raise investment. A recent survey by the European Investment Bank (EIB, 2017) reports that the high level of uncertainty, complex business regulation and taxation, lack of finance and energy costs are the most significant obstacles to raise corporate investment (Figure 1.4). Also, Greek firms report more often than companies in other EU countries inadequate transport infrastructure as a significant obstacle to investment.

Reviving domestic and foreign investment will require policy actions spanning different areas. This chapter focuses on policies to enhance competition – by lowering product market regulation and improving regulatory quality – to speed up the reorganisation of struggling but still viable firms and the liquidation of those that are not viable – by accelerating insolvency procedures and improving out-of-court mechanisms – to climb the value chains – by boosting innovation and investment in KBC – and to restart lending to firms – by overcoming problems in the banking sector. Finally, this chapter focuses on ways to enhance public investment, especially the quality of infrastructure.

Figure 1.4. **Obstacles to investment reported by businesses are high**

Share of firms reporting an obstacle to investment activities



Note: Based on the EIB Investment Survey 2017 that covers 12 500 firms including the whole range from small SMEs with more than 5 employees to larger corporates across the EU 28.

Source: EIB (2017), *The annual EIB Group Survey on Investment and Investment Finance (EIBIS)*.

StatLink http://dx.doi.org/10.1787/888933714030

Easing product market regulation and enhancing regulatory quality

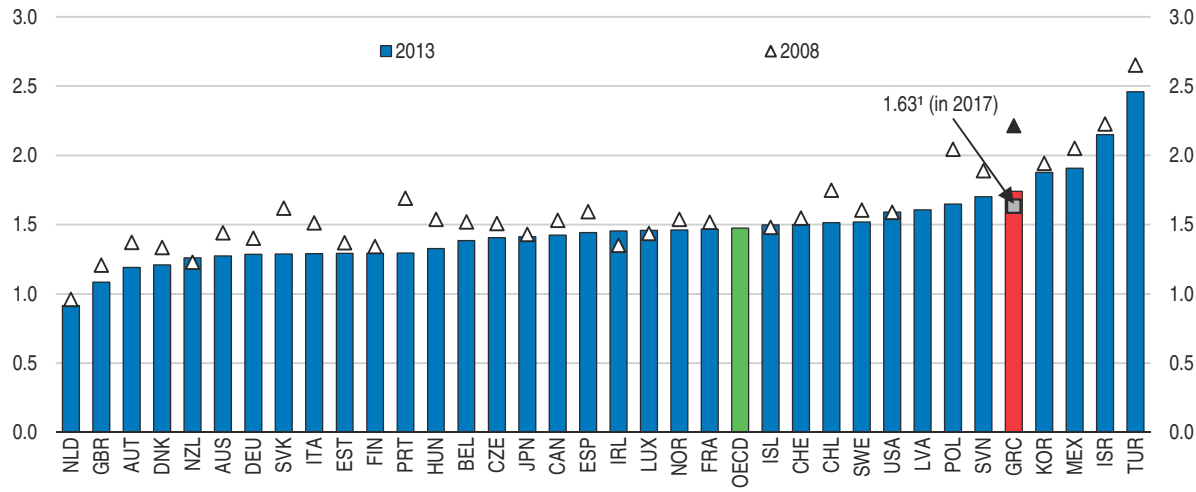
Encouraging competition by reducing regulatory barriers is key to strengthening incentives to invest. Ample empirical evidence shows that market competition fosters investment and productivity (Nickell, 1996; Blundell et al., 1999; Aghion et al., 2004). More competition also strengthens incentives to innovate and adopt better management practices, and invest in information and communication technologies (ICT) and knowledge-based capital (KBC) (Fuentes Hutfilter et al., 2016). As underlined in the previous OECD survey (OECD, 2016) and Arkolakis et al., (2015), product market reforms would also improve external competitiveness and promote exports by lowering production costs without requiring further downward wage adjustment.

Since the start of the crisis, cuts in barriers to entry, trade and investment and reduced state control have made Greece's product markets more open to competition (Figure 1.5). Between 2008 and 2013 reduced barriers to trade and investment contributed most to lessening product market regulations. A preliminary and conservative assessment of reforms implemented since 2013 suggests that product market restrictions have eased further. The drop in the PMR indicator might not fully reflect all of the progress made since 2013 as the PMR index covers mostly horizontal regulations while the product-market reforms passed in Greece concern mostly sector-specific regulations. Despite this progress, Greece's business environment is among the least friendly among OECD countries. This is corroborated by the World Bank Doing Business indicator.

Regulatory restrictions in the service sector can be especially damaging. In Greece the service sector accounts for about 80% of GDP, above the OECD average (about 74%). Also, services account for about 40% of Greece's total exports in gross terms and more that 70% in value added terms. Regulated professions accounted for about 30% of total private sector employment in 2010. Close to 18% of all employees in Greece were working in jobs that required a license, while about 13% of all employees were working in strictly regulated

Figure 1.5. **Product market regulation has eased but remains above most OECD countries**

Index scale from 0 to 6, from least to most restrictive



1. Preliminary calculations of the product market reforms since 2013.

Source: OECD (2017), *Product Market Regulation Database* and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933713764

professions where regulations impose additional administrative licenses as well as entry and conduct restrictions (Athanassiou et al., 2015).

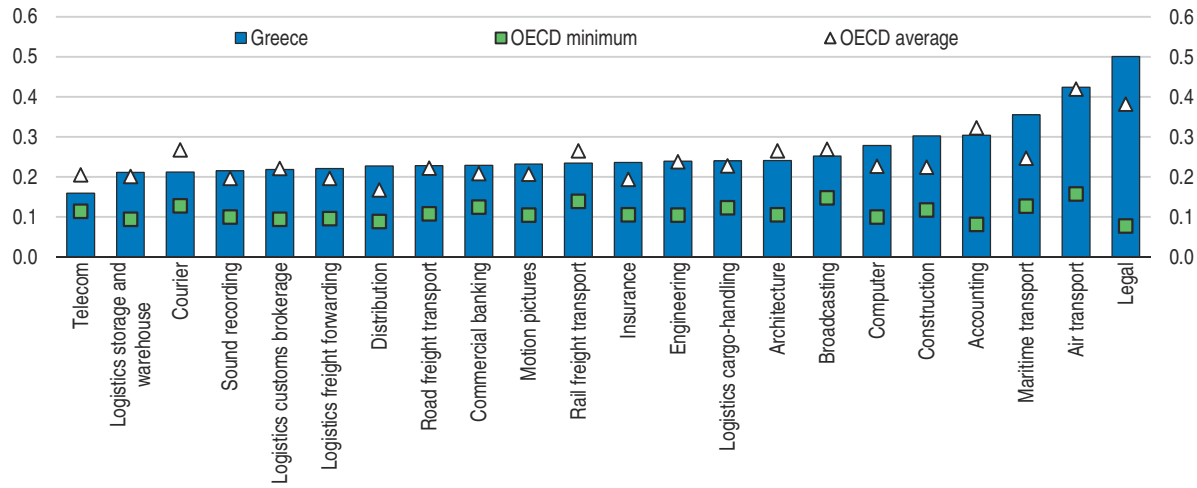
Since 2010 Greece has undertaken an extensive legislative reform to streamline regulation of and ease entry into a large number of regulated professions. The reform was complex and implementation followed the recommendations of the national competition commission (HCC) (OECD, 2013; Athanassiou et al., 2015). This resulted in opening up to competition about 5% of the 350 regulated professions in Greece, through various measures (e.g. increase in the allowed number of notaries and reduction in notary fees; elimination of unfair restrictions for access to the engineering profession; relaxation of rules for the establishment of new pharmacies).

An assessment of the reform of 11 regulated professions suggests it has had a positive effect on employment. Without the reform, the crisis would have caused a larger fall in employment in these regulated professions and the employment recovery would have started later. The reform had no clear impact on prices and the quality of services provided (Athanassiou et al., 2015).

As highlighted in previous Surveys (OECD, 2013b; OECD, 2016c), the liberalisation of regulated professions could go further. The OECD Service Trade Restrictiveness (STRI) index, which captures restrictions to international trade in services, shows that in Greece about half of the 22 sectors considered have higher restrictions than the OECD average (Figure 1.6). Relative to the OECD average, Greece performs especially well in telecommunications and postal services. Legal, construction and maritime transport services are instead the three sectors with the highest restrictions relative to the OECD average (Figure 1.6). For instance, in legal services EU nationality is required to obtain a license to practice domestic law, only licensed lawyers can own shares in law firms and board members and managers of law firms must be licensed lawyers. In construction services, there are discriminatory measures relating to public procurement processes against potential bidders – as only bidders registered in countries signatories to the WTO Public Procurement Agreement can participate in public

Figure 1.6. **Service trade restrictions can be lowered further**

OECD Services Trade Restrictiveness Index, scale from 0 to 1 (most restrictive), 2017



Note: The index includes regulatory transparency, barriers to competition, other discriminatory measures, restrictions on movement of people and restrictions on foreign entry. It is calculated on the basis of the Service Trade Restrictions Index (STRI) regulatory database over the 35 OECD Members, Brazil, China, Colombia, Costa Rica India, Indonesia, Lithuania, Russia and South Africa. The STRI database records measures on a most-favoured-nations basis. Preferential trade agreements are not taken into account. Air transport and road freight cover only commercial establishment (with accompanying movement of people).

Source: OECD (2018), "Service Trade Restrictions Index by services sector" in *OECD Industry and Services Statistics* (database).

StatLink *http://dx.doi.org/10.1787/888933714049*

tenders – and the State controls two major firms in this sector. In maritime transport services, foreigners cannot own more than 49% of local maritime transport companies. Moreover, majority ownership by Greek or EU nationals is a precondition for the registration of vessels under the national flag. Also, certain technical agreements are exempt from competition law while some services are reserved for specific entities at ports (OECD, 2016c). However, reforms have eased restrictions in the cruise ship sector. Between 2012 and 2014, the cabotage for cruise ships and the obligation for round trips were repealed.

The OECD is working with Greece to boost product market competition. Between 2013 and 2016, the OECD conducted, in co-operation with the Hellenic Competition Commission (HCC), three Competition Assessment Reviews that helped identify barriers to competition in selected sectors and ways to improve the overall regulatory framework (Box 1.1). The reviews covered 14 sectors, accounting for about 30% of GDP corresponding to 39% of employment, and they made 773 recommendations. The Hellenic Confederation of Enterprises estimates that 485 (63%) were implemented by December 2016 (Figure 1.7). The second review of the third ESM Stability Support Programme identified about 270 out of 356 reforms that should have been adopted by July 2017 (European Commission, 2017). Overall, progress has been uneven across sectors: it was larger in pharmaceuticals, manufacturing and wholesale trade; more limited in media, construction and e-commerce. Ownership of reforms has improved in some instances. On e-commerce the Greek government has worked with the OECD and the European institutions to transform a set of e-commerce specific recommendations into a far-reaching review of consumer protection legislation. This is expected to lead to the codification of the 1994 law on consumer protection; the new code has already been drafted.

As at January 2017, most of the recommendations of the three Competition Assessments have been legislated (Figure 1.7). Full implementation of these reforms, in the context of strong domestic ownership, would be an additional step to promote competition

Box 1.1. **The OECD Competition Assessment Reviews for Greece**

The OECD has developed the "Competition Assessment Toolkit" to conduct competition assessments and improve regulatory impact assessment relating to competition issues. One of the main elements of the Competition Assessments is a "Competition Checklist", which asks a set of questions to identify laws and regulations restricting competition.

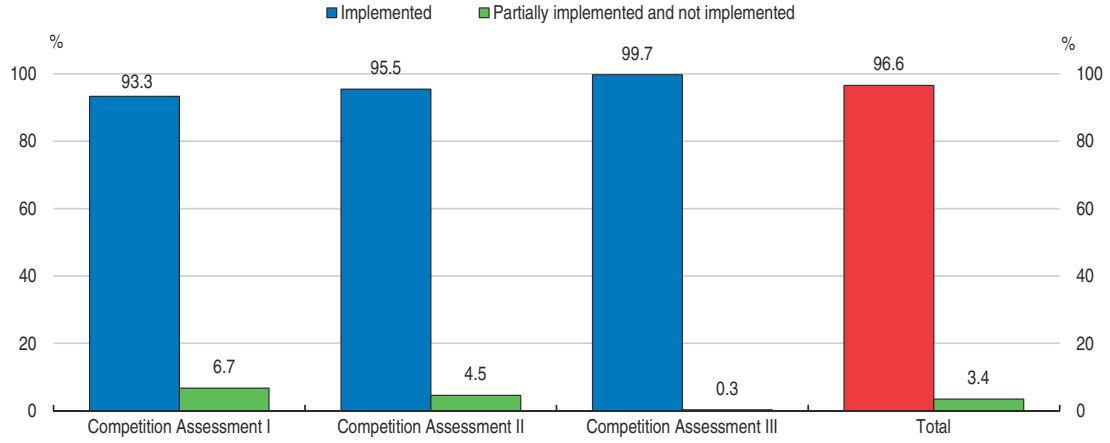
In collaboration with the Hellenic Competition Commission (HCC) the OECD has conducted three competition assessments:

- **2013:** The Greek government asked the OECD to conduct an assessment of laws and regulations curbing competition in the sectors of tourism, retail trade, food processing and construction materials. The review used the OECD Competition Assessment Toolkit to structure the analysis and identify 555 problematic regulations and 329 provisions where changes could be made to foster competition. The OECD has estimated that implementing about 60 of these recommendations (those for which quantification was possible) would generate benefits (in the form of lower prices, higher expenditure and turnover) of about EUR 5 billion per year, or 2.5% of GDP.
- **2014:** The second competition assessment review identified competition-distorting rules and regulations in the following manufacturing sectors: beverages; textiles, clothing apparel and leather, machinery and equipment, and coke and refined petroleum products. The review made 88 recommendations on specific legal provisions taking into account EU legislation and relevant provisions in comparable countries, notably EU member states.
- **2016:** The OECD carried out an independent policy assessment concerning 5 sectors: construction, media, wholesale trade, e-commerce and manufacturing sub-sectors, namely pharmaceuticals, chemicals, rubber products, paper and paper products, printing and reproduction of recorded media, which were not examined in the earlier assessments. The review identified 577 potential restrictions to competition, leading to 356 recommendations. Estimates suggest that the implementation of these recommendations will have a positive impact on the Greek economy of around EUR 414 million.

Source: www.oecd.org/daf/competition/greece-competition-assessment-reviews.htm.

Figure 1.7. **Implementation of OECD Competition Assessments' recommendations has progressed**

2013-17



Note: The OECD's Competition Assessments aim to help governments to eliminate barriers to competition by providing a method for identifying unnecessary restraints on market activities and developing alternative, less restrictive measures that still achieve government policy objectives.

Source: EC (2017), "The ESM Stability Support Programme: Greece, First & Second Reviews July 2017 Background Report", *Institutional Paper 064*, November 2017; EC (2018), *Compliance Report of ESM Stability Support Programme: Third Review January 2018*, European Commission, DG ECFIN, available at *www.esm.europa.eu/assistance/greece*.

StatLink http://dx.doi.org/10.1787/888933713802

and strengthen incentives to invest. Reducing horizontal product market restrictions would also help. Greece is gradually moving in this direction as for instance the the role of one-stop shops is being expanded. This is welcome and international experience suggests one-stop shops can be effective tool to improve firms' performance by simplifying administrative procedures (e.g. McLinden, 2013).

In Greece, one-stop shops now provide newly founded companies with electronic access to the tax authority's online platform and automatically make the founders' details available to the social security agency (EFKA) to speed up the social security registration process. The 2016 investment licencing law has introduced the registration of new companies remotely through the e-one-stop shop and simplified licensing procedures, replacing *ex ante* licensing with simple notification. The electronic system for establishing new companies and licensing has been operational since June 2017 – covering selected sectors including beverage, coffee-shops, restaurants, bars, hairdressers, theatres and cinemas, logistics, mines and quarries and hotels. In January 2018 a new law set common rules for inspections in all sectors of the economy. By the end of 2018 a more complete version of the electronic system covering the licensing procedure is expected to be in place. The new system will also cover inspections and will allow for, among other things, the prioritisation of inspections based on risk assessments, the exchange of information among competent authorities and the creation of integrated and unique business profiles with inspections' histories and results. The e-one-stop shop services are expected to be provided free of charge during the first year of operation. The government should ensure one-stop shops have the resources and capabilities to perform their recently expanded tasks effectively.

To produce the expected benefits, the reforms concerning product markets and one-stop shops need to be complemented with others aiming at streamlining cumbersome regulation and improving the efficiency of the public administration. The "silence is consent" rule, whereby licences are automatically issued if the competent authority does not act within the statutory period, could also be expanded further.

As reported in the 2016 OECD Economic Survey, recent changes in competition policy and the Hellenic Competition Commission (HCC) have brought the legal framework closer to OECD best practices. The HCC has continued to show dedication and commitment to competitive markets by vigorously enforcing competition laws, despite severe resource constraints. In 2015, the HCC imposed the highest fine ever in Greece on a single undertaking (EUR 31.5 million) for abuse of dominance in the beer market. In 2016, it imposed fines for about EUR 11.5 million in high profile cases, which were upheld by courts. In 2016, a cartel settlement procedure was introduced in Greece, allowing the HCC to speed up decision making and free resources for other cases. This procedure has been applied in two cases in 2016, one of which (a cartel investigation in the construction sector) was the largest yet pursued by the HCC. The HCC's record also includes the imposition of procedural fines for submission of misleading data that obstructed investigations.

However, the lack of resources is hampering the work of the HCC. The budget of the HCC is financed through a levy on limited liability companies. Because of the lasting crisis, its budget has declined considerably, from EUR 9.7 million in 2011, to EUR 7.7 million in 2015 and EUR 5.4 million in 2017. Also, the HCC has to turn over 80% of its yearly saving to the central government. The tight budget constrains HCC's ability to perform its functions and carry out investigations. Moreover, scarce resources have weakened advocacy activities as law enforcement is understandably given priority. The 2015 ESM Stability Support Programme

envisaged an increase of the HCC's advocacy unit by twelve additional posts. However, between 2014 and 2016, the staff of the HCC (excluding administrative support and IT experts) declined from 64 to 57 people (due to secondments to other parts of the public sector).

As the economic and fiscal situation improves, the government should make sure the HCC has the financial and human resources commensurate to its responsibilities. Eliminating the rule allowing the central government to claw-back 80% of the HCC's yearly savings would go in the right direction. Going forward Greek authorities could perform competition assessments regularly (such as for new legislation) so as to raise the profile and importance of competition issues in public and political debates and maintain the reform momentum.

Boosting foreign direct investment and integration in global value chains

Given the low level of savings, foreign direct investment (FDI) can play an important role in reviving investment in Greece. Also, FDI generates benefits that go well beyond the direct additional investment it engenders:

- With the right conditions, FDI can beget, technology spillovers and productivity gains to the host country (e.g. Iordanoglou and Matsaganis, 2017; OECD, 2015a; OECD 2010c, Lee, 2005).
- FDI can contribute to the export performance of the host country as foreign affiliates tend to be more export-oriented than domestic companies (e.g. Kneller and Pisu, 2004; OECD, 2000; Ahn et al., 2004).
- Finally, FDI is a building block of global value chains (GVCs). GVCs co-ordinated by multinational enterprises account for 80% of global trade (OECD, WTO and UNCTAD, 2013). Across countries integration in GVCs is positively associated with skills development and productivity growth (OECD (2017g). GVCs enable domestic firms to access world markets through MNEs' supply chains. The size of manufacturing as a share of GDP is positively associated with integration in GVCs, especially through backward engagement (i.e. imports of inputs used to produce final goods or intermediates to be exported) (OECD, WTO & UNCTAD, 2013).

In Greece, foreign direct investment and integration in GVCs are low. Greece attracts little FDI and is poorly integrated in GVCs, thus missing out on the benefits from participating in international markets. The FDI stock started to increase in 2015 (Figure 1.8 – Panel B) but it remains low. In 2016, the Greek inward FDI stock was 15% of GDP, much lower than the OECD average and in other small open economies, such as Slovenia, Spain, Portugal (Figure 1.8 – Panel A). The low level of FDI stock predates the financial crisis, indicating structural obstacles to attracting FDI. Though improving, the degree of integration in GVCs is also lower than in peer countries (Figure 1.9). This is true especially for the share of domestic value added embodied in foreign final demand (i.e. the exports of value added) (Figure 1.9 – Panel A).

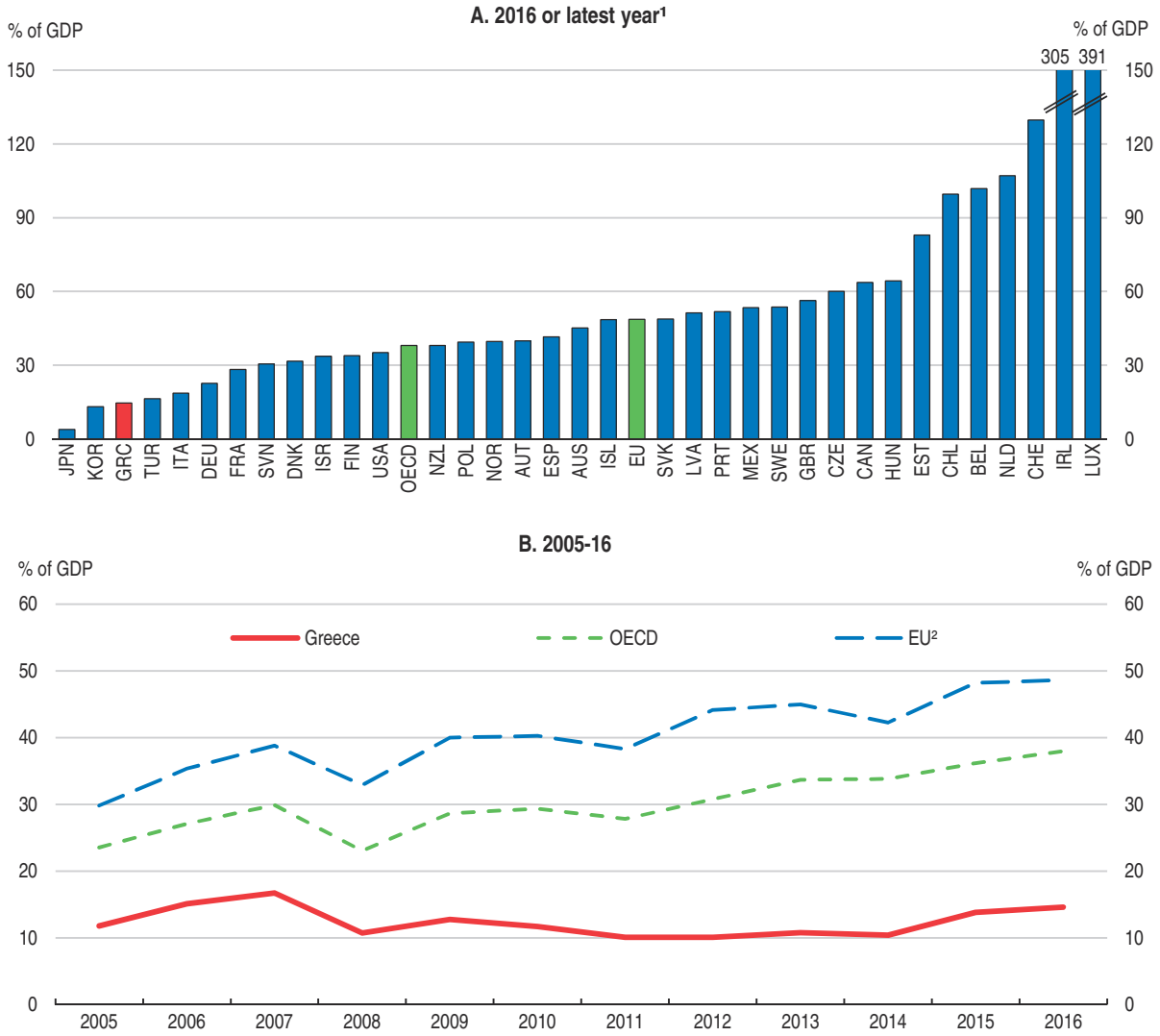
The poor business environment hinders FDI and integration in global value chains

Overall, FDI regulatory restrictions are low compared to other OECD countries. Greece ranks 12th among 35 OECD countries on the OECD's FDI Restrictiveness Index (Figure 1.10). Between 2006 and 2016, Greece lowered FDI restrictions, though most progress took place before 2011. The most significant remaining restrictions concern foreign equity (for mining, quarrying and oil extraction), and screening and approval mechanisms (for fisheries, air and maritime transport, radio and TV broadcasting, accounting and audit, media, tertiary education and business services).

Attracting more FDI then hinges on improving the business environment by lowering product market restrictions, improving the quality of infrastructure and institutions as well as

Figure 1.8. **Greece's inward FDI stocks are low but have improved recently**

Inward FDI stock



1. 2015 for Mexico.
2. EU25 for data between 2004 and 2006, EU27 for data between 2007 and 2012 and EU28 from 2013.

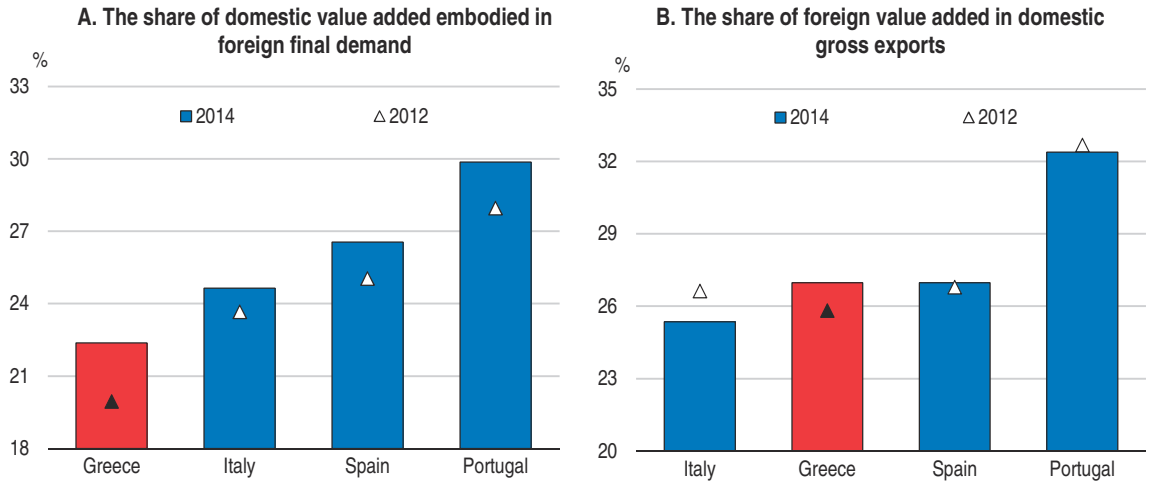
Source: OECD (2018), "FDI statistics according to Benchmark Definition 4th Edition (BMD4): Foreign direct investment: Main aggregates", *OECD Globalisation Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713821

the efficiency of the public administration. These are also some of the main policy determinants of integration in GVCs (OECD, WTO and UNCTAD, 2013). As highlighted above, the business environment can be improved by lowering PMR restrictions. Also, according to the 2017-2018 Global Competitiveness Report Greece ranks 130th out of 137 countries on the burden of government regulation, 112th as regards to FDI and technology transfer and 61st on the protection of intellectual property rights (WEF, 2017b). Iordanoglou and Matsaganis (2017) underline the role of bureaucratic obstacles and hostile attitude against foreign investment at all levels of government in Greece as a factor holding back FDI. Acting on all these factors will improve Greece's attractiveness as FDI destination.

The ongoing privatisation programme presents an opportunity to attract FDI in key sectors such as transport, energy and tourism. Some positive results are already apparent

Figure 1.9. **There is ample scope to deepen participation in global value chains**

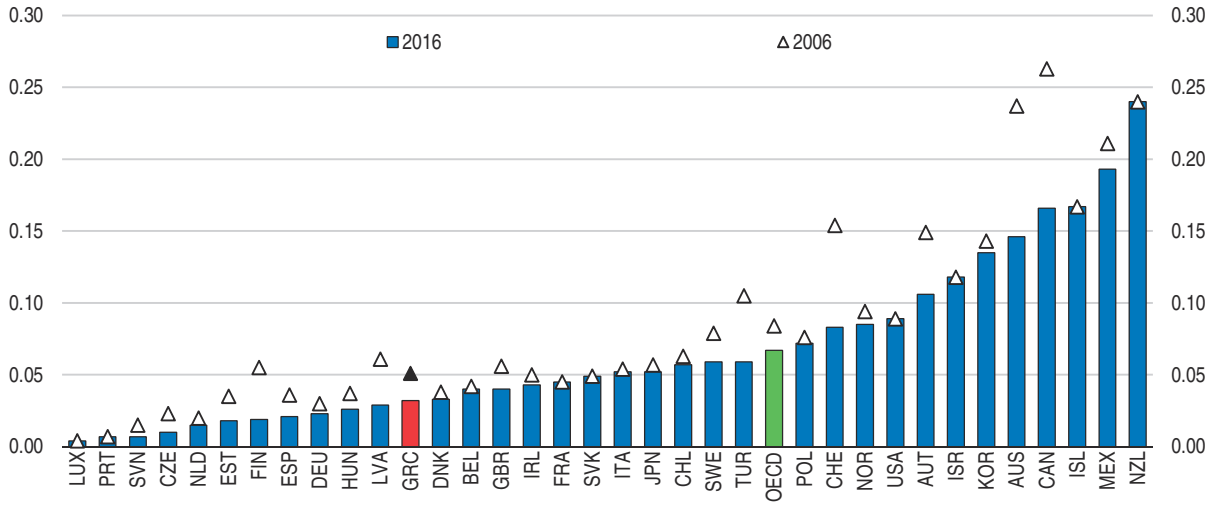


Source: OECD (2017), "TiVA Nowcast Estimates" in *OECD International Trade and Balance of Payments Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714068

Figure 1.10. **FDI regulatory restrictions are low compared to other OECD countries**

FDI regulatory restrictiveness index, scale from 0 (open) to 1 (closed)



Note: The index reports statutory restrictions on foreign direct investment across the four main types of restrictions: foreign equity limitations; discriminatory screening or approval mechanisms; restrictions on the employment of foreigners as key personnel; and, other operational restrictions. The overall restrictiveness index is the average of sectoral scores.

Source: OECD (2017), *OECD FDI Regulatory Restrictiveness Index Database*.

StatLink http://dx.doi.org/10.1787/888933713840

from the privatisation of the Piraeus and Thessaloniki ports. The privatisation of the Piraeus port may increase GDP by 0.8% by 2025 and could contribute to long-term reduction of public debt by 2.3 percentage points of GDP (IOBE, 2016). Also, construction works and the operation of the port may create more than 31 000 new jobs overall.

Attracting FDI in sectors having a relative comparative advantage (RCA) would be especially beneficial for Greece. Empirical research suggests that FDI offers the potential of raising the quality of exports thereby enhancing RCA (Harding and Javorcik, 2012). Policies aiming at attracting FDI to sectors with a comparative advantage could then accelerate GVCs integration. Box 1.2 shows that Greece has a comparative advantage in the food sector,

Box 1.2. **Identifying sectors with comparative advantage in the Greek economy**

As an indicator of sectoral competitiveness, the revealed comparative advantage (RCA) or Balassa Index (Balassa, 1965) is used. It is calculated for fourteen commodities exported from Greece to the rest of the world using the following formula:

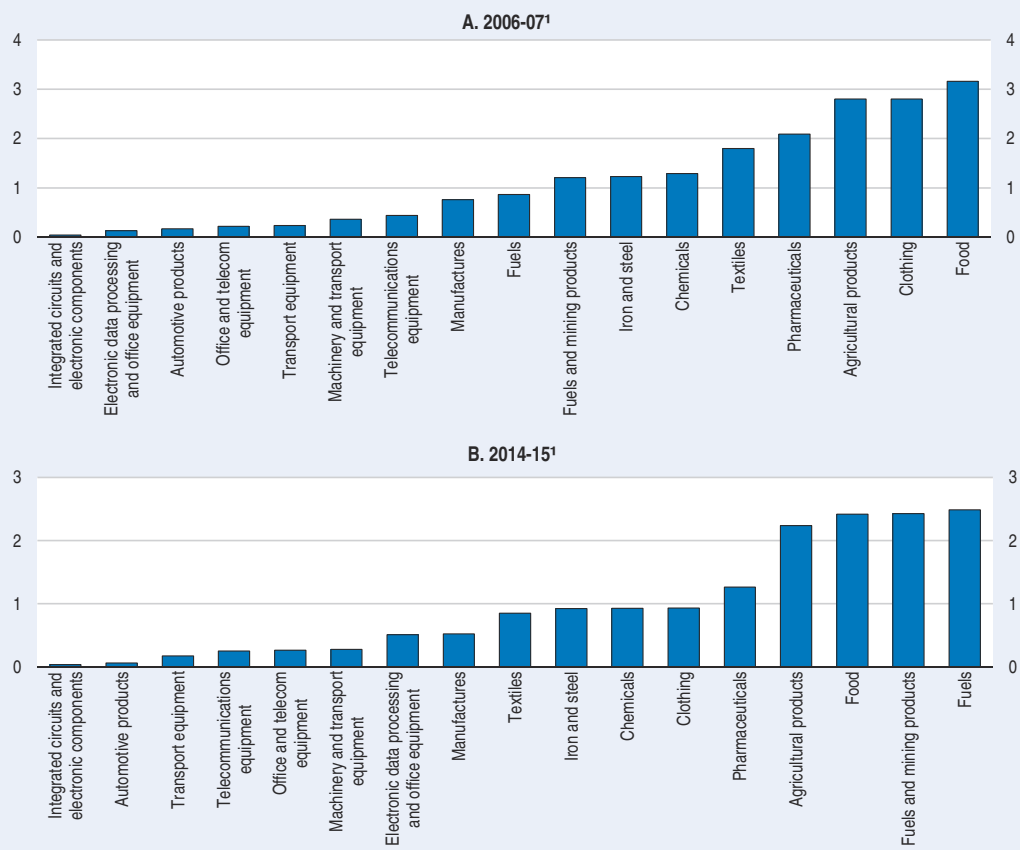
$$RCA_{ij} = \frac{X_{ij} / \Sigma_i X_{ij}}{\Sigma_j X_{ij} / \Sigma_i \Sigma_j X_{ij}}, \qquad (1)$$

Where X_{ij} is the value of country's j exports of commodity i. The numerator calculates the share of exports of a specific commodity over total exports for Greece. The denominator calculates the share of exports of a specific commodity over total world exports.

An RCA index value larger than one means that the value of the specific commodity exports as a share of the country's total exports is larger than the corresponding ratio for the rest of the world. Based on the historical values of RCA index, commodities can be grouped in three categories: 1) Products and services on which Greece has historically had a comparative advantage and RCA indices constantly well above 1; 2) Commodities with RCA indices around 1, i.e. products which Greece has been exporting with a slight comparative advantage; 3) Commodities with very small shares in Greece's exports compared to the rest of the world, and RCA indices constantly below 1. The chart below shows the 2006-07 and 2014-15 average value of RCA of Greek industries (Figure 1.11).

Figure 1.11. **Revealed comparative advantage in Greece**

A higher value of the index indicates a greater comparative advantage



1. Unweighted average.

Source: Authors' calculations based on data on merchandise trade by commodity in the annual macro-economic database of the European Commission (AMECO).

StatLink http://dx.doi.org/10.1787/888933714087

agricultural products, fuels, minerals and pharmaceuticals. Policies to attract FDI in these sectors could entail for instance incentives to participate in international fairs and fast track approval process.

Recent legislation to attract FDI and promote strategic investment more broadly includes the 2010 law "Acceleration and Transparency of Implementation of Strategic Investments" (Fast Track Law) and the 2013 law "Creation of a Development Friendly Environment for Strategic and Private Investments". These aim at simplifying licensing procedures and providing limited tax incentives. Enterprise Greece is the agency within the Ministry of Economic and Development with responsibilities over assessing project proposals and granting them fast track status if they meet certain criteria.

More recently, the 2016 law establishing state aid schemes for private investments introduced a range of financial incentives covering tangible and intangible capital with the aim of attracting FDI in addition to encouraging entrepreneurship, innovative SMEs and innovation clusters. Incentives for major investment projects include a fixed corporate income tax rate for 12 years, tax exemption equal to 10% of eligible expenditure (capped at EUR 5 billion) and fast-track licensing procedures.

Integrating Greek SMEs in global value chains

The Greek economy is largely based on SMEs and micro enterprises. Helping these firms to integrate into global value chains (GVCs) would require addressing financing constraints and ensuring they can meet the required international quality standards, such as ISO 9000 series, as well as adopt responsible business conduct (OECD, WTO and UNCTAD, 2013; OECD and World Bank, 2015). However, compliance with international quality standards and technical regulations can also increase cost significantly for SMEs. The problem is aggravated when these firms have to adhere to an increasing number of private standards set by customers (OECD, 2008).

Policies have an important role to play to support certification and compliance with standards by SMEs through for instance building national platforms to increase awareness of international certification, sharing experiences and best practices, and facilitating matching between potential partners. For instance, in Mexico some first-tier suppliers of Volkswagen have helped second-tier suppliers to improve quality – by aiding them to gain quality certification specific to the automotive sector based on ISO 9001 – so as to enter or remain in Volkswagen GVCs. Mexico's National Network of Productive Associations promotes horizontal and vertical links between SMEs, governments, institutions and intermediate organisations. Also, initiatives such as group certification for SMEs in geographical regions might be useful, if trust could be built in effective control mechanisms (OECD, 2008).

In Greece, recent initiatives to help SMEs to grow and integrate in GVCs have focused on easing financial constraints through national and European programmes. For instance, the recently established EquiFund will invest in private-sector venture capital and private equity funds across Europe focusing on Greek companies with the aim of supporting technology transfer funds and unlocking equity investment in Greece.

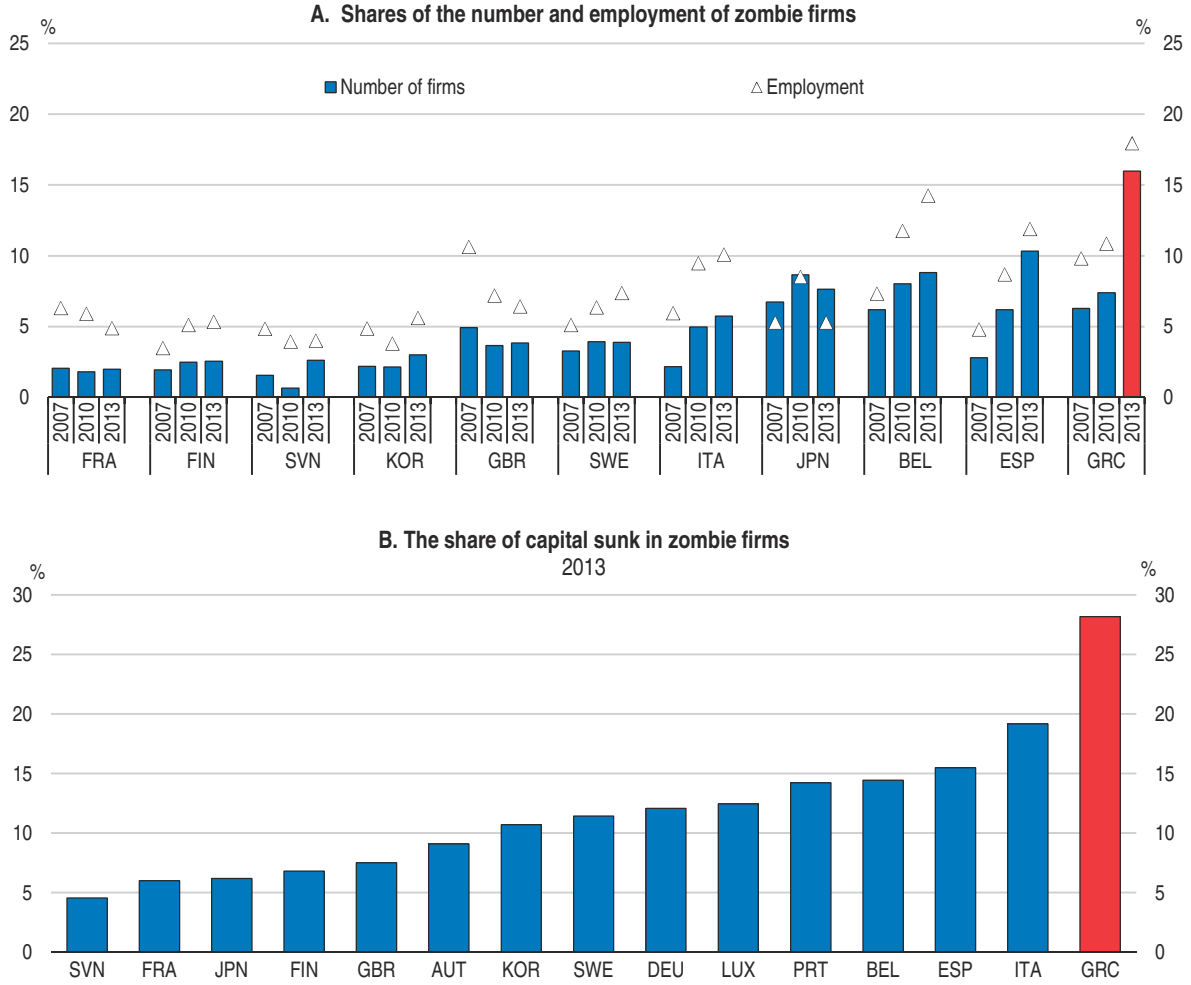
Streamlining insolvency procedures and strengthening contract enforcement

Investment and entrepreneurship heavily rely on the ability of capital to freely and quickly move between profitable market opportunities. The role of insolvency frameworks becomes crucial in restructuring companies that are still viable and liquidating those that

are not. An efficient insolvency regime should deliver the largest recovery rate for creditors with the least direct loss in the value of the insolvent firm as a going concern. If creditors are not protected or allowed to participate in insolvency proceedings, they will have less incentive to lend in the future. That leads to a less developed credit market and lower investment (Claessens and Klapper, 2002).

Long and costly insolvency procedures trap capital and other resources in low productivity firms, reducing allocative efficiency and depressing domestic investment. Evidence suggests that a nontrivial share of the collapse in aggregate business investment in Greece is attributable to the survival of firms having persistent problems meeting interest payments, the so-called zombie firms (Adalet McGowan et al., 2017). As of 2013, Greece had the highest share of capital and employment trapped in zombie firms. This was true also in 2003, suggesting persistent problems in restructuring insolvent firms or making them exit the market (Figure 1.12). A high share of capital and employment trapped in zombie firms

Figure 1.12. **Large shares of employment and capital are trapped in zombie firms**



Note: Zombie firms are defined as firms aged 10 years or older and with an interest coverage ratio less than 1 over three consecutive years. Capital stock and employment refer to the share of total capital and labour that are in zombie firms. The sample excludes firms that are larger than 100 times the 99th percentile of the size distribution in terms of capital stock or number of employees.

Source: Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933713897

signals high resource misallocation, lowering productivity. Moreover, it weakens incentives for non-zombie firms and financial institutions to invest and innovate (congestion effect), while also raising the cost of capital and labour through their artificial scarcity. Empirical evidence from OECD countries indicate that reducing barriers to corporate restructuring can contribute to significantly reduce the share of capital sunk in zombie firms (Adalet McGowan et al., 2017), thus directly reducing resource misallocation and increasing productivity. Such reforms can also raise investment by non-zombie firms through reducing congestion.

The market congestion generated by zombie firms can also create barriers to entry, thus lowering investment from potential market entrants. Simulations suggest that lowering the share of capital trapped in Greek zombie firms from nearly 30% to 5% would increase investment for a typical non-zombie Greek firm by nearly 5%. According to Adalet McGowan et al. (2017), Greece could benefit more than any other country analysed in the sample from insolvency reforms.

Greece's Bankruptcy Code governs the legal framework of insolvencies (Table 1.1). Currently there are four types of insolvencies: pre-bankruptcy rehabilitation; bankruptcy-liquidation; bankruptcy-reorganization; special administration (fast track liquidation; if the procedure does not succeed within 12 months, a standard bankruptcy procedure follows). Numerous changes to the insolvency framework during the crisis have aimed at accelerating bankruptcies, enhancing pre-bankruptcy rehabilitation and plans as well as facilitating the discharge of entrepreneurs (i.e. so-called "second chance") (Table 1.1; Box 1.3). These changes are consistent with the 2016 EU directive on Preventive Restructuring, Second Chance and Efficiency Measures and the 2014 EC recommendation on A New Approach to Business Failure and Insolvency.

Table 1.1. **Main elements of Greece's insolvency framework**

Law 3588/2007	Bankruptcy Code (BC) regulates rehabilitation (pre-bankruptcy), liquidation and re-organisation proceedings; amended several times during the crisis;
Law 3858/2010	Cross-border insolvency proceeding (consistent with EU regulation);
Law 3869/2010	Protection of over-indebted households (or individuals)" (i.e., those that do not fall under the scope of the BC).
Law 4307/2014	Special administration procedure; this is a fast-track liquidation procedure aiming at facilitating the sale of the debtor's business as a going concern, or the sale of individual functional group of assets or individual assets; if the procedure does succeed within 12 months, a standard bankruptcy procedure follows.
Law 4354/2015	Legal framework for handling the sale and management of non-performing loans.
Law 4336/2015	Amends the BC by streamlining the pre-bankruptcy rehabilitation procedures and introduces an early warning system allowing debtors facing the likelihood of insolvency to apply for an early stage pre-bankruptcy rehabilitation process; it also raises the requirements of insolvency administrators by introducing the licensed profession of insolvency professionals.
Law 4446/2016	Extensive modification of the BC to speed up insolvencies through accelerating and simplifying bankruptcy procedures, introduction of "second chance" mechanism, enhancement of pre-bankruptcy rescue mechanisms.
Law 4472/2017	Simplified procedures for bankruptcies of small enterprises; it expedites sales of movable and immovable property of bankrupt companies and faster termination of bankruptcies.

Source: OECD compilation.

Also, in 2017 the Greek Parliament passed a law to facilitate out-of-court dispute resolutions and accelerate the settlement of debt of non-financial corporations and professionals. The new law is debtor friendly and is initiated by the debtor by submitting a proposal for settling her/his debts. Enterprises cannot apply for this mechanism when a single creditor accounts for at least 85% of the total claims. The debt settlement agreement needs to be ratified by the court. If the court decides not to ratify the out-of-court agreement, the agreement is no longer valid and initial claims are restored. Also, electronic auctions finally started in November 2017 and are expected to take-over from physical auctions by

Box 1.3. **Main recent changes in Greece's insolvency framework**

In the last three years, especially through Law 4336/2015 and Law 4446/2016, Greece insolvency framework has undergone substantial changes. These can be grouped in three main areas:

1. Speeding up bankruptcies by :
   - Limiting the role of courts in insolvency proceedings by transferring many of their duties to insolvency professionals (a newly established licensed profession);
   - Abolishing the creditors' committee as this has proven to hinder rather than facilitate insolvencies (e.g. in the previous regime the creditor committee could successfully oppose any settlement reached by the insolvency administrator with debtors);
   - More flexible procedures in case of "small" bankruptcies (estate less than EUR 100 00);
   - Shortening of certain deadlines (e.g. convocation of the creditors' meeting; delayed submission of a creditor's claim; submission of the reorganisation plan and its acceptance);
   - Cancelling the court pre-judgement of the reorganisation plan (in the previous regime, the court had to examine the reorganisation plan before creditors voted on it and could in certain cases dismiss the plan).
2. Enhancing pre-bankruptcy rehabilitation plans by:
   - Consolidating three different pre-bankruptcy rehabilitation plans into the pre-pack rehabilitation plan; this is similar to the pre-pack arrangements already present in the United Kingdom and United States; rehabilitation procedures can start only if a pre-agreed rehabilitation is in place so as to avoid courts being overloaded with plans aiming only at strategically delaying bankruptcy and unlikely to succeed; the debtor and creditors (representing 60% of total claims, including 40% of secured claims) must agree on the rehabilitation plan, which needs be ratified by the court; ratification binds all creditors even those that have dissented or did not participate;
   - Introducing creditor-driven rehabilitation; creditors (representing 60% of total claims, including 40% of secured claims) can agree on a rehabilitation plan without the participation of the debtor and submit the plan to the court for ratification, provided that the debtor is unable to meet overdue financial obligations in a general and permanent way (i.e. cessation of payments); the opposition of the debtor does not preclude the ratification of the plan as the court will base its decision mainly on the opinion of the financial expert accompanying the plan;
   - Introducing new procedures to deal with non-co-operating shareholders;
3. Facilitating the discharge of entrepreneurs ("second chance") by:
   - Shortening the period from 10 to two years, starting from the start of bankruptcy proceedings, after which the entrepreneur can be fully discharged from any of the creditors' claims that have not been fully satisfied; the entrepreneur is discharged any time after bankruptcy ends; entrepreneurs have the right to this discharge only once.

Source: Karatzas, C.M., V. Salaka and A.S. Tsatsi (2017), "Insolvency Proceedings in Greece after Recent Reforms", *Emerging Markets Restructuring Journal*, Vol. 3; "Insolvency and Directors' duties in Greece: Overview", available at *www.ukpracticalw.thomsonreuters.com** accessed in August 2017; "Restructuring & Insolvency in Greece" available at *www.lexology.com* accessed on August 2017.

mid-February 2018 (EC, 2017; EC, 2018). An unimpeded flow of electronic auctions will accelerate enforcement procedures and support a thriving secondary market for distressed assets.

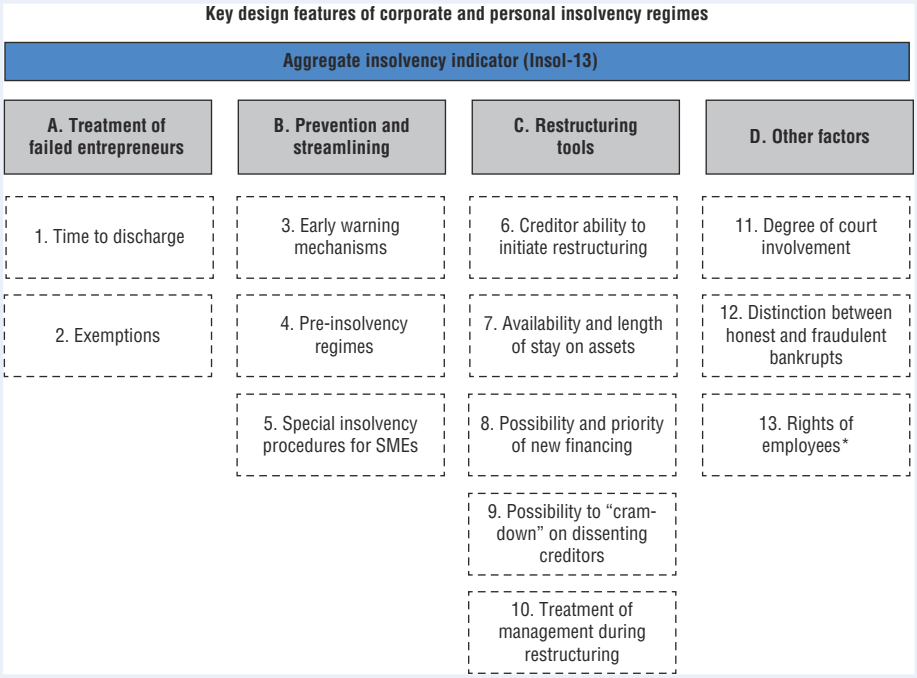
Overall, these changes to the insolvency framework and out-of-court business dispute resolution mechanism go in the right direction. The cross-country OECD policy indicator of insolvency regimes (Box 1.4) shows a marked improvement in Greece from 2010 to 2016 to below the OECD average (Figure 1.14). Greece is the country that along with Chile, Germany,

Box 1.4. **The OECD questionnaire on insolvency regimes**

In April 2016, a questionnaire aimed at collecting specific information about personal and corporate insolvency regimes was circulated to 35 OECD member and 11 non-member countries.

The questionnaire was designed to capture 13 key features of insolvency regimes (Figure 1.13). In order to get a better understanding of reforms over time, countries were also asked to indicate the state of play with respect to the different features of insolvency regimes at five year intervals since 1995 (i.e. 1995, 2000, 2005, 2010 and 2016), but the final responses only allowed the construction of indicators for 2010 and 2016.

Figure 1.13. **Components of the OECD insolvency index**



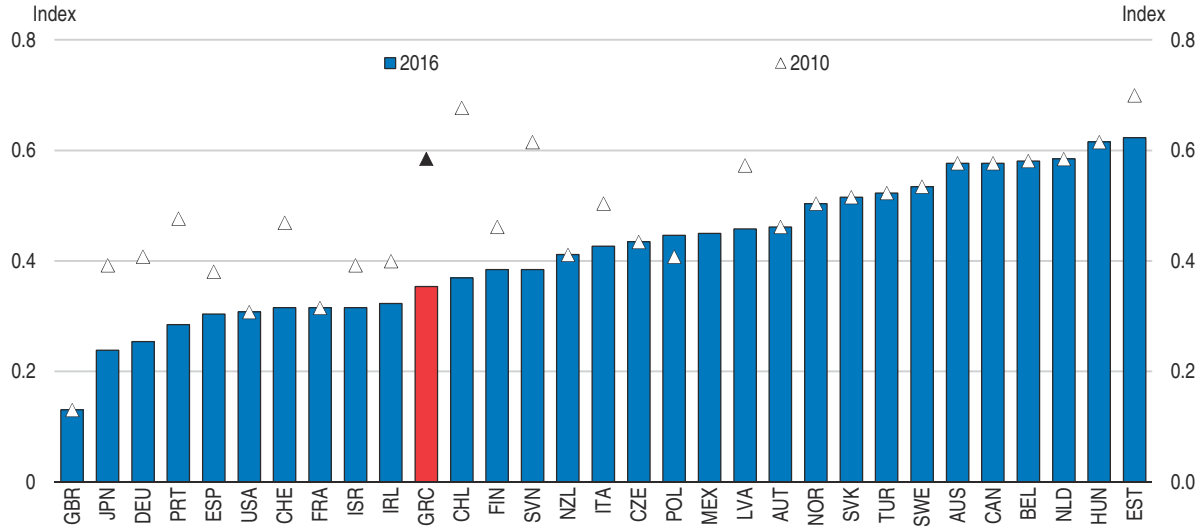
Source: Adelet McGowan, M., D. Andrews and V. Millot et al. (2017), "Insolvency Regimes, Zombie Firms and Capital Reallocation", *OECD Economics Department Working Paper,* No. 1399, OECD Publishing, Paris; Adalet McGowan, M. and D. Andrews (2016)" Insolvency Regimes And Productivity Growth: A Framework For Analysis", *OECD Economics Department Working Paper*, No. 1309, OECD Publishing, Paris.

Japan, Portugal and Slovenia made the largest progress on insolvency procedures. The sub-components of the index show progress in all of the three areas covered by the index: personal costs to failed entrepreneurs, lack of prevention and streamlining and barriers to restructuring (Figure 1.15). The insolvency framework index included in the World Bank's Doing Business database corroborates these improvements as Greece's distance to the best-performing countries decreased between 2010 and 2017.

Despite this progress, recovery rates remain low and insolvency proceedings slow compared to most OECD countries (Figure 1.16). For the stylised insolvency case considered by the World Bank's Doing Business index, the average recovery rate is just 35.6%, about half the level of the OECD average. Also, insolvencies last on average 3.5 years, more than double the time of an average OECD country.

Figure 1.14. **Greece's insolvency framework has improved**

Insolvency indicator



Note: The indicator is a composite that aggregates 13 insolvency indicators across 4 dimensions: treatment of failed entrepreneurs; prevention and streamlining; restructuring tools; and other factors. Calculations are based on the OECD questionnaire on insolvency regimes which collected specific information (mostly in the form of Yes/No questions and numbers) about personal and corporate insolvency regimes for 35 OECD member and 11 non-member countries.

Source: Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

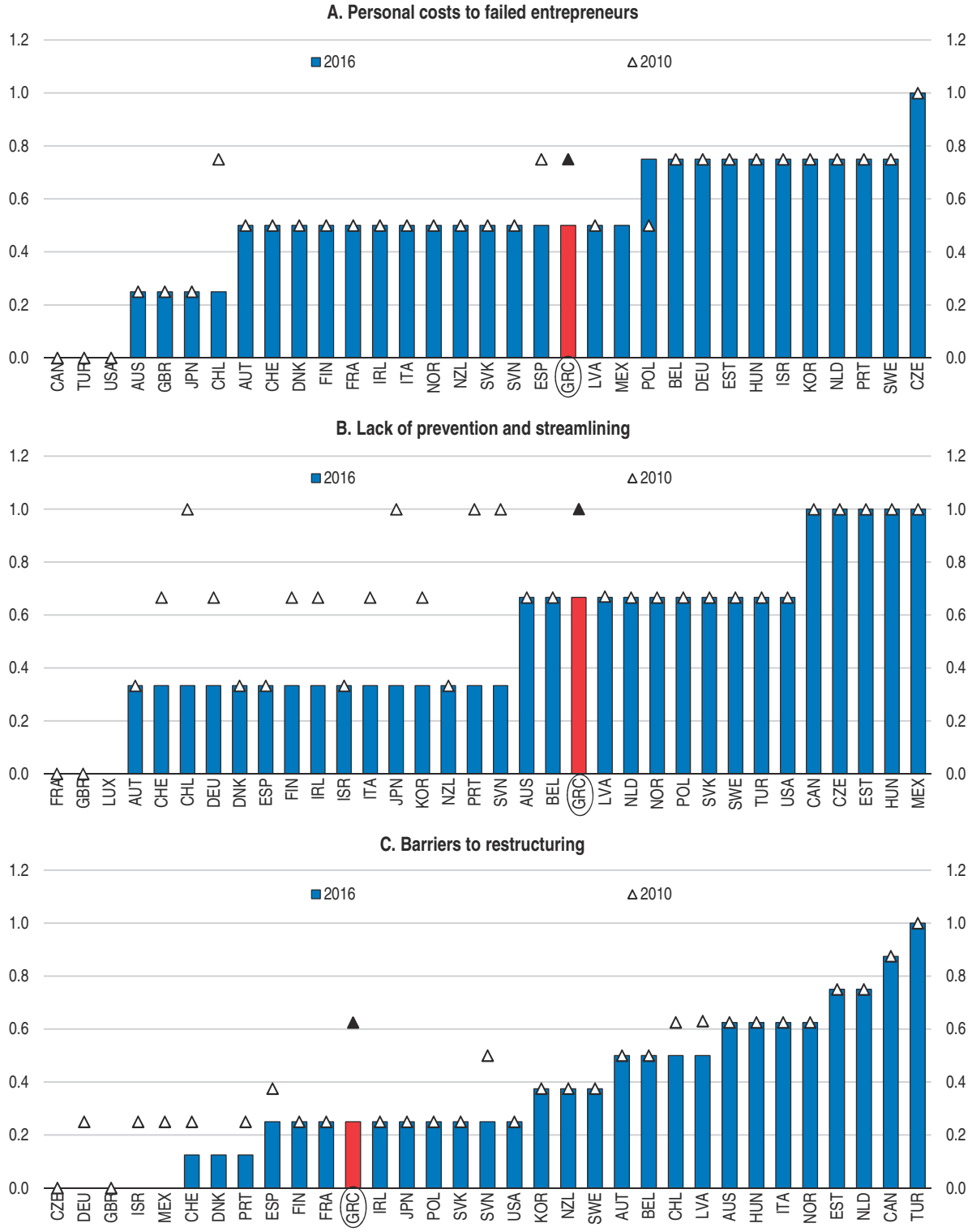
StatLink http://dx.doi.org/10.1787/888933713916

The government should ensure the legislated reforms are fully and timely implemented. For instance, the first electronic auctions started only in November 2017, though the legislation and a pilot version of the platform had been ready long before. Electronic auctions need to proceed unimpeded. The results of the first electronic auctions show they have the capacity to push strategic defaulters to repay loans. Besides, the government should ensure sufficient well-trained insolvency professionals are available soon. The first cohort of insolvency professionals is expected to assume tasks only by the end of 2017 after completing training and examinations. Training should cover not only insolvency laws and regulations but also finance and economics so that insolvency professionals can effectively and efficiently steer liquidation and restructuring processes. The government also needs to make further progress on establishing an insolvency registry, following international best practices. This initiative is part of the National Strategic Reference Framework (NSRF) 2014-2020.

The efficiency of the insolvency regime is intertwined with that of the judicial system. This is especially important in Greece as the new insolvency framework passed in 2016 applies only to proceedings started after 22 December 2016. This means that the large backlog of insolvencies (more than 200 000) falls outside the remit of the new insolvency regime. Greece is among the countries with the lengthiest trials and highest litigation rates (OECD, 2013b). In addition, the World Bank's Doing Business Indicator also suggests that enforcing contracts is difficult in Greece (Figure 1.17). The relative position of Greece has actually declined since 2010.

In countries displaying high litigation rates such as Greece, policies should primarily aim at shortening court cases. The digitalisation of the justice system is an important and thus far an underutilised tool in Greece. Across countries, the budget devoted to digitalisation

Figure 1.15. **Greece has improved across all areas of the OECD insolvency regime indicator**



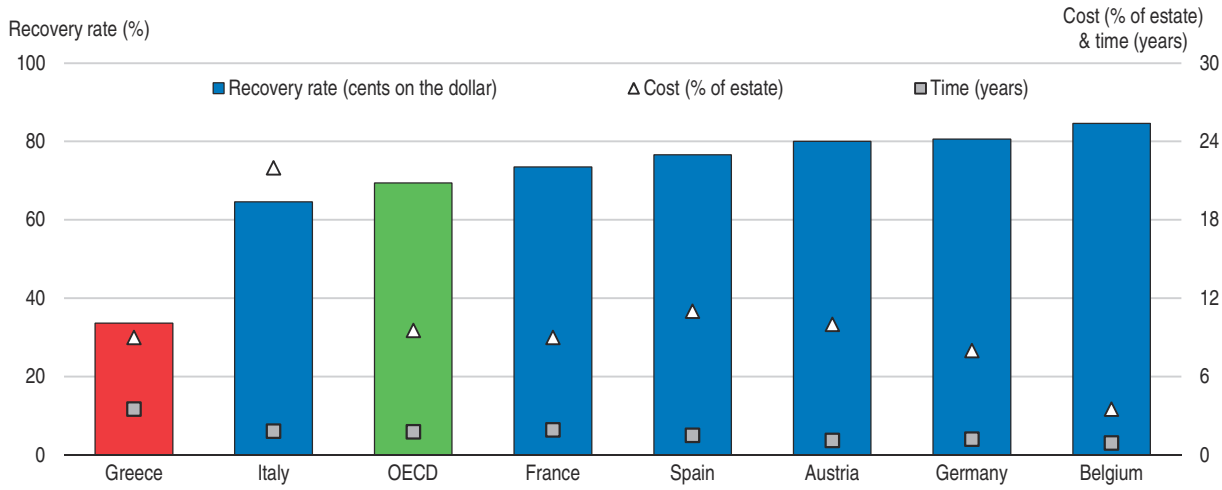
Note: Calculations based on the OECD questionnaire on insolvency regimes.

Source: Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933714106

Figure 1.16. **Insolvency proceedings in Greece are slow and the asset recovery rate is low**

2018



1. Reference year of database. The 2018 database reports the data collection completed in June 2017.

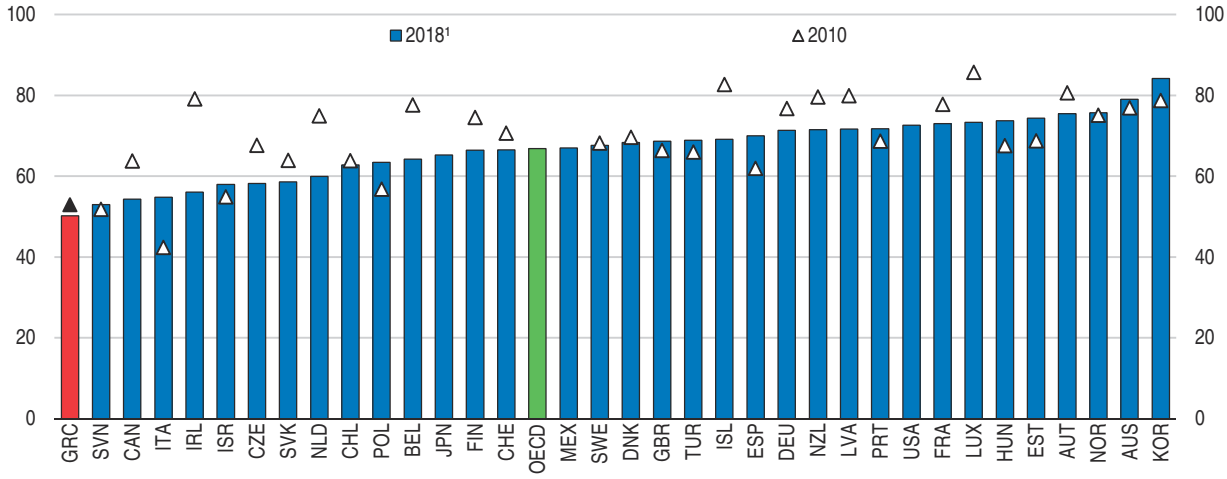
Note: Time for creditors to recover their credit is recorded in calendar years and the period of time is measured from the company's default until the payment of some or all of the money owed to the bank. Potential delaying tactics by the parties, such as the filing of dilatory appeals or requests for extension, are taken into consideration. The cost of the proceedings is recorded as a percentage of the value of the debtor's estate. The cost is calculated on the basis of questionnaire responses and includes court fees and government levies; fees of insolvency administrators, auctioneers, assessors and lawyers; and all other fees and costs. The recovery rate is calculated based on the time, cost and outcomes of insolvency proceedings and is recorded as cents on the dollar recovered by secured creditors. The calculation takes into account whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. The costs of the proceedings are deducted. The value lost as a result of the time the money remains tied up in insolvency proceedings is also deducted. The recovery rate is the present value of the remaining proceeds.

Source: World Bank (2018), *Doing Business 2018* (database).

StatLink http://dx.doi.org/10.1787/888933713935

Figure 1.17. **Enforcement of contracts is weak**

Index scale from 0 to 100, 100 indicating strongest performance



1. Reference year of database. The 2018 database reports the data collection completed in June 2017.

Note: The index reports the distance of each economy from the best performance observed on each of the indicators across all economies.

Source: World Bank (2018), *Doing Business 2018* (database).

StatLink http://dx.doi.org/10.1787/888933713954

is associated with a shorter trial length (Palumbo et al., 2013). The National Strategic Reference Framework 2014-2020 envisages the digitalisation of judicial files and records. Digital technologies can support case-flow management through creation and maintenance of records concerning case processing and schedules, structuring management of pre-trial, trial, conferences, and hearings; flagging cases for staff and judge attention, enabling verbatim records of court proceedings, and providing needed management information and statistics. Finland's Insurance Court provides a successful example of applying case-flow management along with an advanced time-frame alarm system enabled by digital technologies (Pekkanen et al., 2015).

Building an innovation system

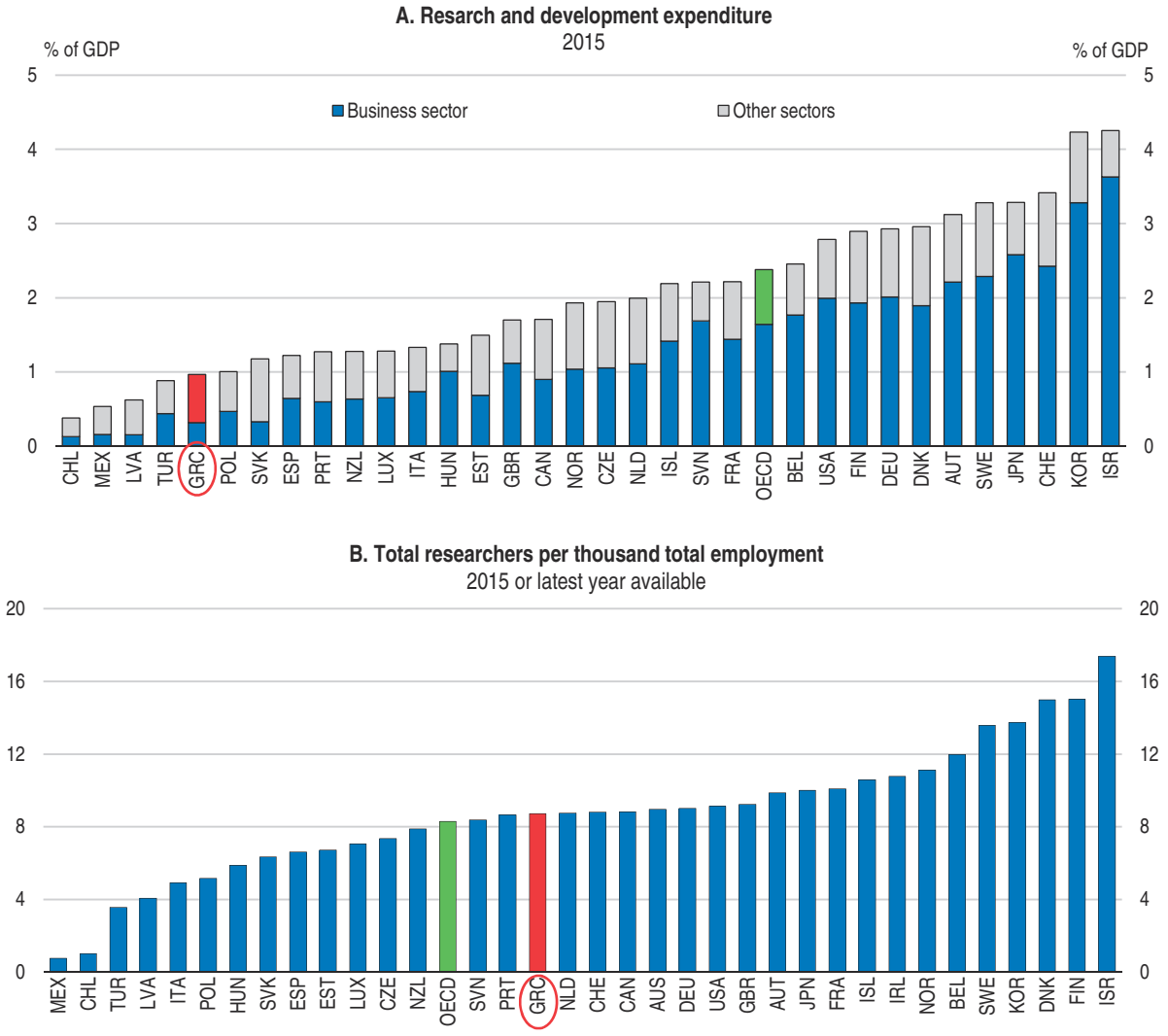
According to the European Innovation Scoreboard 2017, Greece is a moderate innovator. Greece lags behind the OECD average both in business and government spending on R&D activities, which amount to 0.28% and 0.54% of GDP respectively (Figure 1.18 – Panel A). Funding from abroad accounted for 13.2% of gross domestic expenditure on research and development in 2014, with the EU being the most important external funder of R&D activities. The number of researchers in Greece is above the OECD average (Figure 1.18 – Panel B). Thus, research productivity in terms of the number of patents per researcher and per R&D spending is low (Figure 1.19).

Connections between research centres and industry remain a challenge in Greece (Figure 1.20). Co-operation and financing of, mostly, public research centres and universities by the private sector face stiff resistance. In general, systematic data on scientific research are missing. The National Research and Innovation Strategy for Smart Specialisation 2014-20 was introduced in 2014 as the successor of the National Strategic Plan for Research and Development 2007-13. The new strategy aims at promoting links between research and industry and accelerating the dissemination of innovation. According to the strategy, gross expenditure on research and development is expected to amount to 1.2% of GDP by 2020. The 2016 law establishing state aid schemes for private investments provides financial incentives to boost R&D and foster collaboration between industry and R&D centres. This might go towards bridging the gap between the many Greek SMEs and research centre (Nassr et al., 2016). Greece's SMEs have lower capacity than their European peers to upgrade their technology (NBG, 2016).

The institutional setting of Greece's innovation policies is fragmented. Responsibilities, design and implementation of innovation strategies rest with many institutions and agencies:

- The National Council of Research and Innovation (NCRI) is the highest advisory body of the government for the formulation and implementation of national policies on research, technology and innovation. The NCRI is appointed by and reports directly to the Minister of Education and Religious Affairs.
- The Ministry of Rural Development and Food supervises the National Agricultural Research Foundation (NAGREF), which undertakes research and technology in agricultural, forest, animal and fish production and other related areas.
- In 2016, Greece established a new science and research financing institution, the Hellenic Foundation for Research and Innovation (HFRI), following the example of the National Science Foundation (NSF) of the United States or Germany's Deutsche Forschungsgemeinschaft. The results of the research it funds will be collected and

Figure 1.18. **Research and development expenditure is among the lowest in the OECD**



Source: OECD (2016), *OECD Main Science and Technology Indicators* (database) and OECD (2017), *OECD Science, Technology and R&D Statistics* (database).

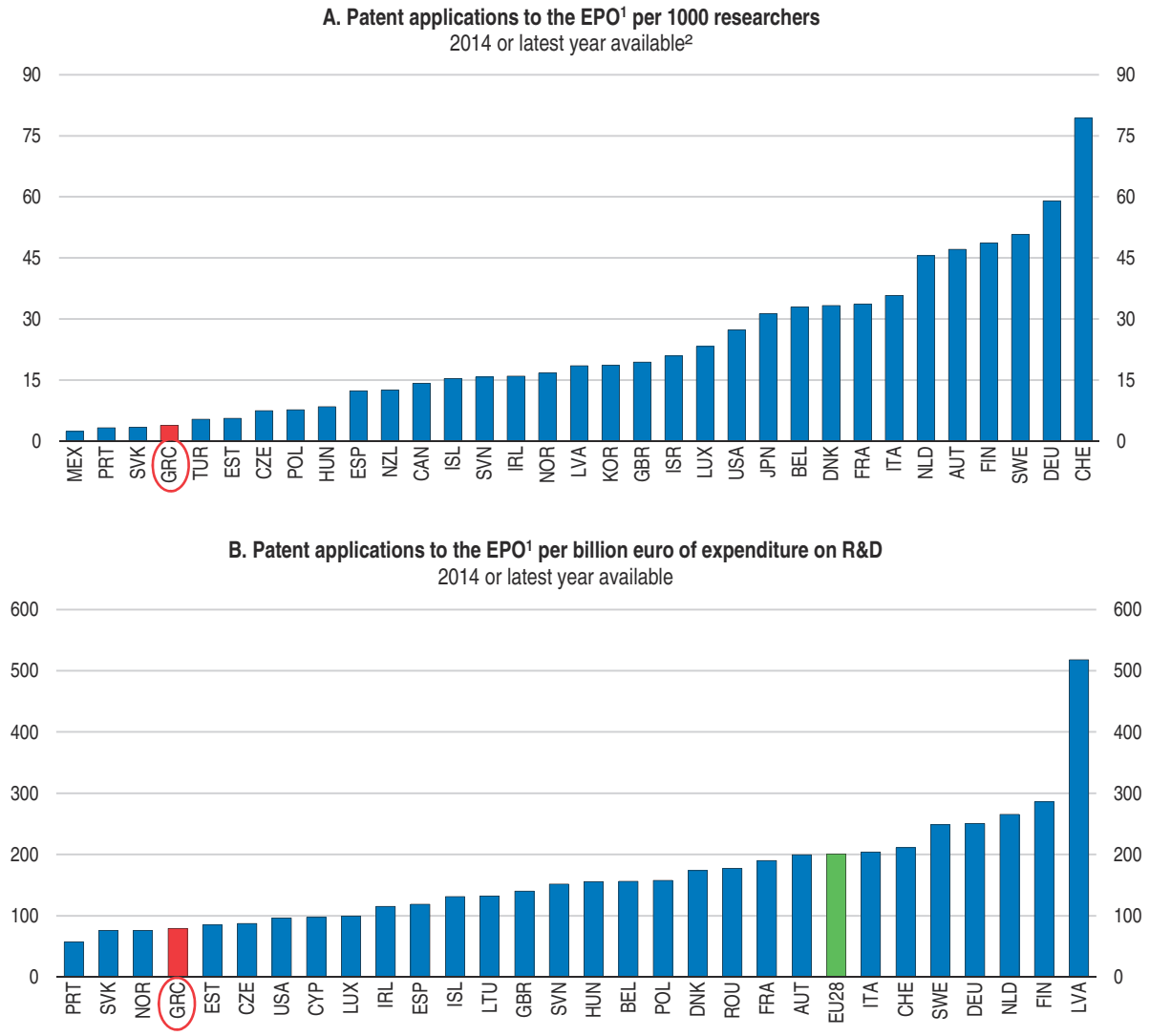
StatLink http://dx.doi.org/10.1787/888933714125

documented by the National Documentation Centre (EKT), which is also responsible for documenting all the publicly funded research output produced in Greece.

Overall, the high level of fragmentation lowers transparency and accountability as research centres are overviewed by different ministries. Moreover, existing agencies are not closed or consolidated into new ones, such as the HFRI. This can lead to overlapping responsibilities and inefficiencies in the management of funds and research programmes. The National Strategic Plan for Research and Development 2014-2020 acknowledges this problem.

Government-funded research should be consolidated into one framework. Agencies should be merged and lines of responsibilities and accountabilities simplified. Simplification will help identify strengths and weaknesses of research centres and projects, and improve the allocation of funds.

Figure 1.19. **Research productivity is low**



1. European Patent Office (EPO).
2. 2013 for Latvia, Iceland and the Slovak Republic, 2013 for Canada and Mexico and 2012 for Israel for the number of researchers. For Switzerland, the number of researchers in 2014 is estimated based on available data in 2012 and 2015.

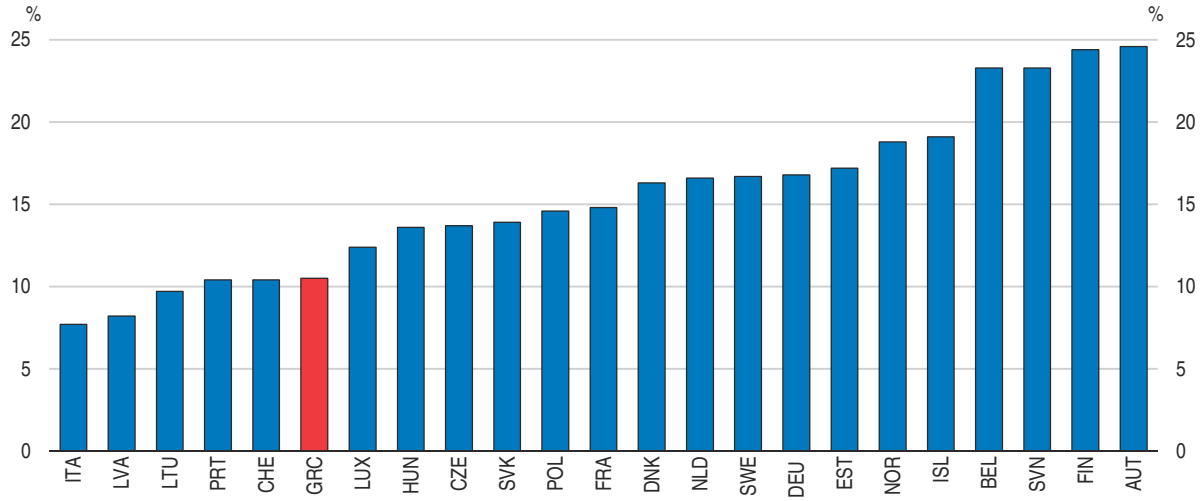
Source: OECD (2017), *OECD Main Science and Technology Indicators* (database) and Eurostat.

StatLink http://dx.doi.org/10.1787/888933714144

The use and effective enforcement of intellectual property rights (IPRs) is another important policy measure to encourage innovation. Evidence from six case studies on major innovations suggests that IPRs contribute at least partially to R&D appropriation (WIPO, 2015). IPRs encourage disclosure (unlike trade secrets) by allowing innovators to share technologies on terms they choose. As such, IPRs enable the development of technology markets. International bodies such as the World Trade Organisation (WTO) and World Intellectual Property Organisation (WIPO) require their members to undertake binding commitments to protect IPRs. The OECD has also developed guidelines on specific aspects of IPRs, such as access to research data from public sources and licensing of inventions (OECD, 2007).

Figure 1.20. **Co-operation with higher education or research institutions in innovation is low**

The share of firms co-operating in research in all product and/or process-innovating firms, 2012-14



Note: International comparability may be limited due to differences in innovation survey methodologies and country-specific response patterns.

Source: Eurostat (2016), Community Innovation Survey (CIS) 2014.

StatLink http://dx.doi.org/10.1787/888933714163

The IPRs regimes concern not only large and multinational enterprises but also innovative start-ups and SMEs. Yet, in OECD countries, SMEs tend to underutilise IPRs (OECD, 2015a). This is especially problematic in Greece given the large share of micro firms and SMEs, which lack resources and capacity to file for patents. In this area recent important progress has involved the creation of the profession of patent attorney, which will extend considerably the pool of professionals who, after having obtained the required accreditation, can represent clients filing for patents. This change is expected to accelerate and improve the quantity and quality of patent applications.

Public procurement is another tool that could be used to develop the innovation capacity of the country. Good practices from OECD countries show that public procurement can be used to foster innovation. For example, by specifying functional rather than technical criteria in calls for tenders, the government could foster competition among firms that wish to provide services in the most cost effective and innovative way. In a recent survey among OECD countries (OECD, 2017h) almost 80% of responding countries reported to support innovation through the procurement process; also half of them have developed an action plan for innovation procurement. Greece is taking the first steps towards an action plan to support innovation through public procurement. Its smart specialisation strategy 2014-2020 includes a programme on Pre-commercial Procurement, conducted by the General Secretariat for Research and Technology (GSRT) and the Ministry of Education, Research and Religious Affairs. A pilot programme is under preparation.

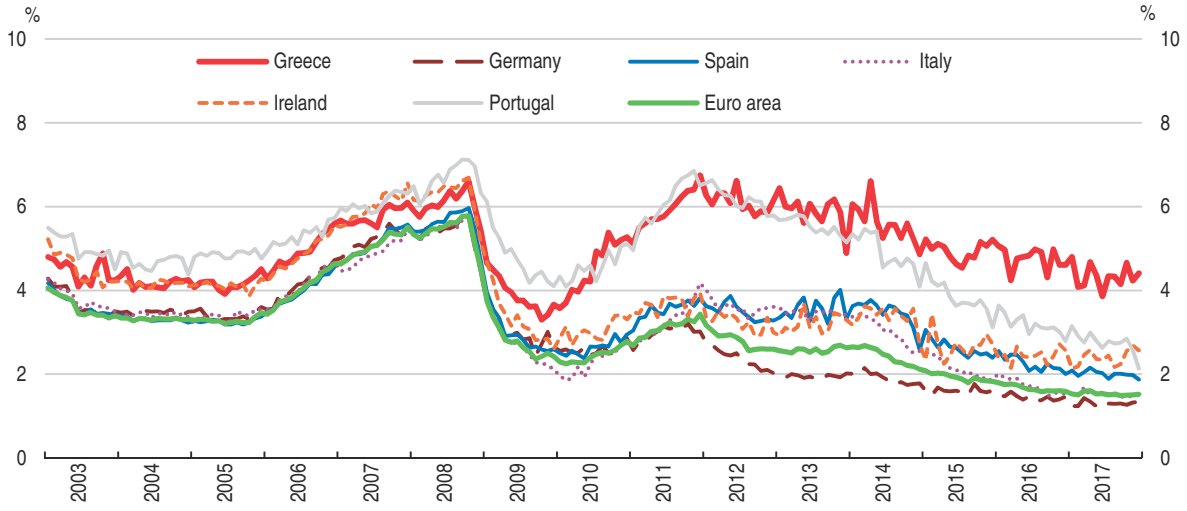
The measurement and impact assessment of actions related to procurement for innovation needs to be established. There is currently no formalised system in place for doing so and there are no quantified targets for procurement for innovation in Greece. Impact assessments, evaluation studies and/or studies of state-of-play regarding procurement for innovation do exist, but their recommendations are underused.

Reviving bank lending to firms

Bank lending interest rates have declined to pre-crisis levels after peaking in 2011. However, their reduction was more moderate than in other Eurozone countries. To date, Greek lending rates remain well above those in other EU countries and Greek banks' interest rate differential with EU countries is higher than in the pre-crisis period (Figure 1.21).

Figure 1.21. **Bank lending rates in Greece have declined but remain higher than in other Eurozone countries**

Bank interest rates on loans in EUR – new business, maturity up to 1 year



Source: ECB (2018), "MFI interest rate statistics", Statistical Data Warehouse, European Central Bank.

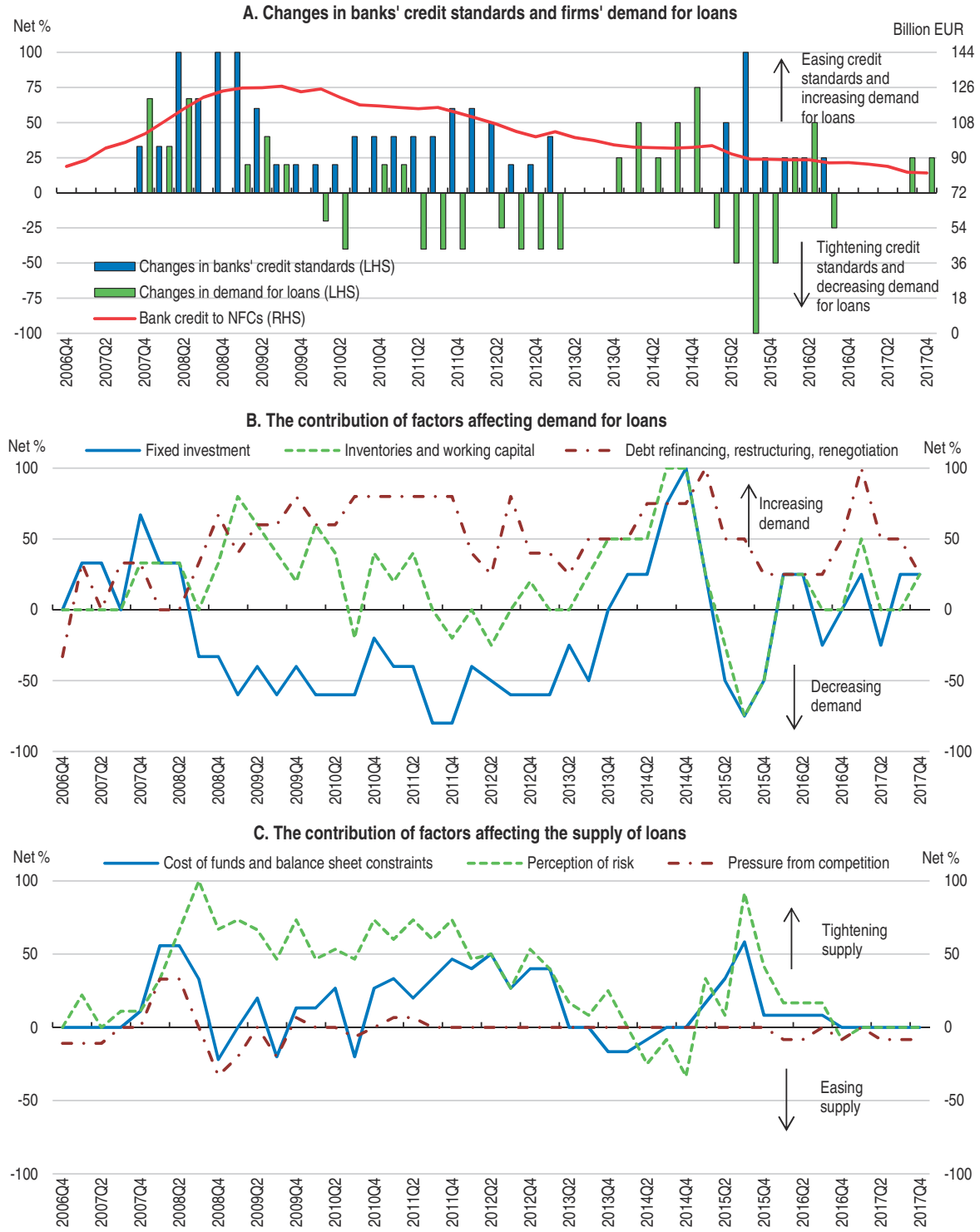
StatLink http://dx.doi.org/10.1787/888933713346

Despite the gradual fall in lending rates, bank credit to non-financial corporations remains low, though it has stabilised (Figure 1.21 and Figure 1.22 – Panel A). At mid-2017, bank credit was at the same level as in 2006 or 30% below the 2009 peak. The 2015 uncertainties relating to the ESM Stability Support Programme halted the recovery of bank credit that had started in 2014 (Figure 1.22 – Panel A). Confidence collapsed, derailing the recovery in the demand for loans (Figure 1.22 – Panel B). The demand for loans started to increase again only in late 2016. However, fixed investment projects are still a weak contributor to the demand for loans, which are mainly driven by debt refinancing, restructuring and renegotiation needs and, to a lesser extent, inventories and working capital (Figure 1.22 – Panel C). On the supply side, the tightening in credit standards of 2015 and previous years has yet to unwound (Figure 1.22 – Panel C).

The Greek banking sector is undergoing deep reforms to enhance its resilience to shocks and to support sustainable lending to firms and households. Reforms have centred on rationalisation of operations, consolidation, recapitalisation, and more recently improving banks' governance. The restructuring of the banking sector has already yielded results:

- Through consolidation, the share of banking assets held by the largest 5 banks increased from 70% in 2007 to more than 97% 2016. This high concentration does not seem to have obstructed competition so far and the competition commission has not opened cases on the banking sector.
- The cost-to-income ratio decreased by about 60% from late 2014 to less than 50% in mid-2017, one of the lowest in the EU. In 2016 the number of bank branches per 1 000 people

Figure 1.22. **Bank credit's standards have yet to ease and demand for bank loans is still weak**



Note: Net percentages for credit standards are defined as the difference between the sum of the percentages of banks responding "tightened considerably" and "tightened somewhat" and the sum of the percentages of banks responding "eased somewhat" and "eased considerably". Net percentages for the questions on demand for loans are defined as the difference between the sum of the percentages of banks responding "increased considerably" and "increased somewhat" and the sum of the percentages of banks responding "decreased somewhat" and "decreased considerably".

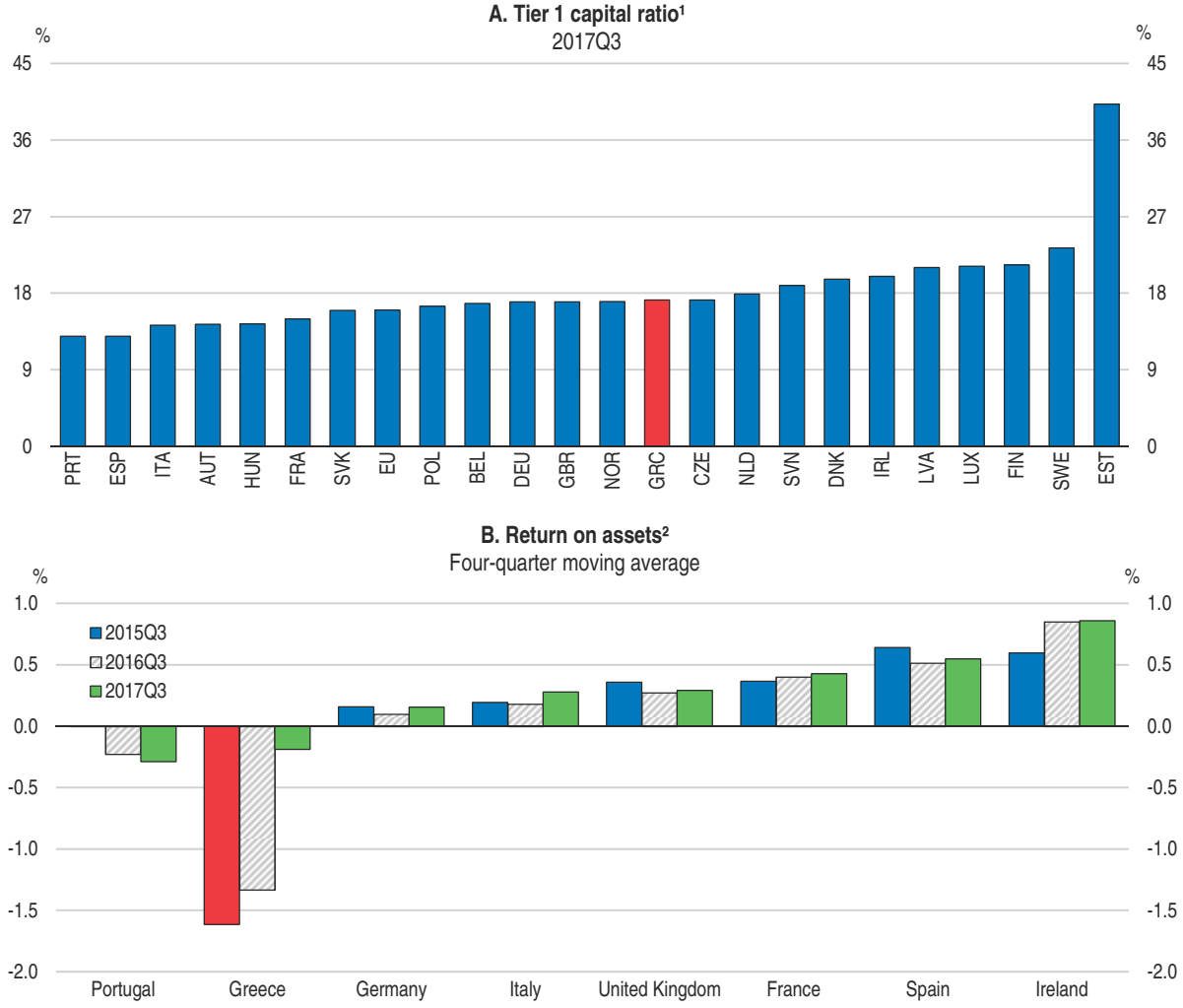
Source: ECB Bank Lending Survey.

StatLink http://dx.doi.org/10.1787/888933714182

was one-third lower than EU average after having decreased by 40% since 2007. In parallel, the number of bank employees per 1 000 people also declined – through voluntary exit schemes – by nearly 35%, to about 60% the EU average. Greek banks have divested from many foreign subsidiaries and other non-core activities.

- Following three recapitalisation rounds between 2012 and 2015 (for EUR 51.7 billion), banks' capital ratio rose well above regulatory thresholds; in 2017Q2 the Tier1 capital ratio was 17% (Figure 1.23 – Panel A). The latest bank recapitalisation in 2015 amounted to about EUR 15 billion and followed the ECB's asset quality review and stress tests with higher capital hurdles than in other EU countries.

Figure 1.23. **Capital ratios exceed thresholds but return on assets remains negative**



1. % of the total risk exposure.
2. The ratio is calculated by dividing annual profit or loss by total assets.

Source: European Banking Authority (2018),"Risk Dashboard, Data as of Q3 2017".

StatLink http://dx.doi.org/10.1787/888933713384

As a result of these reforms, confidence in the banking sector is starting to recover. From 2016, major credit rating agencies have upgraded the rating of Greek banks (e.g. Moody's, 2016), on the back of improving profitability and loan quality.

The Hellenic Financial Stability Fund (HFSF) has played a central role in this reform process, having participated in bank recapitalisation and, currently, steering the implementation of governance reforms. The HFSF, founded in 2010, is owned by the Ministry of Finance as a private legal entity but is not part of the public sector. Its role is to contribute to the maintenance of the stability of the Greek banking system, (HFSF, n.d.). According to its statute, the HFSF will wind down in 2020. HFSF holds equity in the four systemic banks: 40% of National Bank of Greece, 26% of Piraeus, 11% of Alpha and 2% of Eurobank's equity. Banking supervision rests with the Bank of Greece and the Single Supervisory Mechanism.

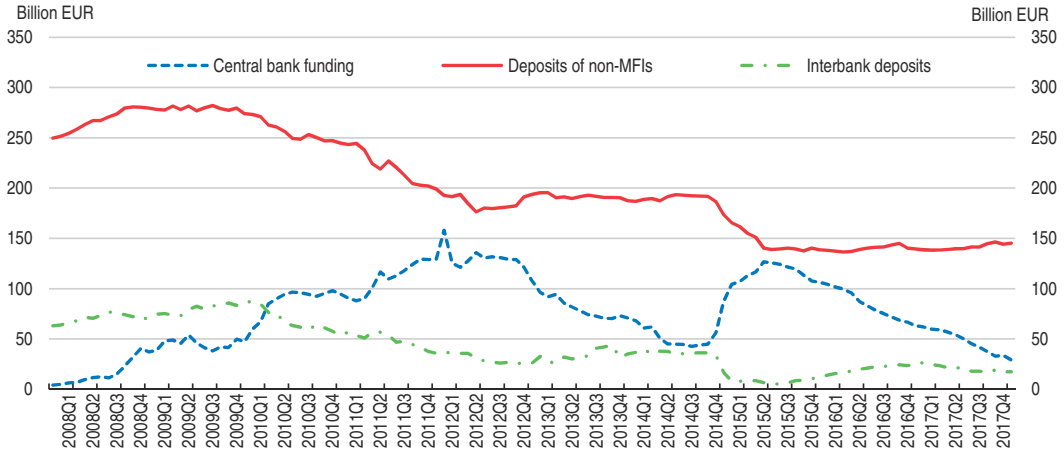
Yet, the banking sector still faces several challenges. Banks' return on assets is improving but still lower than other OECD countries (Figure 1.23 – Panel B) and banks' assets are declining, also because of disinvestment of foreign subsidiaries. Moreover, banks are well capitalised but about half of their capital consists of deferred tax assets (or 7% of total assets) (Moody's, 2017). According to Basel III capital rules, from 2018 deferred tax assets that rely on banks' future profitability will have to be deducted from Common Equity Tier 1 (CET1), which will lower bank capital ratios. The Greek government has amended the tax code – in line with other European countries such as Italy, Portugal and Spain – to allow banks to turn deferred tax assets into deferred tax credits (i.e. direct claims on the government that will have to be honoured in case of liquidation or insolvency) – so that they need not be deducted from CET1. The carry-forward period was lengthened from 5 to 20 years. These changes have received a positive assessment by the ECB (ECB, 2017). Transforming deferred tax assets into deferred tax credits might in the long-term aggravate the adverse feedback loop between bank and government financial health.

Banks' funding is improving, though it still constrains lending. The bulk of bank deposits lost during the crisis have yet to return. Bank deposits dropped by 27% from late 2014 to mid-2015, for a cumulative loss of about 50% from their 2009 peak (Figure 1.24). The capital controls imposed in mid-2015 halted the deposit outflows and they are being gradually relaxed, although they still contribute to tight financial constraints. The central bank funding is diminishing rapidly and is now at levels of 2009. Access to the interbank market is improving but is still low (Figure 1.24). The government has issued a roadmap to lift capital controls, as banks' funding conditions improve, while preserving financial stability.

Banks have also a large stock of non-performing loans (NPLs), constraining credit supply, especially towards more risky borrowers such as SMEs. In 2017Q3, the gross value of NPLs stood at EUR 106 billion, about 46% of total loans or 58% of GDP (Figure 1.25 – Panel A and B). The size of non-performing exposures (NPEs, which in addition to loans and advances include debt securities other than those held for trading) is similar to that of NPLs as in Greece the amount of debt securities is not large compared with loans. According the European Banking Authority, in Sept 2017 the NPE ratio was 42% in Greece, against 14% in Portugal and 10% in Italy and in Ireland (EBA, 2017). The analysis below refers to either NPEs or NPLs depending on which data are available. Provisions amount to 49% of NPLs' gross value, higher than the EU average. The net value of NPLs (gross value minus provisions) amounts to about 175% of banks' capital (Figure 1.25 – Panel C). NPEs are spread across loan types (Table 1.2). Business loans account for over half of total NPEs. Considering business lending, NPEs are concentrated among SMEs, though the share of loans that are non-performing is larger for sole proprietors.

The prolonged crisis has led to the rise in NPLs in combination with structural and bank governance problems. Private debt relative to GDP and the share of loans to non-financial corporations remain low compared to other OECD countries but the long crisis

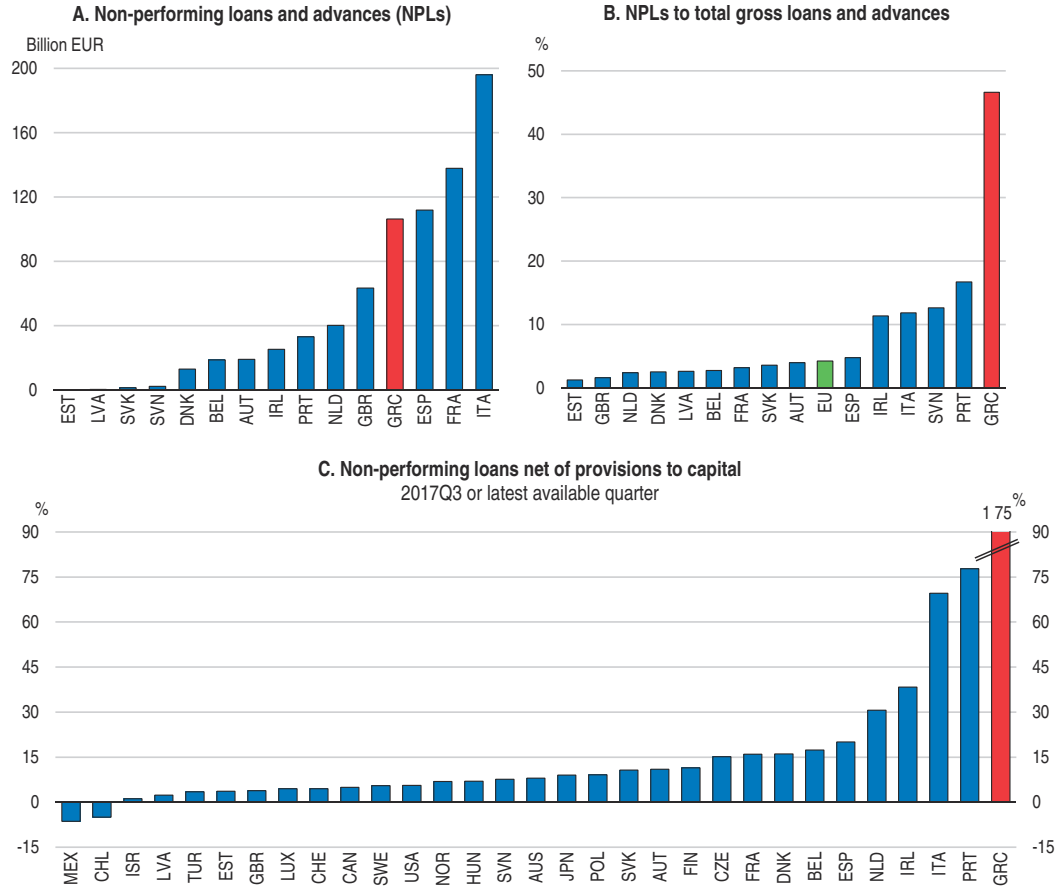
Figure 1.24. **Bank deposits have levelled off and reliance on the central bank's funding is decreasing**



Note: Deposits include deposits and repos of non-monetary and financial institutions (non-MFIs). Central bank funding includes ELA provided by the Bank of Greece and financing provided by the ECB.
Source: Bank of Greece.

StatLink http://dx.doi.org/10.1787/888933713365

Figure 1.25. **The stock of non-performing loans is large**
2017Q3



Source: European Banking Authority (2018),"Risk Dashboard, Data as of Q3 2017" and IMF (2018), *IMF Financial Soundness Indicators Database*.

StatLink http://dx.doi.org/10.1787/888933713403

Table 1.2. **Share of NPEs for different types of loans**

June 2017

Type	% NPEs in total gross loans[1] by category	% of category NPEs in total NPEs
Residential mortgages	43.3	30.2
Consumer loans	53.2	14.9
Business loans	43.6	52.8
Sole proprietors	66.5	10.1
SMEs	59.0	31.5
Large corporates	24.5	12.8

1. Includes loans, advances and debt securities. NPEs are non-performing exposures according to the European Banking Authority definition and computed by the Bank of Greece. NPEs include either of the two criteria: a) material exposures which are more than 90 days past due; b) unlikely to pay in full without realisation of collateral, regardless of the existence of any past due amount or of the number of days past due.

Source: OECD computations and Bank of Greece (2017), *Report on Operational Targets for Non-Performing Exposures*, December.

has eroded the capacity of households and businesses to pay their debts. Also, even before the onset of the crisis the NPL ratio in Greece was 4.5% (in 2007) higher than the 3% average for the euro area (HBA, 2017). This suggests bank governance problems and deficient risk management contributed to misallocate credit. Already back in 2006, the IMF Financial Stability Report (IMF, 2006) underlined the limited capabilities and lack of data across banks for performing effective risk management, provisioning policies not aligned with risk exposures, and high level of NPLs compared with other euro area countries.

Bank governance framework has improved

To reap the full benefits of the banking sector reforms banks' governance will have to improve. Poor corporate governance has skewed lending decisions, contributing to the rise in NPLs. Eligibility criteria for banks' boards were weak, resulting in poor management. Credit risks were not properly assessed due to insufficient risk controls, lack of data and uneven use of credit-scoring methodologies (IMF, 2006).

The Single Supervisory Mechanism and the Bank of Greece as banks' supervisors oversee banks' corporate governance. The Hellenic Financial Stability Fund (HFSF) as a shareholder of banks plays an important role in implementing corporate governance reforms and recommending changes. Banks' corporate governance reforms have made progress since the banks were consolidated and recapitalised in 2015. In 2016, the four systemic banks replaced many members of their boards to conform to the new strict fit-and-proper criteria. The HFSF is leading an in-depth review of the governance and performance of the four systemic banks' boards of directors and their committees, which aims to establish at the board level a culture of evaluation and a focus on managing NPLs. Building on the board assessment already undertaken in 2016, the new review aims at establishing an evaluation culture and discipline at the board level, and evaluating risk- and audit-board committees with particular focus on non-performing loan management.

Fully implementing and entrenching corporate governance reforms is a precondition for HFSF to divest its equity holdings in banks by 2020. After the conclusion of the in-depth review of the governance framework and performance of the banks' boards of directors, the HFSF should pursue its recommendations and continue to align corporate governance standards with international best practices. The government should ensure HFSF's continued independence and authority to fully implement the compulsory corporate governance standards. In the last two years, director and senior executive turnover at HFSF

was high. This may have hampered HFSF's regular reporting and operations. More stability in HFSF's senior management, while ensuring that senior managers meet strict fit-and-proper criteria, will enhance its operations.

Reducing non-performing loans

Reducing NPLs is paramount to restore the banking sector to health and to revive bank credit. NPLs restrict credit supply through two main channels: lowering profitability and tying up capital as impaired assets carry higher risk weights (Ayira et al., 2015).

Accelerating their disposal hinges on complementary policies (Aiyar et al., 2015; Liu and Rosenberg, 2013): i) tightening regulatory policies; ii) developing a market for distressed debt. Improving insolvency and debt restructuring proceedings is also important as discussed in a separate section in this Chapter. Urgency is needed as lowering NPLs to pre-crisis levels will take considerable time. The recent experience of Ireland and Spain shows that NPLs start declining only two to three years after the first decisive actions have been taken.

Tightening regulatory policy

Banks' supervisors have taken several steps to improve the regulatory framework of NPLs. Initial improvements by the BoG were informed by diagnostic studies commissioned in 2013 and 2015 to a private sector firm to assess the quality of the loan portfolio of Greek banks, review existing forbearance measures and foreclosure solutions and assess the capacity of banks to deal with impaired loans in an effective way (NBG, 2014; Plaskovitis, 2016). The main findings pointed to the predominance of forbearance measures, limited use of foreclosures, delays in handling denounced loans (i.e. loans where the contract has been terminated), and insufficient portfolio segmentation.

Following this assessment, the BoG has issued new and detailed supervisory guidance on NPLs, including a new reporting framework which goes well beyond the European Banking Authority's guidelines (ECB, 2016; BoG 2017). In line with the ECB's guidance (ECB, 2017), it requires banks to develop NPL reduction strategies, including quantitative targets (Table 1.3), and to establish dedicated units to manage NPLs.

The introduction in 2016 of quantitative targets to dispose of NPLs and NPEs was an important step forward. Setting and enforcing targets is the approach followed by Ireland and Cyprus after the crisis and Japan in the late 1990s and early 2000s. According to Greek banks' current targets, the stock of NPEs should drop by nearly 40% between June 2017 and December 2019, (BoG, 2017). Banks expect that a large share of NPEs will be cured as the economy improves (i.e. they will become performing loans). Cured loans should reduce NPEs by EUR 33 billion and marginally exceed the generation of new NPEs. Sales, liquidations and write-offs are also expected to play an important role, reducing NPEs by EUR 33 billion in total.

So far banks have been able to meet NPL disposal targets. The targets become more ambitious from 2018 and banks expect NPL inflows to remain high. Supervisors should provide robust and proactive supervision to ensure prudent NPL recognition and provisioning as well as strong capital buffers. Non-compliance with NPL targets should trigger additional supervisory measures, speeding up bank restructuring. Moreover, efforts should be pursued to enhance the capacity of banks to manage NPLs internally, which is still low. Supervisors need to ensure that the established independent internal units specialising in the management and recovery of NPLs in all major banks are well resourced.

Table 1.3. **Operational targets to reduce non-performing exposures**

	Target	Measurement	Rationale
1	NPE	Gross value	Overall target
2	NPL	Gross value	Overall target
3	Cash recoveries (collections, liquidations and sales) from NPEs	As a share of total NPEs.	Monitoring collection efforts, collateral sales and liquidations. Targets point to rising cash recoveries (from 3% of NPEs in 2017, to 4.5% in 2018 and 6.1% in 2018) based on increasing liquidation proceeds.
4	Restructured loans (long term modifications	As a share of NPEs plus forborne restructured loans.	Monitoring modification solutions offered to distressed borrowers. Banks are aiming at increasing the share of restructured loans to 27%-61% in 2019 from 15%-19% in 2016Q2. Restructuring involves long-term modifications of the loan agreement for a period longer than two years. It is expected this will lead to the transition of borrowers into viability status and finally into a cured status
5	NPEs that are 720 days past due and not denounced	As a share of total NPEs that are 720 days past due either denounced or not denounced.	Monitoring the start of legal efforts to resolve NPEs. Banks are aiming at lowering the share of not denounced loans from 6%-26% in 2016Q2 to 1%-7% in 2019 for SMEs and from 12%-34% to 2%-24% for large corporates.
6	Denounced loans for which legal action has been initiated	As a share of total denounced loans.	Monitoring legal efforts to resolve NPEs. The target is 87-100% in 2019.
7	NPEs of SMEs for which a viability analysis has been conducted in the last 12 months	As a share of total NPEs of SMEs.	Monitoring efforts to offer appropriate restructuring solutions to SMEs. The 2019 target is 80-97% in 2019.
8	NPEs of SMEs and corporates involving multiple banks for which a common restructuring solution has been implemented.	Gross value.	Monitoring efforts to implement common restructuring solutions by multiple banks
9	NPEs of corporates for which a specialist for restructuring companies was hired	Gross value.	Monitoring efforts to implement corporate restructuring solutions. The target is for doubling the amount of loans for which such solutions have been proposed between 2016Q2 and 2019.

Source: BoG (various issues), *Report on Operational Targets for Non-Performing Exposures*, available at *www.bankofgreece.gr/Pages/en/Publications/ReportNPE.aspx*.

In cases where debtors are in arrears with multiple creditors – banks and the public sector – more co-ordination among creditors will help to expedite NPL resolutions. The lack of consultation between creditors has prevented the development of broad agreements on debt restructuring. Some improvements have recently been made with the introduction of regular meetings among the four significant Greek banks to discuss cases involving common borrowers. The new out-of-court dispute resolution (discussed below) also allows for a faster restructuring of debt with multiple creditors including public agencies. The government should make sure public agencies actively participate in these procedures to facilitate debt restructuring.

Supervisors (the Bank of Greece and the Single Supervisory Mechanism) should ensure that as the disposal process of NPLs gathers pace banks remain well capitalised. As highlighted by a recent ECOFIN report on NPLs (ECOFIN, 2017), robust, proactive and intrusive supervision is key to ensuring prudent NPL recognition and provisioning as well as strong capital buffers. Banks need to be able to realistically project the effect of their NPL disposal plan on their capital under different economic assumptions. The banks' stress tests to be conducted in 2018 should be able to identify potential capital shortfalls before the end of the ESM Stability Support Programme. In the event capital shortfalls arise that cannot be covered by the private sector, ESM Programme funds should be used to ensure banks remain well capitalised.

Developing a market for distressed debt

The lack of a distressed debt market and weak demand for distressed debt explain why to date there have been only few non-performing loan sales in Greece. In the second half of 2017, there were the first two NPL sales by Greek banks; additional NPL sales are expected to

be completed in 2018. Regulation and lack of competition has severely hindered the development of a loan servicing (i.e. loan administration) industry in Greece. A new law regulating non-bank loan servicers was approved only in 2015 (Law 4354/2015) and the BoG issued implementing regulation in 2016. This is the first attempt in Greece to foster a secondary market for distressed debts (Sakkas and Bazinas, 2016). The new law and implementing regulation follow international best practices as they allow for the licensing of loan servicing activities to nonbank entities, thus lowering entry barriers into this industry (IMF, 2015). The BoG is responsible for issuing licences, based on pre-defined criteria, and revoking them in the case of infringements. Licensed servicers will have to abide by the supervisory framework for NPLs issued by the BoG. They will be able to operate in three areas: management, transfer (i.e. purchase) and refinancing of loans. Refinancing will require an additional license from the BoG. The possibility of restructuring and refinancing non-performing loans is a key aspect of the reform as it enables licensed servicers to turn around distressed borrowers by offering new loans. This possibility can then help enlarge non-bank sources of finance and improve access to finance by distressed borrowers. However, the legislation on loan servicing only concerns large corporate loans and does not apply to SME loans, consumer loans or primary residence mortgages.

BoG had licenced 10 loan servicers at the end of 2017. This will help to develop a distressed debt markets. Allowing loan servicers to manage or purchase SME loans is expected to accelerate resolution of distressed debt given the large number of distressed SME borrowers in Greece. Japan provides a good example of developing a distressed debt market in a relationship banking environment with many SMEs (Box 1.5).

Box 1.5. **The distressed debt market in Japan**

The collapse of the Japanese financial bubble in 1991 lasted for more than 10 years, resulting in plunging asset prices and a rising stock of banks' NPLs. During 1998-2002, the government created a market to resolve NPLs. These actions were effective as in the following years the stock of NPLs first increased, as banks were forced to recognise them; afterwards it diminished drastically (Figure 1.26).

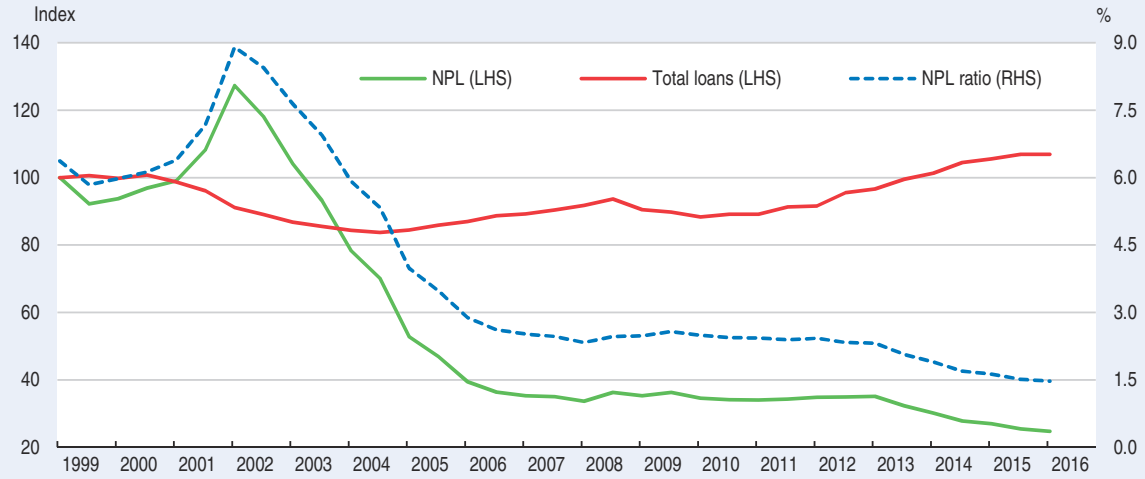
The first step in resolving banks NPLs was to induce banks to sell the collateral of NPLs so as to create a distressed debt market. Until the late 1990s, banks had made insufficient provision for NPLs as the assessment of loan losses was largely left to the judgment of individual banks. In addition, banks did not have adequate incentives to make sufficient provisions as they were not allowed to deduct them from taxable income.

In 1998, the Financial Reconstruction Law required banks to classify borrowers with payment arrears more precisely than previously and this played an important role in accelerating NPL disposals. The 1998 Law also created the Resolution and Collection Corporation (RCC) as a government-owned agency (owned by the Deposit Insurance Corporation) by merging two government-owned institutions that had the responsibility of collecting bad loans from failed housing loan companies, banks and credit co-operatives. Its portfolio initially consisted of real estate collateral on defaulted loans. The 1998 Law also gave RCC the power to purchase distressed assets at fair market value, securitise NPLs, restructure companies and participate in debt-equity swaps, thus accelerating the disposal of NPLs.

In 2001, the Emergency Economic Measures further expedited the sales of collateral owned by nonviable SMEs. The measures required major banks to remove NPLs from their books within three years after their recognition by selling them directly to the market, pursuing bankruptcy proceedings, or by rehabilitating borrowers through out-of-court workout procedures. Any remaining loans had to be sold to RCC at fair price. Between 1999 and 2002, the RCC purchased loans worth JPY 55 trillion (USD 495 billion, 10.9% of GDP) at 96% discount. The RCC also improved the transparency of the NPL market by setting standards of disclosure and publishing information on collateral.

Box 1.5. **The distressed debt market in Japan** *(cont.)*

Figure 1.26. **Policy measures helped to create a distressed debt market and lower NPLs in Japan**



Source: Thomson Reuters.

StatLink http://dx.doi.org/10.1787/888933714201

In 2002 the government announced the Financial Revitalisation Program with the aim to promote corporate debt restructuring for large firms. Authorities tightened loan assessment standards for large borrowers (using market information such as stock prices, credit ratings and discounted cash flow analysis). This led banks to reclassify part of their portfolio as sub-performing and sell such assets in the distressed debt market.

Overall, these measures resulted in a large increase in banks' NPL write-offs and NPL market transactions, and the distressed debt market evolved. In the mid-1990s, the market was dominated by foreign funds that were able to achieve very high internal rates of return (30-50%) as banks sold collateral linked to NPLs at low prices. As the number of investors (especially Japanese ones) in the distressed debt market rose and the banks started using auctions, prices increased and the internal rate of return of buyers dropped to single digits. Overall, the process was not painless. The number of failed financial institutions rose progressively during the 1990s to reach 56 in 2001.

Source: Ohashi, K. and M. Singh (2004), "Japan's Distressed Debt Market", *IMF Working Paper*, No. WP/04/86, IMF; Callen, T. and J.D. Ostry (2003), *Japan's Lost Decade: Policies for Economic Revival*, IMF; Gomi, H. (2007), "Japan Non-Performing Loan Problem and Financial Reconstruction", Paper presented at the Conference *Financial Stability And Financial Sector Supervision: Lessons From The Past Decade and Way Forward*, organised by IMF Regional Office for Asia and the Pacific (OAP), Keio University.

Tax incentives for banks to dispose of NPLs need to be clarified and streamlined. Loan servicing legislation introduced new tax provisions, but these are partly inconsistent with those provided by the 2003 securitisation law. The 2003 securitisation law in addition to providing an efficient and expeditious means for transferring NPLs offers full exemption from indirect and direct taxes on loans transfers (HFSF, 2016), though they have been underused because of the lack of loan servicers. The more recent loan servicing legislation offers less generous incentives, which are also partly inconsistent with the securitisation law (Watson Farley & Williams, 2016; HFSF, 2016), as for instance loans transfers are subject to VAT.

Aligning the tax incentives provided by the loan servicing industry legislation with those of the securitisation law would enhance tax transparency and encourage the disposal of non-performing loans. Tax incentives can be an important tool to encourage the disposal of non-performing loans (KPMG, 2016). Making such incentives temporary, with for instance sunset clauses, will accelerate their effects and ensure such incentives expire when no longer needed.

Facilitating and expediting the sales of collateral would also help create a distressed debt market. The start of e-auctions is a welcome, if delayed, development. The United States has a well-developed distressed debt market (Altman, 2012; Aiyar et al., 2015a, 2015b). Following GAAP rules on the treatment of NPLs, US banks are obliged to: 1) suspend the accrual of interest income from NPLs after 90 days past due on payment or if the loan is deemed uncollectable; and 2) write down of NPLs to the collateral value after 6 months, with the collateral value based on the current price and takes no account for any forecast increase in market valuation. As a result, the United States debt market has contributed to keeping the stock of NPLs low. NPLs peaked at 5% of gross loans in 2009 and have since then declined to below 2%.

The timely and smooth introduction of the International Financial Reporting Standard (IFRS) rule (IFRS9), planned for 2018, could help develop a distressed debt market. IFRS9 will introduce a new approach for the valuation of financial assets and liabilities, including a forward-looking expected loss value of impaired loans. This is radically different from the current, backward looking approach of Greek (and EU) banks (IAS39). Current rules also allow for the accrual of interest income from NPLs, thus inflating banks' profitability and discouraging the write off of NPLs, and do not provide clear guidance for the valuation of collateral.

Enhancing public investment

Public investment in Greece decreased drastically early in the crisis, as in other crisis-hit countries. From 2011 onwards public investment relative to GDP started to recover and reached a level above that of Italy, Portugal, Spain and the EU28 average (Figure 1.27). However, resources allocated to the public investment programme continued to shrink, from EUR 6.65 billion in 2013 to EUR 6 billion in 2017.

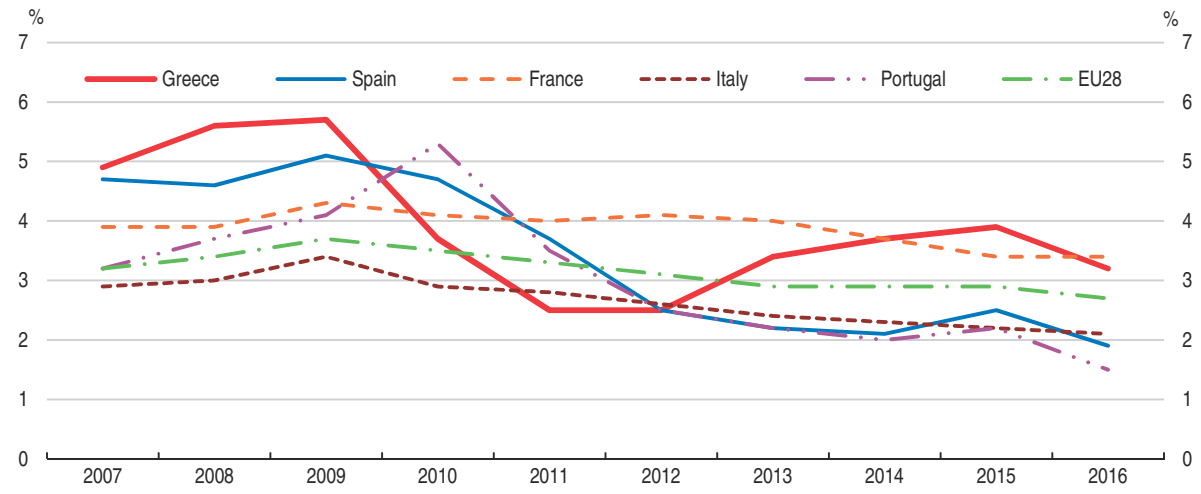
Public investment is largely co-financed by the EU. The rate of absorption of EU funds is high in Greece compared to most EU countries (EU, 2017). Between 2010 and 2017, public investment co-financed by the EU accounted for about 80% of total public investment (Figure 1.28). The large share of EU funds protected investment from more severe cuts during the crisis. As a result, the share of public investment in total expenditure remained broadly stable between 2013 and 2017 in the range of 11-12% (Figure 1.29).

EU funds for public investment will remain significant in the coming years. For the 2014-20 programming period, the European Structural Investment Funds allocated EUR 4.3 billion to environmental protection and resource efficiency, EUR 2.5 billion to transport and energy networks and EUR 0.8 billion to information and communication technology. The government plans to raise public investment that is not co-financed by the EU from EUR 0.8 billion in 2016 to EUR 1 billion in 2017-18 and EUR 1.25 billion in 2019-21.

Public investment can be an important factor to raise long-term growth and social welfare in addition to strengthening the ongoing recovery. Fiscal consolidation can result in long-term economic losses when spending cuts are focus on valuable public goods such as

Figure 1.27. **Public investment has fallen**

General government gross fixed capital formation as % of GDP

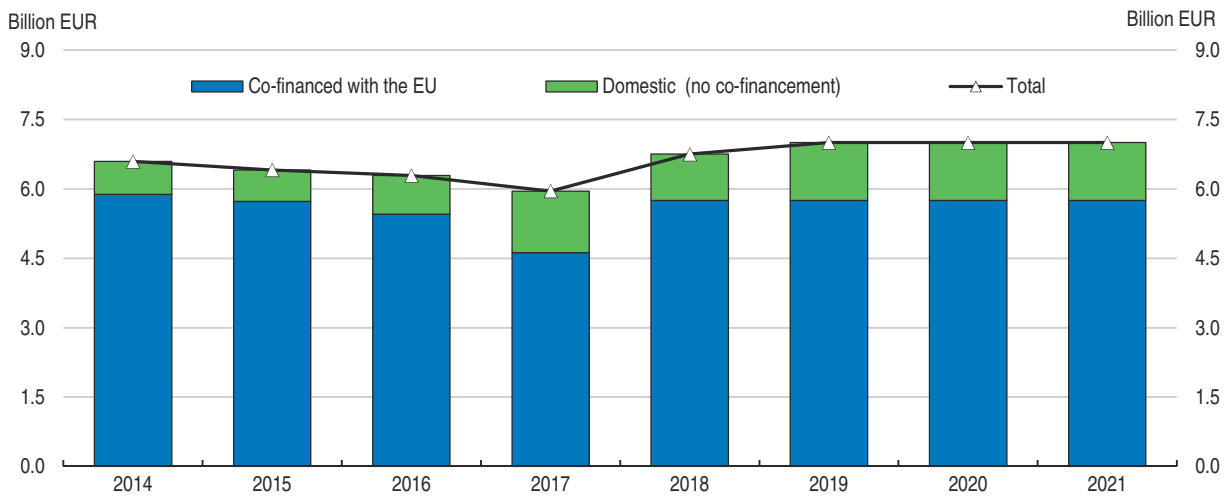


Source: Eurostat (2017), *Government statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714220

Figure 1.28. **EU co-financing of public investment spending is sizeable**

Public Investment Programme (PIP) cash expenditure



Source: Ministry of Finance and State General Accounting Office.

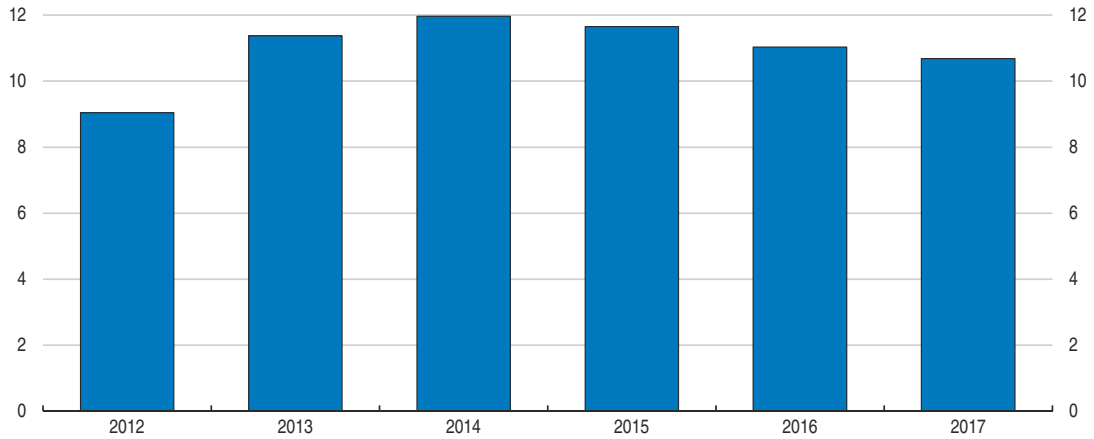
StatLink http://dx.doi.org/10.1787/888933714239

public investment (Cournède et al., 2015). The government should protect public investment from spending cuts, to achieve the fiscal consolidation targets, and increase it as planned. OECD estimates indicate that the marginal return on additional public investment in Greece is positive (Fournier and Johansson, 2016). A recent IMF study also points to a large positive effect of public investment, with one euro spent on public investment increasing GDP by EUR 1-1.4. Across OECD countries a given increase in public investment lowers unemployment twice as much as the same increase in public consumption (OECD, 2017b).

Greece's public investment needs are large as the public capital stock is low. In 2013 it stood at 45% of GDP against the OECD average of 49%. Also, the perception of Greece's infrastructure quality still lags that of most OECD countries, especially for railways (Figure 1.30).

Figure 1.29. **The share of public investment in total budget expenditure remains stable**

Public investment budget expenditure as % of total State budget expenditure

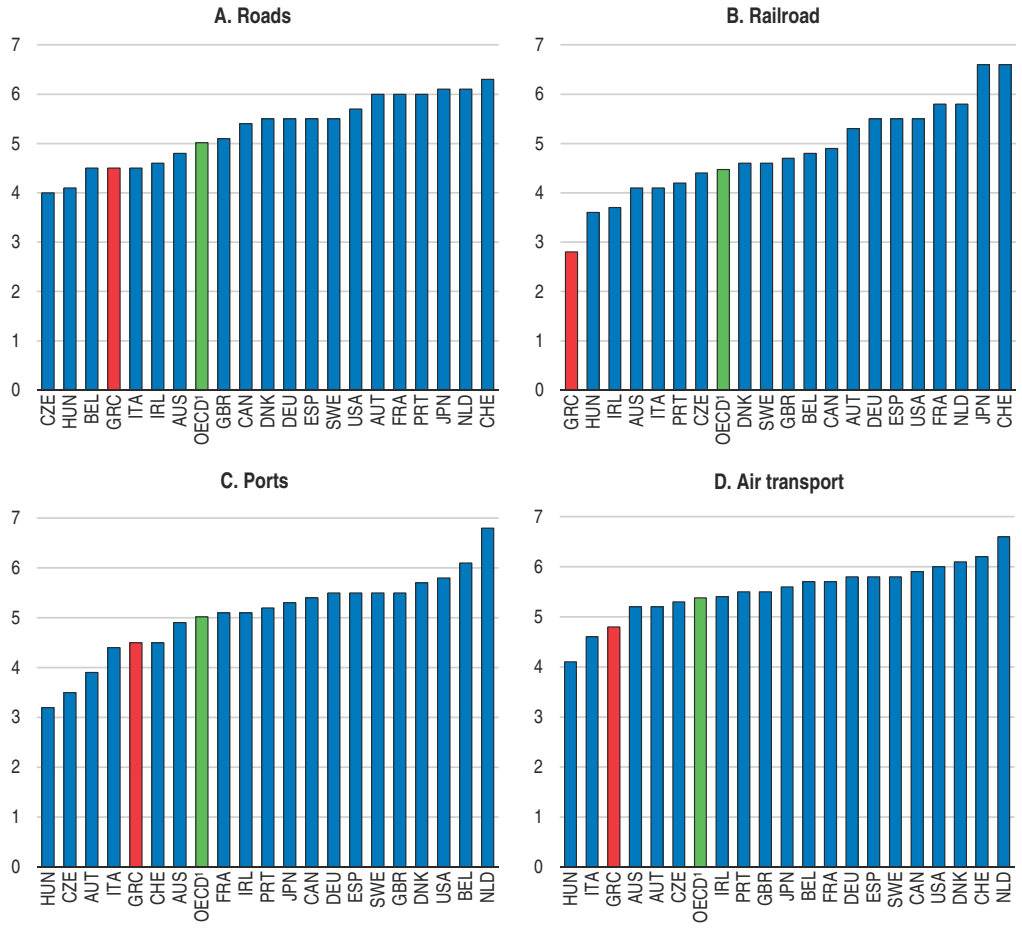


Source: Ministry of Finance, State General Accounting Office and Bank of Greece.

StatLink http://dx.doi.org/10.1787/888933714258

Figure 1.30. **The perceived quality of infrastructure lags other countries**

Global Competitiveness Index, scale from 1 to 7 (best), 2017-18



1. Unweighted average.

Source: World Economic Forum, "The Global Competitiveness Report 2017-2018".

StatLink http://dx.doi.org/10.1787/888933714277

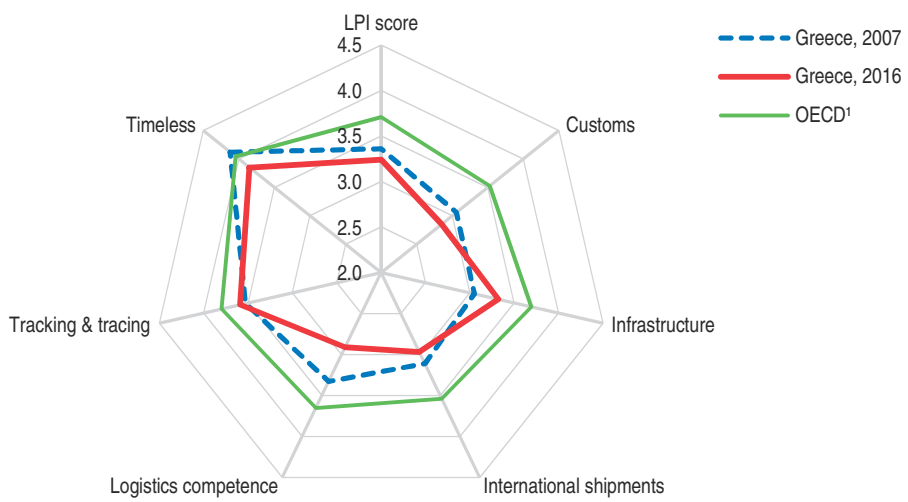
Moreover, poor intermodal connections – especially between ports and railways – in addition to cumbersome customs procedures and low competencies lower the quality of logistics in Greece (Figure 1.30). These problems raise trade costs. In Greece the export lead time (the time between the placing of an order and the receipt of the goods) is 3 days for port and airport transportation and 6 days for rail and road transportation, against 2 days on average in high income OECD countries. A similar gap exists for import lead times (World Bank, 2017). Major infrastructure projects are under way to better connect Greece with the road and railway trans-European networks. Completing these projects is key to shortening export and import lead times.

Greece's railway network is severely underdeveloped. The density of railways is less than 2 kilometres per one hundred square kilometres, one of the lowest across OECD countries. The railway density of Greece is closer to that of continental sized countries – such as the United States and Australia – than to similarly sized countries with a well-developed railway network, such as Belgium (with a rail density of 11) and the Netherlands (8).

Moreover, spending on the railway network declined markedly during the crisis. The average infrastructure spending on railways (as a share of GDP) declined by 71% between the 2000-08 and 2009-15 whereas the average spending on roads fell by less than 10%. The ratio of infrastructure spending on roads to railways more than tripled after the crisis, the largest increase across OECD countries (Figure 1.31). In 2013 alone Greece spent on roads about 23 times more than on rail infrastructure.

Figure 1.31. **Greece's logistics lags OECD countries**

Logistics Performance Index, scale from 1 to 5 (highest)



1. Unweighted average.
Source: World Bank database.

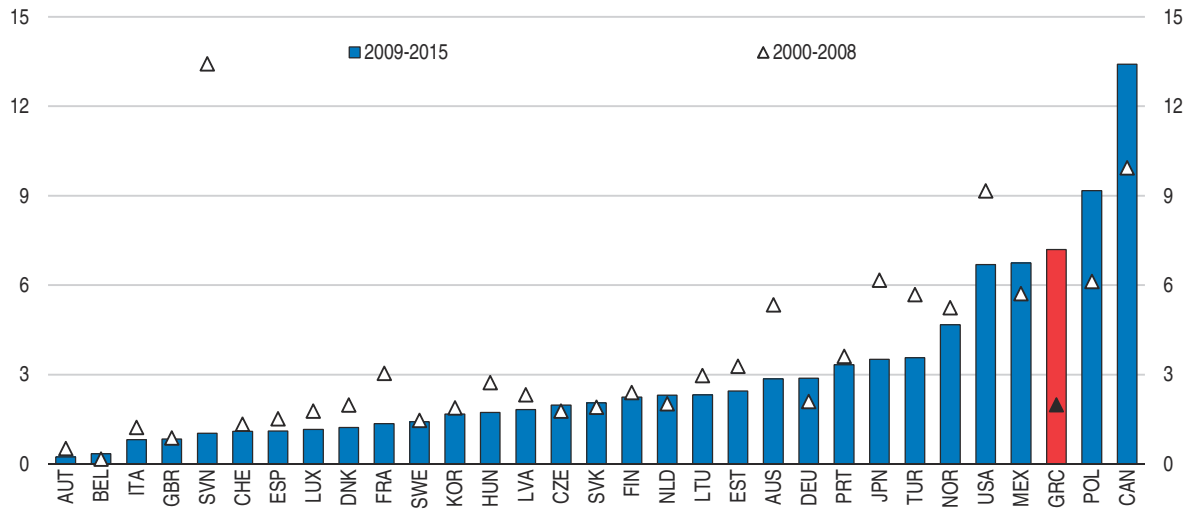
StatLink http://dx.doi.org/10.1787/888933714296

The quality of Greek port infrastructure hampers international connectivity and the tourist industry. Despite being the 4th most popular cruise ship destination in Europe, Greece is ranked only 8th for the revenue generated by this sector. Also, cruise ships bring about 10% of Greece's tourists each year, but they contribute only 3% of total tourist revenue. The insufficient infrastructure and the poor management of Greek ports put Greece at disadvantage to other cruise destinations in the Mediterranean regions, such as Spain and Italy. For instance, 85% of cruise ships reaching Greece carry less than 1 000 passengers

against only 44% in the Mediterranean region. Improving port infrastructure to allow larger cruise ships to moor in Greek ports and enhancing home-porting activities could generate more than EUR 60 million of additional tourist revenue per year and a significant increase in the share of the Mediterranean cruise market (Dianeosis, 2017). Improving port infrastructure will enable Greece to fully reap the benefits of the reforms passed between 2012 and 2014, which eliminated cabotage and the obligation of round trips for cruise ships.

Figure 1.32. **Railways infrastructure spending was cut much more than spending on roads**

Ratio of road to railways spending[1]



1. The average spending on road infrastructure investment per one thousand units of GDP (in current USD) is divided by the average spending on rail infrastructure investment per one thousand units of GDP for 2000-08 and 2009-15.

Source: OECD (2017), "Performance Indicators", *OECD Transport Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714315

Making the most of scarce resources by improving public investment management functions

Given the limited fiscal space, the government should use available funds in a timely and effective manner and exploit all supporting European-wide initiatives, such as the Juncker plan. As of February 2018, Greece ranks first among EU countries for the use of resources (as a share of GDP) allocated through Juncker plan. Also, user fees could be used better and more extensively mobilised as fees are currently often below cost-recovery levels and congestion charges are not applied in Greece (PWC, 2017). User fees could generate additional resources to fund investment and maintenance spending and encourage more efficient use of existing infrastructure.

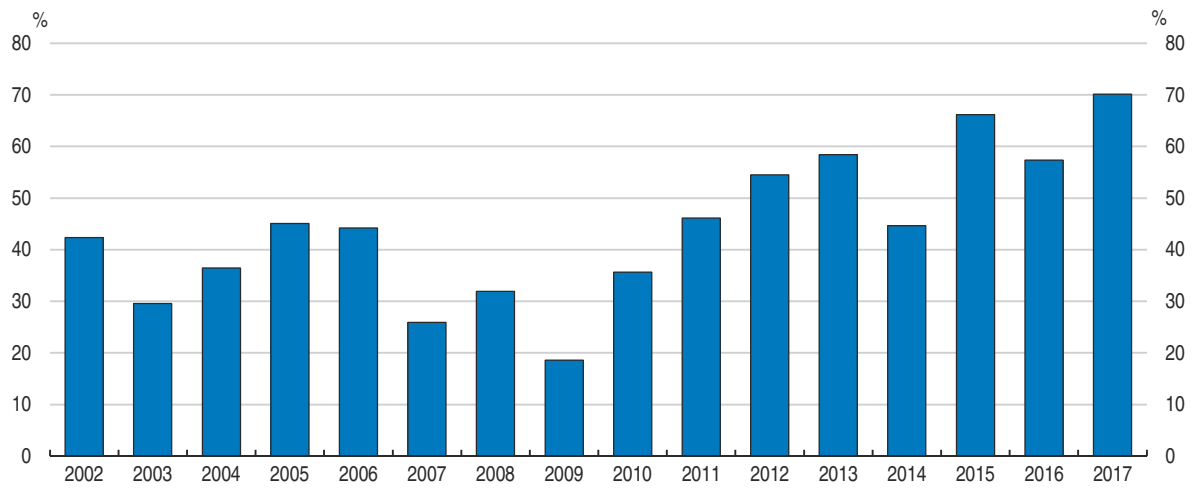
Public investment can be more effective. Burdensome administrative procedures often delay public works and inflate project costs. The incomplete land registry is a major problem as it often delays land acquisition. Completing the land registry should become a national priority. For instance, in 2016 delays in issuing permissions, relating for instance to archaeological reviews, halted works in the Ionian highway and triggered hefty penalty payments from the government to contractors. The highway fully opened only in mid-2017 after several years of delay. A complete registry is necessary to clearly identify all of the state's non-financial assets and to develop a strategy to maximise their social and economic value (Bova et al., 2013).

Shortcomings in the planning stage often lead to modification of contracts during works and higher costs. For instance, none of the 6 Greek road projects audited by European Court of Auditors (ECA, 2013) were delivered at the original contract price. The average cost increase was 36%, the highest among the four countries (Germany, Greece, Poland and Spain) considered. The report also finds that in Greece, like in Poland, high capital requirements have led to large tenders being awarded to only major project management companies. These companies had to register and qualify *ex ante* with the Ministry of Infrastructure. This is not the case in Poland and Germany, where all companies can participate in tenders without pre-qualification. The report also finds that re-measurement of works and contract updates after their initial signing usually lead to large modifications, delays and higher costs. Among the four audited countries, Greece had the longest delay for transport projects on average – 16 months or 57% later than expected, compared with 9 months and 41%, on average, for the four other countries. This calls for better management and *ex ante* design of public investment projects, particularly when other parties are also involved.

Also, public investment payments in Greece are disbursed towards the end of the year (Figure 1.33). This is partly due to the projects being mostly executed from March to October. However, the large payment spike in December also indicates delays in certifying contracting obligations after the completion of works and in the availability of resources.

Figure 1.33. **Disbursement of public investment funds is concentrated towards the end of the year**

Share of total payment made in the last 3 months of the year



Source: Bank of Greece.

StatLink http://dx.doi.org/10.1787/888933714334

Efforts to improve public investment management functions are already under way. For instance, to expedite and enhance the transparency of payments relating to public investment projects, the Information System for the Monitoring of Public Investments Payments and Debts was introduced in early 2015 within the Public Investment Directorate of the Ministry of the Economy. Additional actions include the abrogation of single-project bank accounts at the Bank of Greece. Also, a new system of "ring-fenced accounts" ensures that funds are available when needed for the payments of the co-financed part of the projects. A separate mechanism guarantees the immediate allocations of appropriations and their financing and the unhampered payment of projects from the start of the fiscal

year. Also, the Public Investments Directorate has strengthened the central co-ordination of decisions relating to public investment by issuing documents on a timely basis with concrete guidelines and timetables to authorities responsible for public investment projects. Transparency is also improving as the new electronic platform (e-pde Information System) will provide up-to-date information on all publicly funded projects.

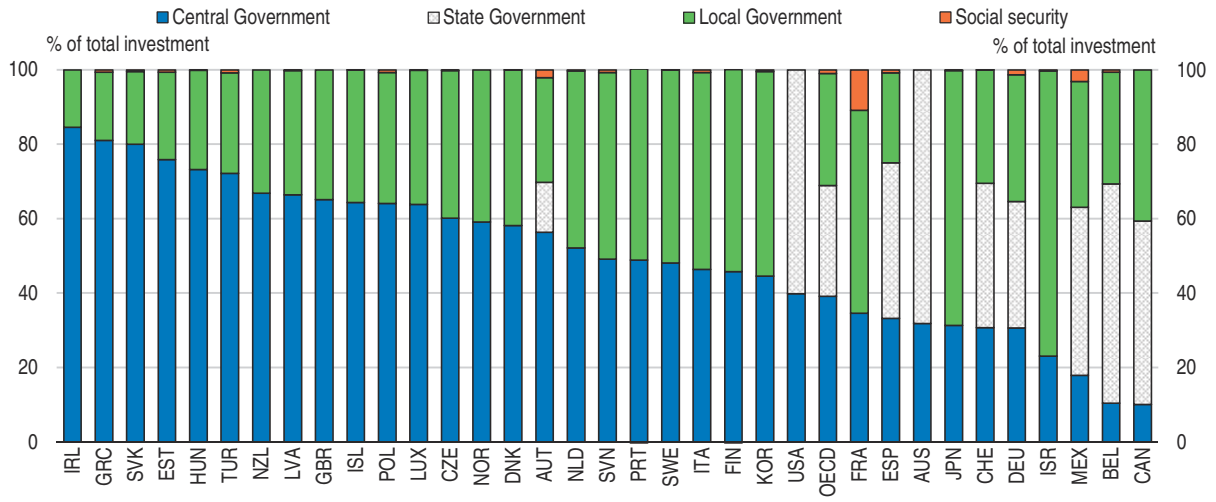
The government should pursue these initiatives and link them with the ongoing public administration reform in order to maximise synergies. A recent econometric analysis covering EU countries shows that higher public sector efficiency significantly increases the positive growth impact of public investment (Papaioannou, 2016).

Developing a long-term public investment strategy

Greece lacks a clear long-term public investment strategy, though public investment decisions are highly centralised. In Greece, the central government is responsible for more than 80% of public investment (Figure 1.34). Public investment decisions are mostly based on the European Union 2014-2020 programme, as a large share of public investment is co-financed by the EU. However, the absence of an integrated long-term public investment strategy, along with political and policy uncertainty, has compounded the problems relating to poor planning and execution. These factors – along with the crisis – might have contributed to a large backlog of projects. There are currently 69 projects in the area of transport, energy and waste and sewage planned for completion by 2022 for a value of more than EUR 20 billion (PWC, 2017).

Figure 1.34. **The central government accounts for most public investments spending**

Share of government investment spending, 2016 or latest year



Note: 2015 for Australia, Israel, Japan, Korea, Mexico, New Zealand, Switzerland, Turkey, the United States and the OECD aggregate. Data for Turkey are not included in the OECD average because of missing time series. Local government is included in state government for Australia and the United States. Australia does not operate government social insurance schemes. Social security funds are included in central government in Ireland, New Zealand, Norway, the United Kingdom and the United States.
Source: OECD (2017), *Government at a Glance 2017* and OECD National Accounts Statistics (database).

StatLink http://dx.doi.org/10.1787/888933714353

Developing and regularly updating a long-term public investment strategy, involving full consultations with all stakeholders, would help build credible policy commitments. It would build synergies among sectors and projects and help link public investment

objectives with wider socio-economic and environmental considerations. Strong political ownership would help overcome short-term budget and political pressures to divert resources dedicated to investment projects to other spending. A long-term public investment strategy covering the whole transport sector is key to developing intermodal transport, thus turning Greece into the European gateway for Asian goods and facilitating Greece's integration into global value chains.

The Ministry of Transport and Infrastructure is co-ordinating the development of the National Transport Plan, which is scheduled to be finalised in March 2019. The Plan will span 20 years and identify projects to achieve broad socio-economic goals. The development of the National Transport Plan is an important positive step towards an integrated long-term strategy for public investment. Other recent positive initiatives in this direction include the design of strategic plans covering: digital policy; innovation and smart specialisation; risk prevention and management; and solid waste management. These strategc plans will need to be developed and implemented in a co-ordinated way.

To build broad ownership of a long-term investment strategy the government should fully consult all stakeholders. Transparent and early engagement with all stakeholders is key to building political ownership of long-term public investment strategies. Engagement should be inclusive and transparent. Inclusive consultation allows any regulated party or member of the public to contribute or comment on proposals, ensuring that all concerned interests are heard. Transparent engagement involves publicly documenting who has been consulted, their inputs, and releasing the regulator's responses (OECD, 2010c). The Netherlands provides an example of a coherent long-term infrastructure strategy based on a long-time horizon and involving ample consultations with stakeholders.

Policy recommendations

(Key recommendations included in the Executive summary are bolded)

Lowering product market regulation and enhancing regulatory quality

- **Expand the scope of the "silence is consent" rule, *ex post* monitoring compliance and one-stop shops; ensure they have the resources to operate effectively.**
- Eliminate the rule allowing the central government to claw back 80% of the yearly savings of the Hellenic Competition Commission.

Streamlining insolvency procedures and strengthening contract enforcement

- **Fully implement the legislated insolvency reforms.**
- **Ensure a sufficient number of well-trained insolvency professionals start operating soon.**
- Establish a national insolvency registry.
- Expand the use of electronic platforms and tools in the justice system.

Boosting foreign direct investment and integration in global value chains

- Build a national platform to increase awareness of international quality certification among SMEs, share experience and best practices and facilitate matching of foreign and domestic firms.

Building an innovation system

- Consolidate agencies having responsibilities for government funded research.
- Building on the planned pilot programme, develop an action plan to encourage innovation through the public procurement process based on effective monitoring and impact assessments.

Policy recommendations *(cont.)*

(Key recommendations included in the Executive summary are bolded)

Reviving bank lending to firms

- **Continue to align banks' governance standards with international best practices.**
- **Align tax incentives for disposing of non-performing loans with those of previous legislation and make them temporary.**
- **Fully implement out-of-court workout procedures and e-auctions.**
- Ensure public-sector agencies actively participate in debt structuring procedures with other creditors.
- Adhere to the road map to phase out capital controls while preserving financial stability.

Enhancing public investment

- **Complete the land registry.**
- Develop the National Transport Plan with full consultation with all stakeholders.
- Protect railways from further spending cuts.

References

Adalet McGowan, M., D. Andrews and V. Millot (2017), "The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries", *OECD Economics Department Working Papers*, No. 1372, OECD Publishing, Paris.

Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economics Department Working Papers*, No. 1399, OECD Publishing, Paris.

Adalet McGowan, M. and D. Andrews (2016), "Insolvency Regimes and Productivity Growth: A Framework For Analysis", *OECD Economics Department Working Papers,* No. 1309, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jlv2jqhxgq6-en*.

Aghion, P. et al. (2010), "Volatility and growth: Credit constraints and the composition of investment", *Journal of Monetary Economics* 57(3): 246-265.

Aghion, P. et al. (2005), "Competition and Innovation: An Inverted-U Relationship", *The Quarterly Journal of Economics*, Vol. 120, No. 2 (May, 2005), pp. 701-728.

Aghion, P. et al. (2004), "Entry and Productivity Growth: Evidence from Microlevel Panel Data", *Journal of the European Economic Association*, 2(2-3): 265-276.

Ahn, S. et al. (2004), "*The Economic Impacts of Outbound FDI and Trade: The Case of Korea*", Korea Development Institute, available, September 2017 at: *www.oecd.org/sti/sci-tech/35629244.pdf*.

Aizeman, J. and I. Noy (2006), "FDI and trade – Two-way linkages?", *The Quarterly Review of Economics and Finance*, Volume 46, Issue 3, July 2006, pp. 317-337, *https://doi.org/10.1016/j.qref.2006.02.004*.

Alesina, A. et al. (2005), "Regulation and Investment", *Journal of the European Economic Association*, Vol. 3, No. 4, pp. 791-825, June.

Andrews, D. and C. Criscuolo (2013), "Knowledge-Based Capital, Innovation and Resource Allocation", *OECD Economics Department Working Papers*, No. 1046, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k46bj546kzs-en*.

Anzoategui, D. et al. (2016), "*Endogenous technology adoption and R&D as sources of business cycle persistence*", *NBER, Working Papers* 22005.

Arkolakis, C., A. Doxiadis and M. Galenianos (2015), "*The challenge of trade adjustment in Greece*", in "Crisis in the Eurozone periphery: Policy options for Greece", MIT Press.

Athanassiou, E., N. Kanellopoulos, R. Karagiannis and A. Kotsi (2015), *The effects of liberalization of professional requirements in Greece, Study conducted for the European Commission – DG for Internal Market, Industry, Entrepreneurship and SMEs*, October 2015, available, August 2017, at: *www.ec.europa.eu/DocsRoom/documents/13363/attachments/1/translations/en/renditions/native*.

auf dem Brinke, A. and H. Enderlein (2017), "How to make sense of the structural reforms lists for the Euro Area", *Policy Paper* No.184, Jacques Delors Institut – Berlin, 25 January 2017, available, 28 August 2017 at: *www.institutdelors.eu/media/structuralreforms-aufdembrinkeenderlein-ijd-jan17.pdf*.

Aiyar, S. et al. (2015a), "A Strategy to Resolve Europe's Problem Loans", *IMF Staff Discussion Note*, No. 15/9.

Balassa, B. (1965), "Trade Liberalization and Revealed Comparative Advantage". *Manchester School of Economic and Social Studies*, 33, pp. 99-123.

Barkas, P. (2015), "International Economic Policies and Keynes Rediscovery in the Greek-Euro Crisis" in "*Modern Dilemmas: Understanding Collective Action in the 21st Century*", Dylan Kissane, Alexandru Volacu (eds.), Ibidem-Verlag publishing, Stuttgart, Germany.

Blöchliger, H. (2017), "Decentralisation and quality of public finance: Intermediate report", OECD mimeo.

Blöchliger, H., B. Égert and K. Bonesmo Fredriksen (2013), "Fiscal Federalism and its Impact on Economic Activity, Public Investment and the Performance of Educational Systems", *OECD Economics Department Working Papers*, No. 1051.

Blomström, M. and A. Kokko (1996), "How Foreign Investment Affects Host Countries", *World Bank Policy Research Working Paper*, No. 1745.

Bloom, N. et al. (2012), "Really Uncertain Business Cycles", *NBER Working Paper* 18245.

Bloom, N., T. Kretschmer and J. van Reenen (2009), "Work-Life Balance, Management Practices and Productivity", in R. Freeman and K. Shaw (eds.), *International Differences in the Business Practice and Productivity of Firms*, University of Chicago Press, Chicago, United States.

Blundell, R., R. Griffith and J. van Reenen (1999), "Market Share, Market Value and Innovation in a Panel of British Manufacturing Firms", *Review of Economic Studies*, Vol. 66, 529-554.

BoG (2017), *Report on Operational Targets for Non-Performing Exposures*, 5 Dec 2017, Bank of Greece, available at *www.bankofgreece.gr/Pages/en/Publications/ReportNPE.aspx*.

Bom, P. and J. Lighart (2014), "What have we learned from three decades of research on the productivity of public Capital", *Journal of Economic Surveys*, Vol. 28, Chapter 5.

Boothe, P. (2015), *Compete to win: The Wilson panel report six years later*, online document, available 25 June 2017 at: *www.ceocouncil.ca/wp-content/uploads/2015/02/Boothe-paper-March-2015-FINAL.pdf*.

Borio, C. et al. (2015), "Labour reallocation and productivity dynamics: financial causes, real consequences", *BIS Working Papers*, No. 534, Bank for International Settlements.

BSTDB (2017), *Annual Report 2016: Mobilizing resources to deliver greater development impact*, Black Sea Trade and Development Bank, available 8 August 2017 at: *www.bstdb.org/publications/BSTDB_Annual_Report_2016.pdf*.

Cahuc, P. and F. Kramarz (2004), "De la précarité à la mobilité : vers une Sécurité sociale professionnelle", report to ministre de l'Économie, des Finances et de l'Industrie et au ministre de l'Emploi, du Travail et de la Cohésion sociale, France.

Callen, T. and J.D. Ostry (2003), *Japan's Lost Decade: Policies for Economic Revival*, IMF.

Cecchetti, S. and E. Kharroubi (2012), "Reassessing the impact of finance on growth", BIS, *Working Paper* 381.

Chakrabarti, A. (2001), "*The Determinants of Foreign Direct Investment: Sensitivity Analyses of Cross-Country Regressions*", Kyklos, Vol. 54, pp. 89-114.

Claessens, S. and L.F. Klapper (2002), *Bankruptcy Around the World: Explanations of its Relative Use*, *World Bank Policy Research Working Paper* 2865, July 2002, World Bank, Washington, DC, available 8 August 2017 at: *http://documents.worldbank.org/curated/en/311061468766468860/130530322_20041117152629/additional/multi0page.pdf*.

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

Dabla-Norris, E., S. Guo, V. Haksar, M. Kim, K. Kochhar, K. Wiseman and A. Zdzienicka (2015), "The New Normal: A Sector-Level Perspective on Productivity Trends in Advanced Economies", *IMF Staff Discussion Note*, No. 15/3.

De Long, J.B. and L.H. Summers (1991), "Equipment Investment and Economic Growth", *The Quarterly Journal of Economics*, Vol. 106, No. 2, available, 4 September 2017 at: *www.econ.ucdavis.edu/faculty/gclark/210a/readings/Delong-Summers.pdf*.

De Ridder, M. and C. Teulings (2017), *Endogenous growth and lack of recovery from the Global Crisis*, Voxeu article, available, July 2017, at: *http/::voxeu.org/article/endogenous-growth-and-lack-recovery-global-crisis*.

Dixit, A.K. (1989), "Trade and Insurance with Adverse Selection", *Review of Economic Studies*, Willey Blackwell, Vol. 56(2), pp. 235-47.

EBA (2017), *Risk Dashboard Data as of Q3 2017*, European Banking Authority, available at *www.eba.europa.eu/risk-analysis-and-data/risk-dashboard*.

EC (2018), *Compliance Report of ESM Stability Support Programme: Third Review January 2018*, European Commission, DG ECFIN, available at *www.esm.europa.eu/assistance/greece*.

EC (2017a), *Compliance Report of ESM Stability Support Programme: Second Review June 2017*, European Commission, DG ECFIN, available, at: *www.esm.europa.eu/assistance/greece*.

EC (2017b), *Supplemental Memorandum of Understanding* (second addendum to the Memorandum of Understanding) between the European Commission, acting on behalf of the European Stability Mechanism, the Hellenic Republic and the Bank of Greece, available, August 2017, at: *https://ec.europa.eu/info/sites/info/files/smou_final_to_esm_2017_07_05.pdf*.

EC (2014), *Guide to Cost-Benefit Analysis of Investment Projects: Economic appraisal tool for Cohesion Policy 2014-2020*, European Commission, Directorate-General for Regional and Urban policy, Brussels, December 2014, available, 13 September 2017 at: *http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf*.

ECA (2013), "Are EU Cohesion Policy funds well spent on roads?", European Court of Auditors, *Special Report* No. 5/2013, available, November 2017, at: *www.eca.europa.eu/Lists/ECADocuments/SR13_05/SR13_05_EN.PDF*.

ECB (2017), *Opinion of the European Central Bank on Certain Amendments to the Deferred Tax Assets Legal Framework in Greece*, European Central Bank (CON/2017/7), available, November 2017, at: *www.ecb.europa.eu/ecb/legal/pdf/con_2017_7_signed.pdf*.

ECB (2016), "MFI interest rate statistics", *Statistical DataWarehouse*, European Central Bank.

ECB (2009), "Housing finance in the euro area", *ECB Occasional Paper*, No. 101, European Central Bank.

EU (2017), *Analysis of the Budgetary Implementation of the European Structural and Investment Funds in 2016*, European Union, available at: *https://publications.europa.eu/en/publication-detail/-/publication/9cacce88-4c43-11e7-a5ca-01aa75ed71a1/language-en*.

Égert, B. and I. Wanner (2016), "Regulations in services sectors and their impact on downstream industries: The OECD 2013 REGIMPACT indicator", *OECD Economics Department Working Paper*, No. 1303.

Égert, B., T. Ko luk and D. Sutherland (2009), "Infrastructure and Growth: Empirical Evidence", *OECD Economics Department Working Papers*, No. 685.

EIB (2017), *EIB Investment Report 2017/2018: From recovery to sustainable growth*, European Investment Bank, EIB Publishing, Luxembourg, available, November 2017, at: *www.eib.org/infocentre/publications/all/investment-report-2017.htm*

Feenstra, R.C. (2003), *Advanced International Trade: Theory and Evidence*, Princeton University Press.

Fournier, J. (2016), "The Positive Effect of Public Investment on Potential Growth", *OECD Economics Department Working Papers*, No. 1347, available, September 2017, at: *www.oecd.org/eco/The-positive-effect-of-public-investment-on-potential-growth.pdf*.

Fournier, J. (2015), "The negative effect of regulatory divergence on foreign direct investment", *OECD Economics Department Working Papers*, No. 1268.

Fournier, J. and Å. Johansson (2016), "The Effect of the Size and the Mix of Public Spending on Growth and Inequality", *OECD Economics Department Working Papers*, No. 1344, OECD Publishing, Paris, *http://dx.doi.org/10.1787/f99f6b36-en*.

Fuentes Hutfilter, A. et al. (2016), "Boosting investment performance in Germany", *OECD Economics Department Working Paper* No. 1326.

Ganelli, G. and J. Tervala (2016), "The Welfare Multiplier of Public Infrastructure Investment", *IMF Working Papers* 16/40, International Monetary Fund.

Garcia-Macia, D. (2015), "*The financing of ideas and the great deviation*", Stanford Institute for Economic Policy Research, *SIEPR Discussion Paper* No. 16-012, available, 13 July 2017 at *https://siepr.stanford.edu/sites/default/files/publications/16-012.pdf*.

Gibson, H. and G. Pavlou (2017), "Exporting and performance: Evidence from Greek firms", *Bank of Greece Working Paper*, No. 228, June 2017, available, September 2017 at: *www.bankofgreece.gr/BogEkdoseis/Paper2017228.pdf*.

Girma, S. (2005), "Absorptive capacity and productivity spillovers from FDI: A threshold regression analysis", *Oxford Bulletin of Economics and Statistics*, 67, 3 281-306.

Gomi, H. (2007), "Japan Non-Performing Loan Problem and Financial Reconstruction", Paper presented at the Conference *Financial Stability And Financial Sector Supervision: Lessons From The Past Decade and Way Forward*, organised by IMF Regional Office for Asia and the Pacific (OAP), Keio University.

Harding, T. and B. Javorcik (2013), "Foreign Direct Investment and Export Upgrading", *The Review of Economics and Statistics*, Vol. 94(4), 964-980.

Hellenic Bank Association (2017), *Documentation Data on the Operation of the Greek Banking System*, *www.hba.gr/UplDocs/HBA_GreekBankingSystem_January2017_EN.pdf* (accessed on 20 November 2017).

HSFS (2016), *Updated Analysis of Non-Regulatory Constraints & Impediments for the development of an NPL market in Greece*, Hellenic Financial Stability Fund, available at *www.hfsf.gr*.

Hocking, B. (2004), "Changing the Terms of Trade Policy Making: From the "Club" to the "Multistakeholder" Model", *World Trade Review*, Vol. 3, No. 1, pp. 3-26.

IMF (2006), "Greece: Financial System Stability Assessment, including Reports on the Observance of Standards and Codes on the following topics, Banking Supervision, Insurance Supervision, Securities Regulation, and Anti-Money Laundering and Combating the Financing of Terrorism", *IMF Country Report*, No. 06/6.

IMF (2015), "Euro Area Policies: Selected Issues", *IMF Country Report* No. 15/205, July 2015, available, November 2017, at: *www.imf.org/external/pubs/ft/scr/2015/cr15205.pdf*.

IMF (2017), Request for stand-by arrangement – Press Release; Staff Report; and Statement by the Executive Director for Greece, *IMF Country Report* No. 17/229, July 2017, available, July 2017, at : *www.imf.org/en/Publications/CR/Issues/2017/07/20/Greece-Request-for-Stand-By-Arrangement-Press-Release-Staff-Report-and-Statement-by-the-45110*.

Invest Europe (2017), *Reaction to European Commission Proposal for a Directive on preventive restructuring frameworks, second chance and measures to increase the efficiency of restructuring, insolvency and discharge procedures*, Brussels, March 2017, available, July 2017 at: *www.investeurope.eu/media/595812/Invest-Europe-PAE-Insolvency-Position-Paper-March-2017.pdf*.

IOBE (2016), *The economic impact of the privatization of the Piraeus port on the Greek economy*, Foundation for Economic & Industrial Research (IOBE), Athens.

Iordanoglou, C. and M. Matsaganis (2017), "Why Grexit cannot save Greece (but staying in the Euro area might)", LSE 'Europe in Question' Discussion Paper Series, *LEQS Paper* No. 123/2017, August 2017, available, 31 August 2017 at: *www.lse.ac.uk/europeanInstitute/LEQS%20Discussion%20Paper%20Series/LEQSPaper123.pdf*.

Kathimerini (2017), *Just 13 foreign investments in 2016 in Greece*, Online newspaper article, 24 May 2017, (In Greek , Μόλις 13 ξένες επενδύσεις το 2016 στην Ελλάδα), available, 9 September 2017 at: *www.kathimerini.gr/910951/article/oikonomia/ellhnikh-oikonomia/molis-13-3enes-ependyseis-to-2016-sthn-ellada*.

Katsoulacos, Y., C. Genakos and G. Houpis (2015), *Product Market Regulation and Competitiveness: Towards a National Competition and Competitiveness Policy for Greece*, Athens University of Economics, Athens, available, 9 June 2017 at: *www2.aueb.gr/users/cgenakos/Research.files/KGH%2021%20April%202015%20final.pdf*.

Karatzas, C.M. et al. (2017), "Insolvency Proceedings in Greece after Recent Reforms", *Emerging Markets Restructuring Journal*, Vol. 3, Spring 2017, available, November 2017, at: *www.clearygottlieb.com/~/media/cgsh/files/2017/publications/emrj-spring-2017/insolvency-proceedings-in-greece-after-recent-reforms.pdf*.

Kneller, R. and M. Pisu (2004), "Export-oriented FDI in the UK", *Oxford Review of Economic Policy*, 20, 3, 424-39.

KPMG (2016), *Sales of distressed portfolios*, Presentation at the Bank of Greece conference "*Distressed loans in the Greek banking system: restructuring portfolios, reviving enterprises*", available, August 2017, at: *www.bankofgreece.gr/BoGDocuments/EBRD_Sales%20of%20Distressed%20Portfolios.pdf*.

Lee, G. (2005), "International R&D spillovers revisited", *Open Economies Review*, 16(3), 249-262.

Lindh, T. and B. Malmberg (2008), "Demography and Housing Demand – What Can We Learn from Residential Construction Data?", *Journal of Population Economics*, Vol. 21(3), July, pp. 521-539.

Liu, Y. and C.B. Rosenberg (2013), "Dealing with Private Debt Distress in the Wake of the European Financial Crisis", *IMF Working Paper* 13/44.

Malliaropulos, D. and T. Anastasatos (2013), "*The improvement in the Competitive Position of the Greek Economy and Prospects for an Export-led Growth Model*", Economy & Markets, Eurobank Research, Volume VIII, Issue 1, January 2013.

McLinden, G. (2013), "Single Window Systems: What We Have Learned", The Trade Post, The World Bank Blog, available, September 2017 at: *blogs.worldbank.org/trade/single-window-systems-what-we-have-learned*.

Moody's (2017), *Announcement: Moody's maintains stable outlook on the Greek banking system amid improved profitability prospects, balanced by still very high problem loans*, Global Credit Research, 15 May 2017, available, November 2017, at: *www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Greek-banking-system-amid--PR_366708*.

Moody's (2016), *Announcement: Moody's Revises Outlook on Greek Banking System to Stable From Negative Amid Profitability and Funding Improvements*, Global Credit Research, 22 Nov 2016, available, November 2017, at: *www.moodys.com/research/Moodys-Revises-Outlook-on-Greek-Banking-System-to-Stable-From--PR_358469*.

Mourougane, A. et al. (2016), "Can an Increase in Public Investment Sustainably Lift Economic Growth?", *OECD Economics Department Working Papers*, No. 1351, OECD Publishing, Paris, *http://dx.doi.org/10.1787/a25a7723-en*.

Muradov, K. (2016), "Trade Costs and Borders in the World of Global Value Chains", *Nineteenth Annual Conference of Global Economic Analysis*, Washington, DC, June 15-16.

Nassr, I., V. Robano and G. Wehinger (2016), "Unleashing the Export Potential of SMEs in Greece", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 41, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jm0qgt464f6-en*.

NBG (2016), *The digitalization level of SMEs*, National Bank of Greece (NBG), Department of Economic Analysis, February 2016, available (in Greek), 6 September 2017 at: *www.nbg.gr/greek/the-group/press-office/e-spot/reports/Documents/SMEs_Digital.pdf*.

Nickell, S. (1996), "Competition and Corporate Performance", *Journal of Political Economy*, 104/4, pp. 724-746.

Nicoletti, G. et al. (2003), "Policies and international integration: Influences on trade and foreign direct investment", *OECD Economics Department Working Papers* No. 359.

Nordås, H.K. and D. Rouzet (2015), "The Impact of Services Trade Restrictiveness on Trade Flows: First Estimates", *OECD Trade Policy Papers*, No. 178, OECD Publishing Paris, *http://dx.doi.org/10.1787/5js6ds9b6kjb-en*.

OECD (2017a), "Greece", in *OECD Economic Outlook*, Volume 2017, Issue 1, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_outlook-v2017-1-21-en*.

OECD (2017b), *OECD Employment Outlook 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2017-en*.

OECD (2017c), *OECD Competition Assessment Reviews: Greece 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264088276-en*.

OECD (2017d), "Greece", in *Public Procurement for Innovation: Good Practices and Strategies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264265820-19-en*.

OECD (2017e), "Greece", in *Economic Policy Reforms 2017: Going for Growth*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/growth-2017-24-en*.

OECD (2017f), *Governments should address fall in public investment as costs stabilise*, available, 7 September 2017 at: *www.oecd.org/newsroom/governments-should-address-fall-in-public-investment-as-costs-stabilise.htm*.

OECD (2017g), *OECD Skills Outlook 2017: Skills and Global Value Chains*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264273351-en*.

OECD (2017h), *Public Procurement for Innovation: Good Practices and Strategies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264265820-en*.

OECD (2017i), "Service Trade Restrictions Index by services sector", in *OECD Industry and Services Statistics* (database).

OECD (2017k), OECD FDI Regulatory Restrictiveness Index (database).

OECD (2017l), OECD Science, Technology and R&D Statistics (database).

OECD (2016a), *OECD Science, Technology and Innovation Outlook 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/sti_in_outlook-2016-en*.

OECD (2016b), "Venture capital investments", in *Entrepreneurship at a Glance 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/entrepreneur_aag-2016-34-en*.

OECD (2016c), *OECD Economic Surveys: Greece 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-grc-2016-en*.

OECD (2015a), *Policy Framework for Investment 2015 Edition*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264208667-en*.

OECD (2015b), OECD Regulatory Policy Outlook 2015, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264238770-en*.

OECD (2015c), *OECD Guidelines on Corporate Governance of State-Owned Enterprises,* 2015 Edition, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264244160-en*.

OECD (2015d), *Lifting investment for higher sustainable growth*, Chapter 3, *OECD Economic Outlook* 2015/1.

OECD (2015e), *The Future of Productivity*, OECD Publishing, Paris, available, September 2017, at: *www.oecd.org/economy/the-future-of-productivity.htm*.

OECD (2015f), "Listing investment for higher sustainable growth", in *OECD Economic Outlook 2015*, OECD Publishing, Paris.

OECD (2014a), *The Governance of Regulators, OECD Best Practice Principles for Regulatory Policy*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264209015-en*.

OECD (2014b), Measurement and Reduction of Administrative Burdens in Greece: An Overview of 13 Sectors, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264213524-en*.

OECD (2014c), *Recommendation of the Council on Effective Public Investment Across Levels of Government*, 12 March 2014, C(2014)32, available, September 2017, at: *www.oecd.org/regional/regional-policy/Principles-Public-Investment.pdf*.

OECD (2013a), *Interconnected Economies: Benefiting from Global Value Chains*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264189560-en*.

OECD (2013b), *OECD Economic Surveys: Greece 2013*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-grc-2013-en*.

OECD (2010a), *Making Reform Happen: Lessons from OECD countries,* available, September 2017, at: *www.oecd.org/env/making-reform-happen-9789264086296-en.htm*.

OECD (2010b), *Transparency and Integrity in Lobbying*, *www.oecd.org/gov/ethics/Lobbying-Brochure.pdf*.

OECD (2010c), *Investment Reform Index 2010: Monitoring Policies and Institutions for Direct Investment in South-East Europe*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264079588-4-en*.

OECD (2009), *Guidelines for Recipient Country Investment Policies Relating to National Security: Recommendation adopted by the OECD Council on 25 May 2009*, OECD, Paris.

OECD (2008), *OECD Guidelines for Multinational Enterprises*, OECD Publishing, Paris, available, September 2017, at: *www.oecd.org/corporate/mne/1922428.pdf*.

OECD (2008), *Enhancing the Role of SMEs in Global Value Chains*, OECD Publishing, Paris.

OECD (2007), *Compendium of OECD Work in Intellectual Property*, OECD, Paris.

OECD (2005), *OECD Guiding Principles for Regulatory Quality and Performance*, OECD Publishing, Paris, available, September 2017, at: *www.oecd.org/fr/reformereg/34976533.pdf*.

OECD (2003a), *Recommendation of the Council on Guidelines for managing conflict of interest in the public service*, OECD Publishing, Paris, available, September 2017, at: *www.oecd.org/gov/fightingcorruptionin thepublicsector/2957360.pdf*.

OECD (2003b), *A Checklist for Foreign Direct Investment Incentive Policies*, OECD Publishing, Paris.

OECD (2000), "Main Determinants and Impacts of Foreign Direct Investment on China's Economy", *OECD Working Papers on International Investment*, 2000/04, OECD Publishing, Paris, *http://dx.doi.org/10.1787/321677880185*.

OECD, WTO and UNCTAD (2013), *Implications of Global Value Chains for Trade, Investment, Development and Jobs*, Prepared for the G-20 Leaders Summit, Saint Petersburg (Russian Federation), available, September 2017, at: *http://unctad.org/en/PublicationsLibrary/unctad_oecd_wto_2013d1_en.pdf*.

OECD and World Bank (2015), Inclusive Value Chains, Report prepared for submission to G20 Trade Ministers Meeting Istanbul, Turkey, 6 October 2015, available at: *www.oecd.org/trade/OECD-WBG-g20-gvc-report-2015.pdf*.

Ohashi, K. and M. Singh (2004), "Japan's Distressed Debt Market", *IMF Working Paper*, No. WP/04/86, IMF.

Ollivaud, P., Y. Guillemette and D. Turner (2016), "Links between weak investment and the slowdown in productivity and potential output growth across the OECD", *OECD Economics Department Working Papers*, No. 1304, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jlwvz0smq45-en*.

Pallis et al. (2017), *The development prospects of home-ports cruise industry in Greece*, Original in Greek "Η Αναπτυξιακή Προοπτική της Κρουαζιέρας Αφετηρίας στην Ελλάδα", Dianeosis research and analysis organisation, Athens, available, October 2017, at: *www.dianeosis.org/wp-content/uploads/2017/09/limania_krouaziera_final.pdf*.

Palumbo, G. et al. (2013), "Judicial Performance and its Determinants: A Cross-Country Perspective", *OECD Economic Policy Papers*, No. 5, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k44x00md5g8-en*.

Papaioannou, S.K. (2016), "Public Investment Multipliers in EU Countries: Does the Efficiency of Public Sector Matter?", Centre of Planning and Economic Research, *Discussion Paper* No. 150, available, 13 June 2017 at: *www.kepe.gr/images/pdf/D.P/DP_150_Papaioannou.pdf*.

Pekkanen, P. et al. (2015), Timeframe Alarm System: Designing a Practical Tool for Caseflow Management, *Justice System Journal*, Volume 36, Issue 4.

Plaskovitis, I.S (2016), "*Greek banks after the recapitalisation: The agenda for NPL resolution*", Presentation at the EBRD / BoG Workshop: "*Distressed loans in the Greek banking system: restructuring portfolios, reviving enterprises*", Athens, 10 March 2016, available, November 2017, at: *www.bankofgreece.gr/BoGDocuments/20160310_The_Agenda_for_NPL_Resolution.pdf*.

Potamitis, S. (2017), "Restructuring & Insolvency in Greece", Thomson Reuters Practical Law, available, November 2017, at: *www.ukpracticalw.thomsonreuters.com*

Potamitis, S. et al. (2017), "Insolvency and Directors' duties in Greece: Overview", Thomson Reuters Practical Law, available, November 2017, at: *www.ukpracticalw.thomsonreuters.com*

PWC (2017), *Infrastructure in Greece: Funding the Future*, PriceMarch 2017, Athens, available, September 2017, at: *www.pwc.com/gr/en/publications/greek-thought-leadership/infrastracture-in-greece-2016-en.pdf*.

Rodriguez Palenzuela, D., S. Dees and the Saving and Investment Task Force (2016), "Savings and investment behavior in the euro area", *ECB Occasional Paper* No. 167, January 2016, available, September 2017, at: *www.ecb.europa.eu/pub/pdf/scpops/ecbop167.en.pdf?2b3674e4d3a69b9162dacf10eb5047a5*.

Sakkas, Y.G. and Y.G. Bazinas (2016), The Legal Framework for Non-Performing Loans in Greece, *Eurofenix – The journal of INSOL Europe*, Spring 2016, available, November 2017, at: *www.bazinas.com/fresheditor/Uploads/fa4e86e32962fdfe8395e17649b48316.pdf*.

Roth, F. and A. Thum (2013), "Intangible Capital and Labor Productivity Growth: Panel Evidence for the EU from 1998-2005", *Review of Income and Wealth*, Vol. 59, pp. 486-508, *http://dx.doi.org/10.1111/roiw.12009*.

SEV (2016), "*Η εφαρμογή της εργαλειοθήκης του ΟΟΣΑ για την αξιολόγηση των συνθηκών του ανταγωνισμού στην Ελλάδα… σε αριθμούς. Πορεία υλοποίησης και νέες συστάσεις. Key facts and figures*" (The implementation of the OECD toolkit for the assessment of competition in Greece… in numbers. Implementation track and new recommendations. Key facts and figures"), Hellenic Federation of Enterprises, available in Greek, 18 July 2017, at: *www.sev.org.gr/Uploads/Documents/49884/key_facts_figures.pdf*.

Sutherland, D. et al. (2009), "Infrastructure Investment: Links to Growth and the Role of Public Policies", *OECD Economics Department Working Papers*, No. 686, OECD Publishing, Paris, *http://dx.doi.org/10.1787/225678178357*.

The National Herald (2016), *Road Construction Delays Cost Greece 241.5M Euros*, 23 June 2016, available, September 2017, at: *www.thenationalherald.com/127924/road-construction-delays-cost-greece-241-5m-euros/*.

UN (2010), *Integrating Developing Countries' SMEs into Global Value Chains*, Commission on Investment, Enterprise and Development, UNCTAD/DIAE/ED/2009/5, New York and Geneva, available, October 2017, at: *http://unctad.org/en/Docs/diaeed20095_en.pdf*.

Watson Farley & Williams (2016), *New regulatory framework for non-performing loans in Greece*, June 2016 Briefing, accessed in September 2017, available at: *www.wfw.com/wp-content/uploads/2016/06/WFW-NewRegulatoryFrameworkForNPLsInGreece.pdf*.

World Bank (2017a), *Global Indicators of Regulatory Governance: Greece*, website, International Bank for Reconstruction and Development/The World Bank, Washington, DC, available, July 2017, at: *http://rulemaking.worldbank.org/data/explorecountries/greece#cer_assessment*.

World Bank (2017b), "*Greece, Economy Profile 2017*", in *Doing Business 2017: Equal Opportunity for All*, International Bank for Reconstruction and Development/The World Bank, Washington, DC, available, September 2017, at: *www.doingbusiness.org/reports/global-reports/~/media/WBG/DoingBusiness/documents/profiles/country/GRC.pdf*.

World Bank (2016), *Doing Business 2016: Measuring Regulatory Quality and Efficiency*, International Bank for Reconstruction and Development/The World Bank, Washington, DC, available, September 2017, at: *www.doingbusiness.org/~/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB16-Full-Report.pdf*.

WEF (2017a), *The Global Competitiveness Report 2017-2018*, World Economic Forum, Geneva, Switzerland, available, September 2017, at: *www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf*.

WEF (2017b), *The Global Competitiveness Report* (database), World Economic Forum, Geneva, Switzerland.

WIPO (2015), *World Intellectual Property Report: Breakthrough Innovation and Economic Growth*, Economics & Statistics Series, World Intellectual Property Organisation, available, November 2017, at: *www.wipo.int/edocs/pubdocs/en/wipo_pub_944_2015.pdf*.

WTO (2016), *Greece: Trade in Value Added and Global Value Chains*, online document, available, September 2017, at *www.wto.org/english/res_e/statis_e/miwi_e/GR_e.pdf*

Yeaple, S.R. and S.S. Golub (2007), "International Productivity Differences, Infrastructure, and Comparative Advantage", *Review of International Economics*, Vol. 15, No. 2, pp. 223-242.

© OECD 2018

Chapter 2

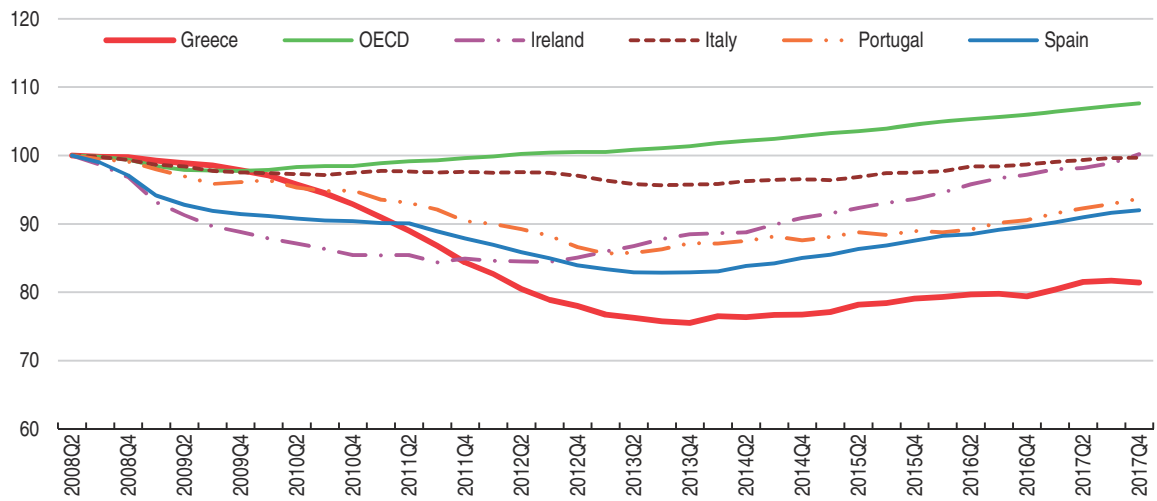
Generating employment, raising incomes and addressing poverty

Employment is pivotal to strengthening the economic recovery, increasing social welfare and redressing poverty. Jobs are returning, making inroads into high unemployment, but their wages and skill levels are lower than many that were lost during the crisis. Greece's hiring is benefiting from more flexible arrangements. Legislative amendments can maintain this flexibility, ensure wages align with productivity and better protect individuals from labour market risks. Ensuring that workers possess skills that match employers' needs will sustain employment and productivity growth. Improving the education system is a long-term mission and involves raising its pedagogical strength and orientation towards professional needs. A social welfare system dominated by pensions has not been able to prevent a steep hike in poverty among children and the young, risking long-term harm to well-being. Pursuing recent steps towards a better targeted social protection, accompanied by support programmes for jobseekers, will provide a reliable safety net and reduce poverty.

Expanding employment is among the top priorities in Greece and is cardinal for redressing poverty. After the deep losses over the crisis, employment is now recovering (Figure 2.1, Table 2.1). The unemployment rate has fallen by 6.9 percentage points from its peak in 2013, to 20.9% in 2017Q4. Participation in the labour force has continued to expand, particularly among women. More workers are obtaining employee positions, rather than being self-employed. Wages have stabilised (Figure 2.2). However, full recovery remains distant. Employment at the end of 2017 was still 14% below its 2008 peak. Limited inroads have been made into the surge in poverty that has followed joblessness (Figure 2.3) and has particularly affected families with children. Many of the new jobs are part-time or temporary and pay the minimum wage; the share of working poor is rising (Figure 2.4). While unemployment is decreasing, the share of long term unemployed has increased (Figure 2.5), especially among those with less education (Table 2.1).

Figure 2.1. **Employment in Greece fell further during the crisis and has recovered more slowly**

Index 2008 Q2 = 100



Source: OECD (2018), *OECD Economic Outlook: Statistics and Projections* (database).

StatLink http://dx.doi.org/10.1787/888933714372

Employment grew more strongly for workers with higher levels of education, though jobs created since 2013 typically require fewer skills than those lost during the crisis (Figure 2.6). Despite solid education participation rates, the labour market and education system are not providing workers with the skills that employers need. Greece's workers are among the most likely to report being over-qualified for their jobs among OECD countries (Figure 2.7). At the same time, surveys find that high school students' test performance and adults' skills lag other OECD countries (OECD, 2016b). Adult education and active labour market programmes have lacked the capacity, quality and focus on the skills needed by workplaces to help the large number of unemployed access Greece's emerging economic

Table 2.1. **The labour market has improved but remains less inclusive than elsewhere**

Percentage, unless otherwise indicated

	Greece				OECD			
	2007	2013	2016	2017Q4	2007	2013	2016	2017Q3
Labour force participation[1] (15-64)	66.5	67.5	68.2	..	70.6	71.0	71.7	..
Female	54.8	58.3	60.4	..	60.9	62.5	63.6	..
Youth (15-24)	31.0	28.4	24.6	..	49.4	47.0	47.2	.
Prime-age workers (25-54)	81.8	83.9	85.5	..	81.0	81.5	81.9	..
Older workers (55-64)	44.2	42.4	44.9	..	55.7	59.7	62.1	..
Employment rate[2] (15-64)	60.9	48.8	52.0	53.4	66.5	65.2	67.0	68.1
Female	47.7	39.9	43.3	44.0	57.2	57.4	59.4	60.2
Youth (15-24)	24.0	11.8	13.0	13.7	43.4	39.4	41.1	42.7
Older workers (55-64)	42.7	35.6	36.3	38.9	53.5	56.3	59.2	60.6
Part-time employment[3] (Total)	7.7	10.3	11.0	..	15.4	17.0	16.7	..
Temporary employment[4] (Total)	11.0	10.1	11.2	..	12.2	11.1	11.2	..
Unemployment rate[1] (15-64)	8.5	27.7	23.7	21.4	5.8	8.1	6.5	5.8
Youth (15-24)	22.7	58.3	47.3	..	12.1	16.3	12.9	..
Prime-age and older age[1] (25-64)	7.3	25.5	22.3	..	4.8	7.0	5.6	..
Tertiary education[5]	6.2	19.4	17.2	..	3.3	5.3	4.6	..
Below upper-secondary education[5]	7.1	28.7	26.2	..	9.0	13.9	11.7	..
Long-term unemployment rate[6] (Total)	49.7	67.1	72.0	..	28.2	35.2	30.5	..
Youth not in employment, education or training (NEET)[1,5] (15-29)	16.6	28.5	23.5	..	13.9	15.5	13.9	..
Working age population (15-64, thousands of persons)	7 357	7 180	6 934	..	..	..	..	..
Share of employment[3], by industry:								
Agriculture, forestry and fishing	11.1	12.2	11.3					
Industry, including energy	11.3	9.8	9.3					
Construction	8.1	5.1	4.9					
Services	69.5	73.0	74.6					
of which trade[7]	20.5	19.7	20.1					
Share of employment in general government[3,8]	18.0	18.6	17.8		17.9		18.1	

1. % in same age group.
2. % of working age population.
3. % of employment.
4. % of dependent employment.
5. For the OECD aggregate, average of data in 2016 or latest year available.
6. % of unemployed.
7. Includes wholesale and retail trade, repair of motor vehicles and motorcycles (ISIC Rev. 4 – Section G, Division 45).
8. 2015 instead of 2016 for the OECD aggregate.

Source: OECD (2018), *OECD Employment and Labour Market Statistics* (database), *OECD Main Economic Indicators* (database), *OECD Education Statistics* (database) *OECD National Accounts Statistics (database)*, OECD (2017), *Government at a Glance 2017*, and Eurostat (2018), *Population Statistics* (database).

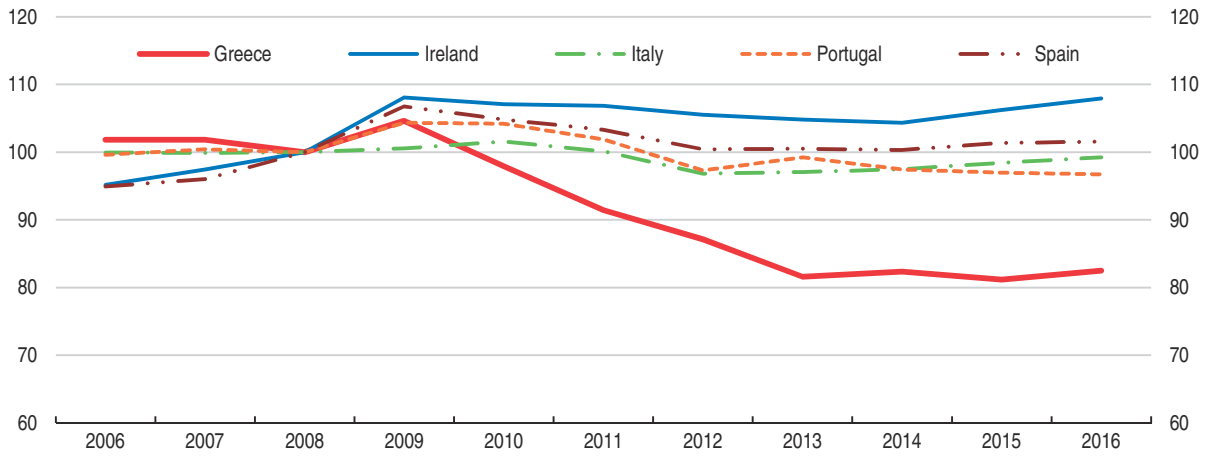
opportunities. As the reform agenda progresses from rectifying the imbalances underlying the crisis to longer-term progress in activity and well-being, the government will need to address these issues.

This chapter presents priority actions to achieve the complementary objectives of:

- Supporting household incomes through more jobs, as the best means of addressing poverty and improving inclusiveness;
- Ensuring that labour market arrangements for determining work conditions support social dialogue and sustainably improve employment and incomes;
- Quality education that provides individuals with the skills required to realise their potential and to raise their employability, productivity and wages; and,

Figure 2.2. **Real wages have stabilised**

Real annual wages, index 2008 = 100

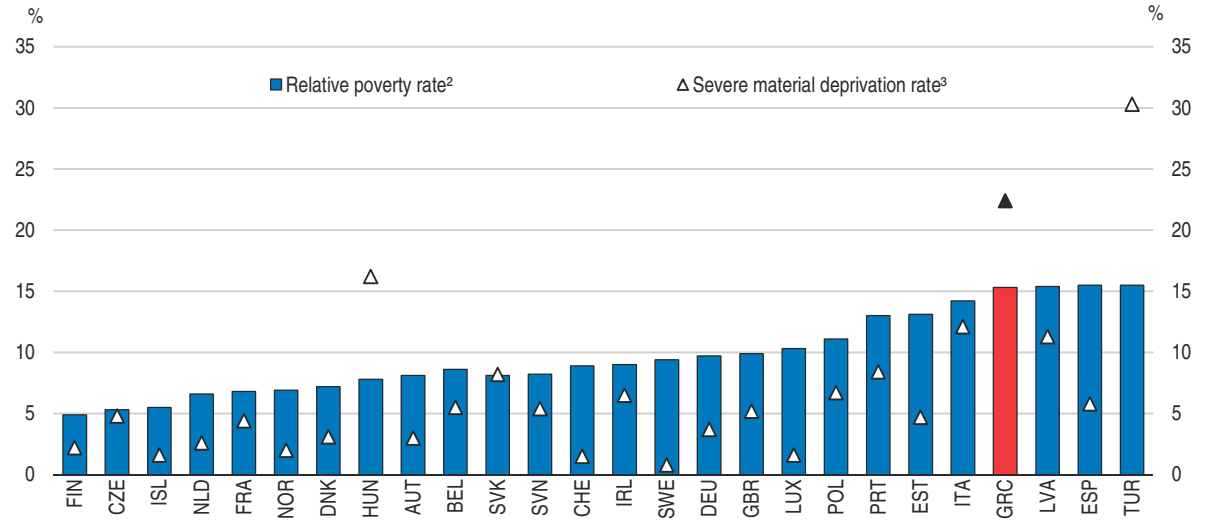


Source: OECD (2018), *Labour Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714391

Figure 2.3. **Poverty rates in Greece are high**

2016 or latest year[1]



1. 2017 for Denmark and Latvia. 2015 for Iceland and Turkey.
2. The poverty line refers to 50% of the median disposable income. Household income is adjusted for household size.
3. The severe material deprivation rate is the proportion of the population living in households unable to afford at least four of the following items: unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, adequate heating of a dwelling, durable goods like a washing machine, colour television, telephone or car, or are confronted with payment arrears.

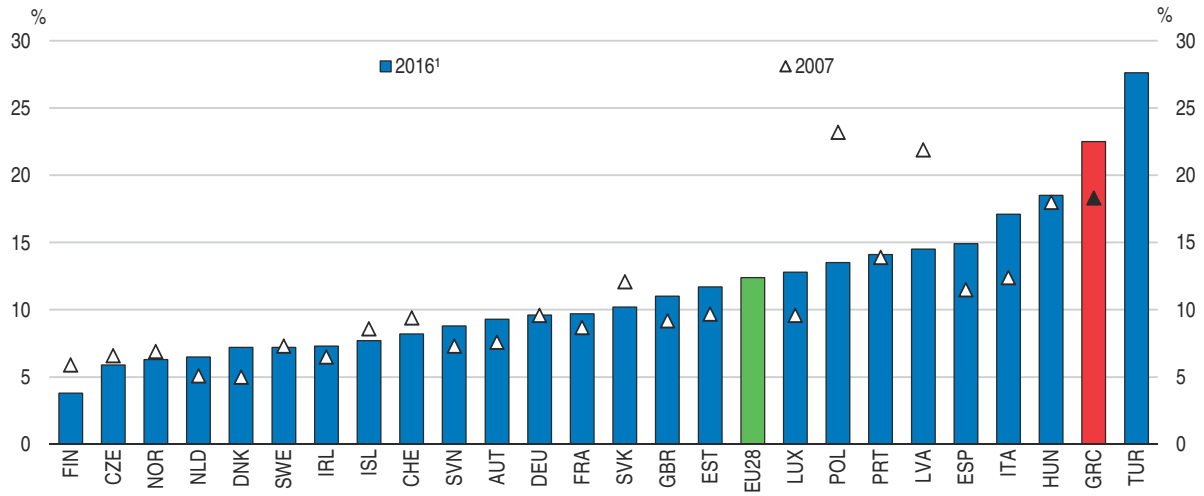
Source: Eurostat (2018), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714410

- Protecting households and especially children from income shocks and the risk of poverty through a comprehensive social safety net, combined with effective active labour market programmes.

Figure 2.4. **The share of workers at risk of poverty is high and has increased**

Employed people at risk of poverty or social exclusion, 18-64 year-olds



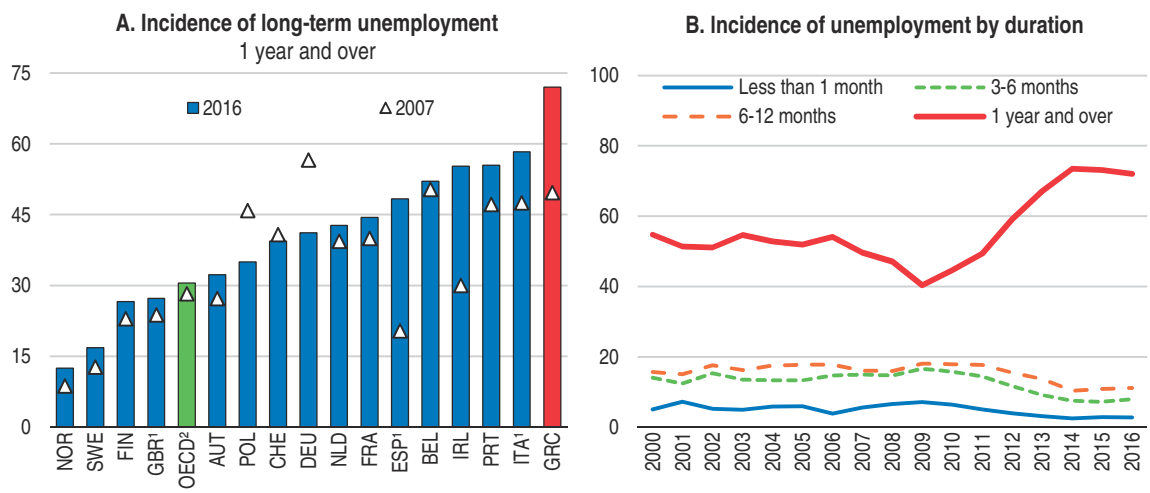
1. 2017 for Denmark and Latvia. 2015 for Ireland, Iceland and Turkey.

Source: Eurostat (2018), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714429

Figure 2.5. **The incidence of long-term unemployment is very high**

% of total unemployment, population aged over 15



1. For population aged over 16.
2. Weighted average.

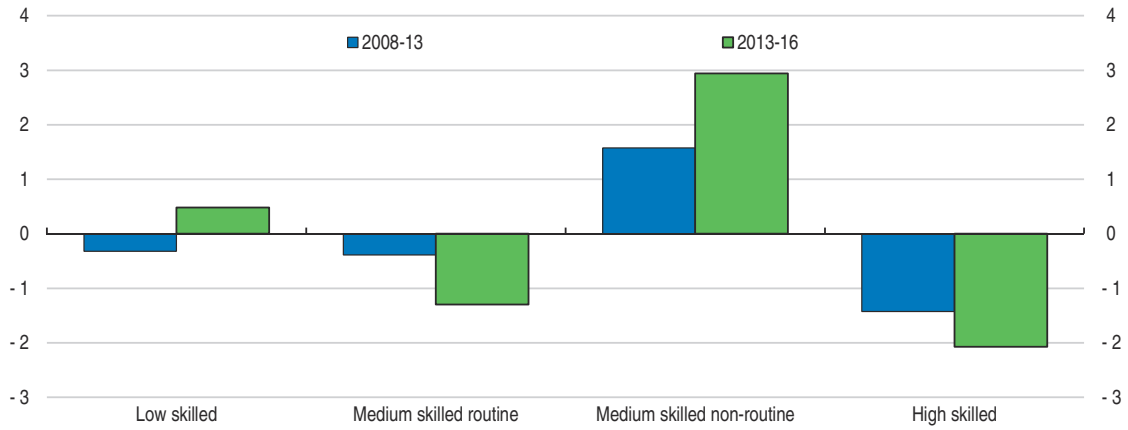
Note: Persons for whom no duration of unemployment was specified are excluded from the total.

Source: OECD (2017), *Labour Force Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714448

Figure 2.6. **Employment has shifted away from higher-skill jobs**

Change in employment shares by occupation category, percentage points



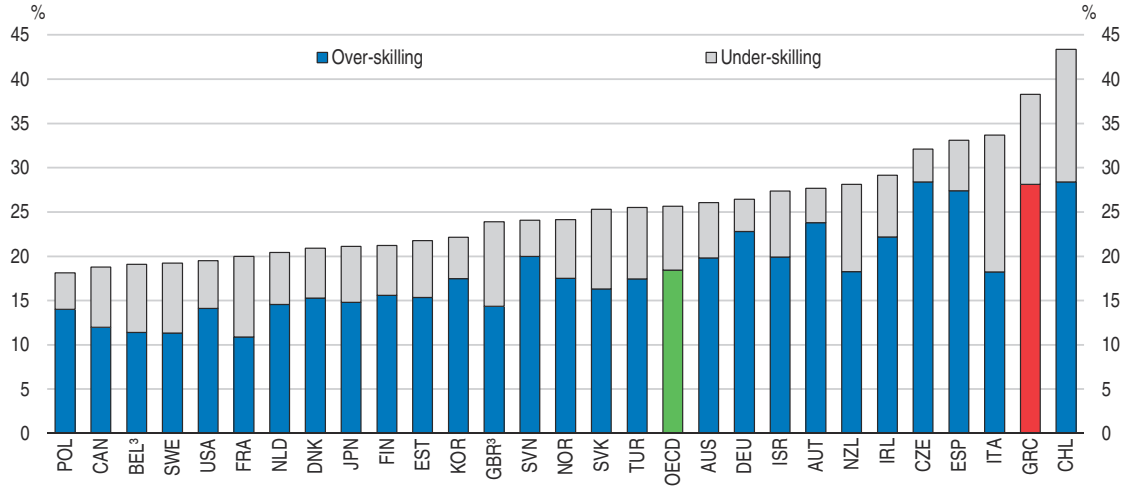
Note: Refers to population aged between 15 and 64. High skilled occupations include managers, professionals, technicians and associate professionals. Medium skilled non-routine occupations include service and sales workers and craft and related trades workers. Medium skilled routine occupations include clerical support workers, skilled agricultural, forestry and fishery workers and plant and machine operators and assemblers. Low skilled occupations refer to elementary occupations. There is a structural break in the data due to change in classification in 2010/11. ISCO-08 classification is at the 1-digit level.

Source: Eurostat (2017), *Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714467

Figure 2.7. **Many workers are over-skilled for their job**

Share of workers with skill mismatch[1], 2012 and 2015[2]



1. The figure shows the percentage of workers who are either over- or under- skilled, for a sample of 11 market industries: manufacturing; electricity, gas, steam and air conditioning supply; water supply; construction; wholesale and retail trade; transportation and storage; accommodation and food service activities; information and communication; real estate activities; professional, scientific and technical activities; and administrative and support service activities. In order to abstract from differences in industrial structures across countries, the 1-digit industry level mismatch indicators are aggregated using a common set of weights based on industry employment shares for the United States. Skills mismatch occurs when a worker's skills are higher than the 90th percentile or lower than the 10th percentile of workers with self-reported well-matched skills.
2. Data correspond to 2012 for countries participating in the first round of the Survey of Adult Skills: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, Netherlands, Norway, Poland, Slovak Republic, Spain, Sweden, United States and United Kingdom. Data correspond to 2015 for countries participating in the second round of the Survey of Adult Skills: Chile, Greece, Israel, New Zealand, Slovenia and Turkey.
3. Data for Belgium correspond to Flanders and data for the United Kingdom to England and Northern Ireland.

Source: Adalet McGowan, M. and D. Andrews (2017), "Skills Mismatch, Productivity and Policies in New Zealand: Evidence from the second wave of PIAAC", *OECD Economics Department Working Papers*, No. 1403, OECD Publishing, Paris. OECD calculations based on the *Survey of Adult Skills (PIAAC) (2012 and 2015)*.

StatLink http://dx.doi.org/10.1787/888933714486

Supporting employment growth through more effective social dialogue

Rebuilding employment is essential to redress poverty, and to ensure that the recovery in activity is lasting and supports inclusive well-being. Substantial changes to wage-setting and employment protection arrangements during 2010 to 2013 focused primarily on giving firms the flexibility to adjust wages and employment (Box 2.1). Collective wage agreements were frozen, and the arrangements allowing their extension to non-signatory workplaces were suspended. The favourability principle, which gave precedence to the terms most generous to the employee when agreements overlapped, was also suspended. "Associations of persons" representing at least 60% of the employees in a workplace were given standing to enter agreements at the firm level in the absence of a union representative. The minimum wage was reduced, given statutory status that ensured it applied to all workers, and additional allowances were suspended while a subminimum wage was introduced for youth. Collective dismissals were simplified while the process to support affected workers was made more transparent and systematic and aligned more with other EU and OECD countries' approaches.

Box 2.1. **Reforms to Greece's labour market institutions**

Greece's labour market institutions underwent substantial reform after the onset of the crisis. The reforms that had the most substantial effects include:

General wage setting:

- 2011: Collective agreements over 3 years old were terminated. Arrangements for *extending sectoral collective agreements* were suspended. The *favourability* principle was suspended, and agreements reached at the enterprise level gained precedence. These reforms remain valid for the length of the third EU structural adjustment program.
- 2011: Time-extension of existing agreements after their expiry was reduced to 3 months. If parties cannot reach a new agreement, conditions would default to the statutory minima, plus bonuses for experience, family situation, education levels and hazardous work.

Minimum wages:

- 2010: Collective agreements stipulating the minimum wage were suspended.
- 2011: Supplemental payments for experience were suspended until unemployment falls below 10%. Additional allowances continued to be provided for years of work experience achieved before 2012. Other bonus payments were ended, for family status, education, or the hazards associated with a job. A sub-minimum wage was introduced for those under 25, at EUR 510.95 per month, and for apprentices.
- 2012: Statutory minimum wage introduced on February 29, at EUR 586.08 per month. Private sector employees remained entitled to 2 months' bonus payments a year, raising the effective minimum wage to EUR 683.76, while the bonus month payments were suspended for public sector workers.
- 2013: Statutory minimum wage adjustment process legislated, providing that the government would set the minimum wage, following consultation with the five main social partner organisations, representing smaller and larger businesses and labour. Consultations would start at the beginning of each year with the decision made at the end of June. This process will apply after the conclusion of the third EU adjustment programme.

Representation:

- 2010: Restrictions removed on the *minimum size of a firm* to enter an enterprise agreement. In the absence of a trade union representative, an "*association of persons*" comprising at least 60% of an affected workforce could enter an agreement with the employer.

Box 2.1. **Reforms to Greece's labour market institutions** *(cont.)*

Employment protection:

- 2010: A *temporary contract* can be renewed three times over 3 years before it is considered permanent. The *probationary* period was extended to 12 months.
- 2010: Thresholds at which dismissals are regulated as *collective* adjusted: for more than 6 dismissals in firms with 20 to 150 staff or 5% of workers in larger enterprises, for indefinite term contracts and where the dismissals do not relate to the employee.
- 2010 and 2017: *Collective dismissals* requirements made more transparent and systematic. The employer has 30 days to discuss with employees' representatives proposed dismissals and investigate alternative solutions. The employer must submit a social plan, including measures to mitigate the consequences of the dismissal, to the employees' representatives and to the Supreme Labour Council (SLC, a committee within the Ministry of Labour made up of representatives from the employees and employers' associations and the government). The employer must submit consultation minutes to the SLC. If there is no agreement between the employee and the employer, the SLC must decide within 10 days whether the employer has complied with information and consultation obligations. If the employer has not, then the SLC may extend the consultation period.
- 2012: *Private work agencies* were permitted, to match jobseekers with employers, and to place workers into temporary positions.

Sources: Eurofound, 2014; Eurofound, 2017a; van Ours, 2016; ILO, 2015; Zepos and Yannopoulos, 2017.

Between the onset of the crisis and early 2010, private sector wages rose by 12.1% even as 207 000 jobs were lost and labour productivity fell (Figure 2.8). The amended framework gave firms flexibility to lower wages, and allowed the crisis adjustment to shift from cutting jobs to reducing wages. They most often did this by entering firm-level agreements (Cholezas and Kanellopoulos, 2015; Daouli et al., 2016; Izquierdo et al., 2017; Visser, 2016). Such agreements surged from a handful before the changes to 976 in 2012, covering the majority of workers (Figure 2.9), before the number of new agreements stabilised at near half of this level in recent years.

Figure 2.8. **Wages have moved more closely with employment and productivity since changes to the wage-setting framework**

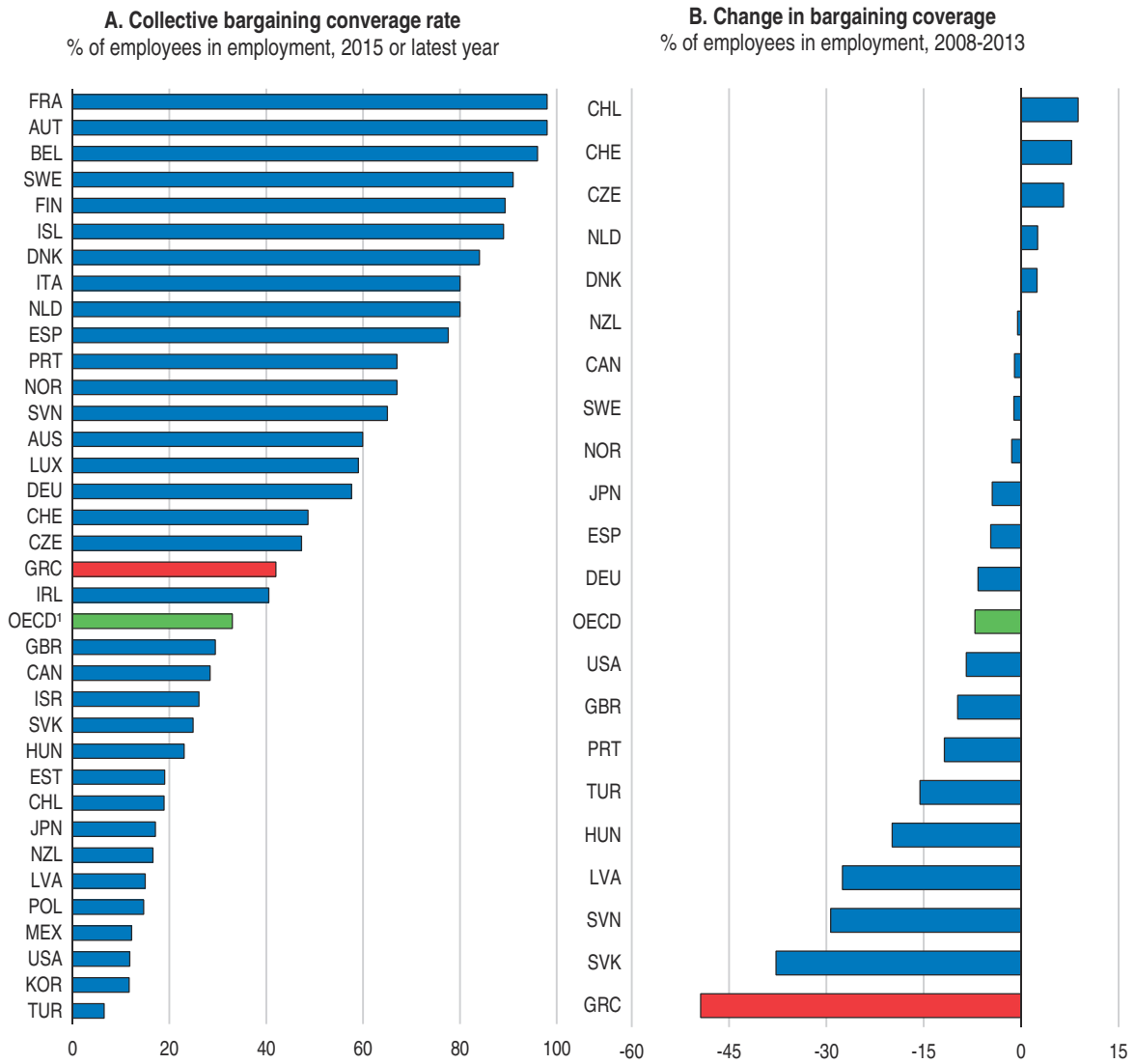
Employment, wages and salaries, and productivity in the non-agriculture business sector, index 2014 Q1 = 100

1. The reference industry is aggregated according to the NACE Rev. 2. Wages and salaries are seasonally and calendar day adjusted.
2. Annual real gross value added per person employed. The reference industry is the non-agriculture business sector excluding real estate based on the ISIC Rev. 4.

Source: OECD (2018), *OECD National Accounts Statistics* (database) and Eurostat (2017), *Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713536

Figure 2.9. **Collective agreements cover fewer Greek workers**



1. Weighted average in 2013.

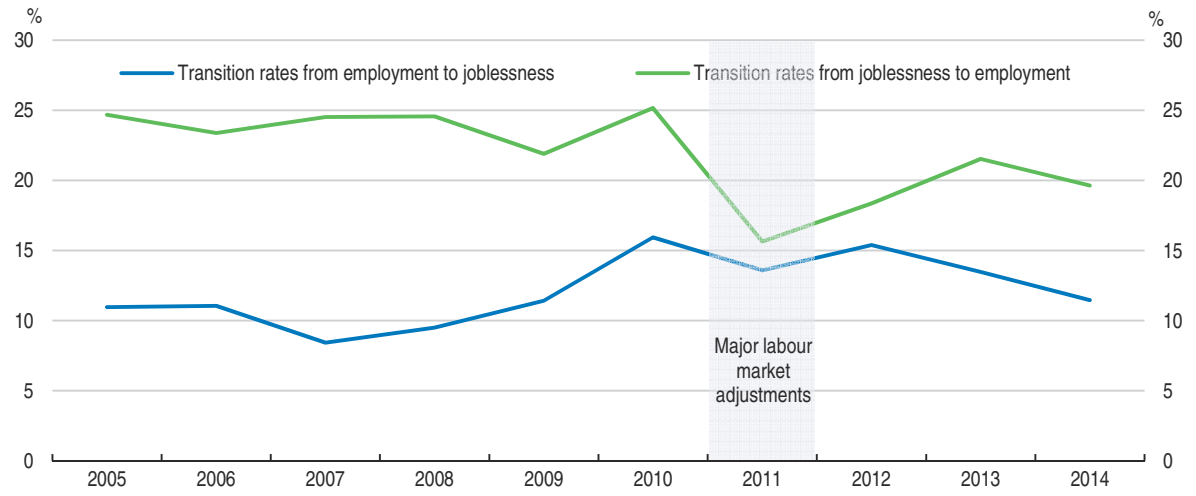
Source: OECD (2017), *OECD Employment Outlook 2017*.

StatLink http://dx.doi.org/10.1787/888933714505

Following the changes, wages, employment and productivity moved more closely (Figure 2.8; Daouli et al., 2016). The allocation of labour across firms improved drastically, as more productive firms were able to attract or retain more workers (OECD, 2017c). The jobless became more likely to transition into employment (Figure 2.10). The share of workers who are self-employed declined. Trust between social partners recovered from its crisis-period lows, but remains below most other OECD countries. Wage inequality returned to pre-crisis levels. However new jobs are more likely to be temporary or part-time and require less skills than those lost (Table 2.1; Figure 2.6) and a large proportion are paid at the minimum wage rate, which, together, contribute to over half of private sector workers earning a gross salary which is lower than the at-risk-of poverty line equivalised for the net household income of a family of four (Figure 2.11) (OECD, 2017a).

Figure 2.10. **Transitions into employment improved following labour market reforms**

Labour transitions between joblessness and employment, 25-59 year-olds, 2005-14[1]



1. The reference income year.

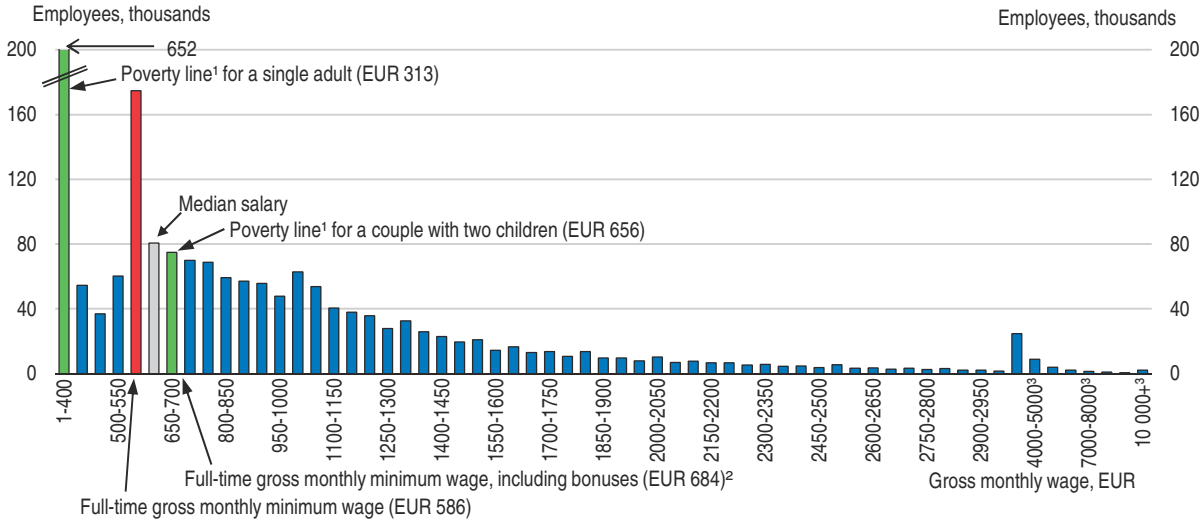
Note: Transition rates between joblessness and employment at the individual level at time t measure the number of times an employed worker at the end of year t-1 experiences a transition from joblessness to employment (and from employment to joblessness), based on monthly information on employment status of the worker: employed; unemployed; and inactive. Individual transition information is used to calculate aggregate transition rates at the country level. See for more details in P. Garda (2016), "The Ins and Outs of Employment in 25 OECD Countries", *OECD Economics Department Working Papers*, No. 1350.

Source: OECD calculations based on *European Survey on Income and Living Conditions (EU-SILC) 2005-2015*.

StatLink http://dx.doi.org/10.1787/888933713213

Figure 2.11. **Many private-sector employees earn less than the poverty line**

Number of private-sector employees earning gross monthly salaries within specified ranges, September 2017



1. The poverty line refers to 50 % of the median disposable income in 2016. Household income is adjusted for household size.
2. Private sector *workers receive two 1-month bonus salaries, paid at Christmas and Easter, which are not included in the gross monthly salary data presented in this figure.
3. At EUR 3 000, salary segments increase from EUR 50 to EUR 1 000.

Source: OECD calculations based on the *ERGANI* database from the Greek Ministry of Labour, Social Insurance and Social Solidarity, and Eurostat (2017), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933713555

Arrangements for extending collective agreements and for favouring work agreements most generous to the employee are suspended until the conclusion of the ESM Stability Support Programme. There is general agreement that, after the programme, a return to pre-reform arrangements would be undesirable, as the loss of flexibility would risk generating wage agreements that are ill-adapted to different firms' conditions, and undermine the recovery in employment and incomes. Further, stability in wage-setting frameworks supports competitiveness and co-operation among social partners (Brandl and Ibsen, 2016). Under current legislation, once the ESM Stability Support Programme concludes the government will be able to adjust minimum wage rates following consultations with social partners and expert institutions, and with reference to the situation and prospects for competitiveness and labour market outcomes. A specialised body tasked with assembling evidence and building consensus would improve social dialogue and better align minimum-wage decisions with labour market conditions, especially for the unemployed. Other weaknesses in the changes to wage-setting processes also need addressing, such as extending to "associations of persons" some of the protections enjoyed by unions. A group of independent experts reported on Greece's labour market institutions in September 2016 (van Ours et al., 2016). In 2018, the government intends to review the arbitration and representativeness arrangements for collective agreements, and to launch a project to simplify the labour law.

Developing a flexible and inclusive framework to negotiate work conditions

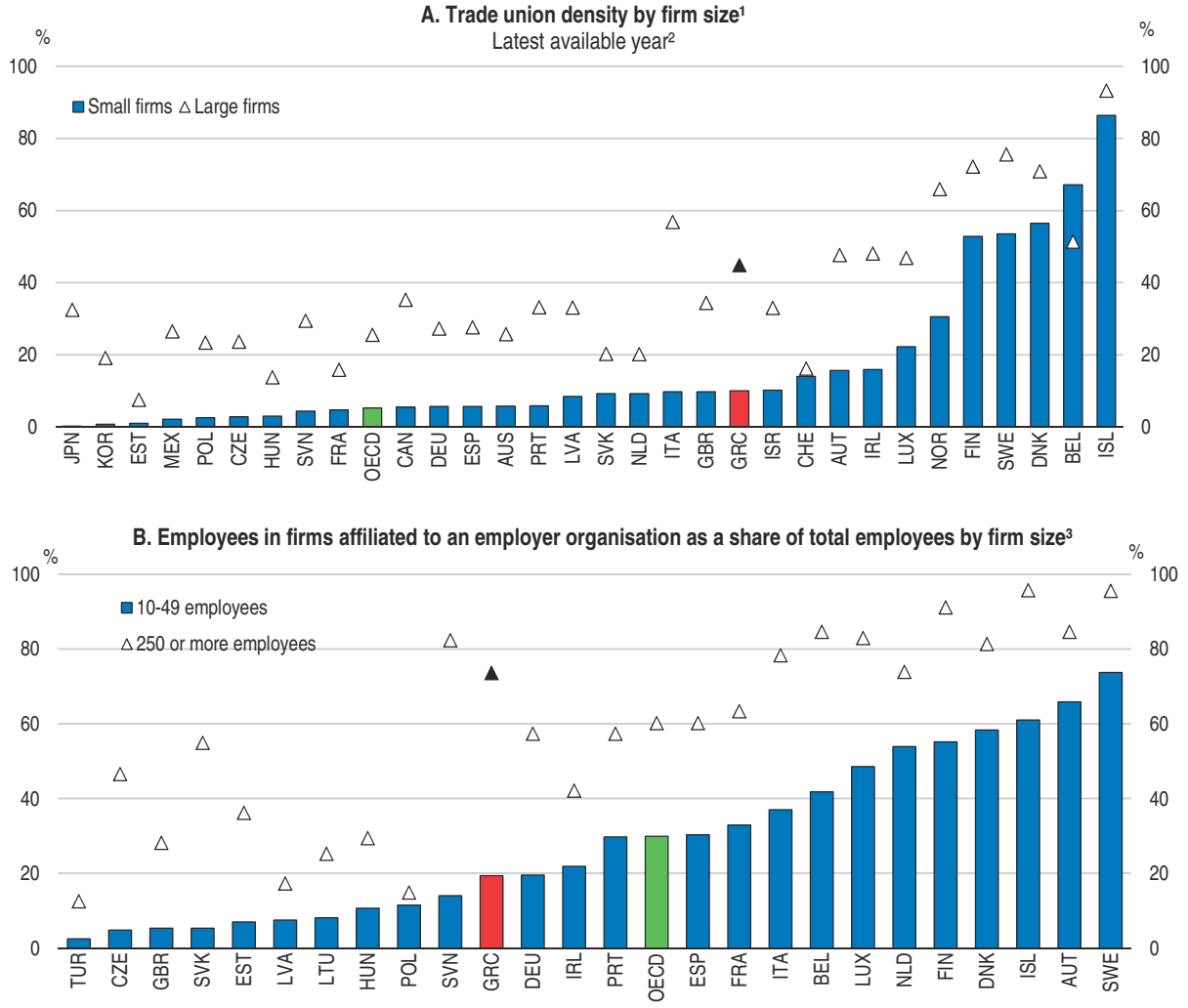
The framework for wage and work condition negotiations should reap the benefits of efficient processes to negotiate agreements and of outcomes that are equitable. Sector-level collective agreements can foster social dialogue and reduce the costs of negotiating wages and other working conditions, especially for small firms (OECD, 2017a). They can improve equality of outcomes especially for groups that suffer discrimination (ILO, 2016), and can help worker representatives negotiate wages that reflect workers' productivity.

Sectoral collective agreements need to adjust for the circumstances of smaller firms. In Greece, like many countries, smaller firms have lower rates of unionisation and affiliation to employers' associations (Figure 2.12), fewer resources for workplace negotiations (OECD, 2017a) and their productivity is often likely to be lower. Ensuring that the collective negotiation process adapts to these firms is especially important for Greece, given that small firms employ most workers.

Extending sectoral collective agreements to non-signatory workplaces in clearly and objectively defined circumstances can improve efficiency and equity. However, the importance of ensuring that social partners enter work agreements freely and avoiding adverse impacts on non-signatories leads only some OECD countries to allow extensions of collective agreements. Of these, most do so on a case-by-case basis and under strict conditions (Table 2.2; OECD, 2017a; OECD, 2017b).

To maintain flexibility and reduce the risk of economic harm, Greece can follow the examples of other OECD countries where extensions are granted under certain conditions (OECD, 2017a). For instance, extensions could be granted only when the original agreement is signed by representatives of minimum shares of both workers and of firms, thus ensuring smaller employers have a voice in negotiations and encouraging workers and employers to organise. As part of its early 2010s reforms, Portugal introduced requirements that collective agreements be entered by employers of at least 50% of workers or 30% of SMEs affected by the extension (OECD, 2017b). Before the completion of the ESM Programme, the Greek government intends to assess the ability of the strengthened ERGANI database to reliably

Figure 2.12. **Unionisation and employer association membership rates are lower in smaller firms**



1. Trade union density by firm size has been adjusted for the overall trade union density shown in Figure 4.2. in *OECD Employment Outlook 2017* by using the share of each size of firms in total union membership and total number of employees. OECD average is the weighted average of the 31 OECD countries. "Small firms" and "large firms" refers, respectively, to firms with fewer than ten employees and 100 or more employees, except for Canada (respectively, to fewer than 20 employees and 100 or more employees), France and Hungary (respectively, to fewer than 11 employees and 50 or more employees), Finland (respectively, to fewer than ten employees and 50 or more employees), Germany (respectively, to fewer than 20 employees and 200 or more employees), Japan (respectively, to fewer than 30 employees, and 100 or more employees) and Mexico (respectively, to fewer than 11 employees and 51 or more employees).
2. 2004 for Luxembourg, 2008 for Greece and Latvia, 2011 for Germany and the Netherlands, 2012 for Israel, Italy, Korea, Poland, Portugal and the Slovak Republic, 2013 for Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, France, Ireland, Norway, Slovenia, Spain, Switzerland and the United Kingdom.
3. Based on the third Eurofound European Company Survey (ECS 2013). Data covers all establishments of the private sector with 10 or more employees in all economic sectors except agriculture, activities of households as employers and activities of extraterritorial organisations. OECD average is the unweighted average of the 24 OECD countries shown.

Source: OECD (2017), *OECD Employment Outlook 2017*, Figure 4.A1.7 and Figure 4.A1.9.

StatLink http://dx.doi.org/10.1787/888933714524

provide this information (European Commission, 2018). Some other OECD countries allow individual workplaces to determine some details of conditions, for example by allowing lower wages or flexible hours in smaller firms. Even where collective agreements meet participation thresholds, some countries also require a neutral body to approve extensions rather than extending agreements automatically. These bodies may invite submissions from affected social partners and assess the proposed extension's economic and social impact.

Table 2.2. **Most countries that allow extensions of collective agreements impose significant conditions**

	Subject to relatively binding criteria	Subject to relatively mild criteria	Not subject to any criteria
Common	Finland (16.0% in 2014) Netherlands (9.3% in 2015) Slovenia (9.0% in 2012) Switzerland (13.7% in 2014)	Belgium (14.0% in 2013) France (22.6% in 2013) Portugal (38.3% in 2011)[a]	Iceland* (24.0% in 2013) Italy* Spain* (6.6% in 2013)
Uncommon	Austria Czech Republic (5.7% in 2013) Germany (0.4% in 2008) Hungary (2.5% in 2012) Israel Japan Latvia Norway (4.0% in 2013) Slovak Republic (0% in 2013) Turkey	Estonia (1.0% in 2012)	Lithuania Luxembourg Mexico Poland

* No formal administrative extensions but functional equivalent are in place. Compulsory membership to an employer association in Austria can also be considered a functional equivalent.

a) The estimated share of workers covered by extensions refers to a period before the series of reforms that tightened extension criteria (see OECD (2017) *OECD Employment Outlook 2017*, OECD Publishing, Paris, Box 4.3).

Note: Extension mechanisms do not exist in Australia, Canada (except in Québec where they are rare), Chile, Colombia, Costa Rica, Denmark, Greece, Ireland, Korea, New Zealand, Sweden, the United Kingdom and the United States.
Figures in parenthesis refer to the additional coverage rate (as a percentage of employees) due to extension measures. For Belgium, France, Iceland, Ireland, Portugal, Slovenia and Spain, the figures refer to the difference between the coverage rate and the organisation rate of employers.

Source: OECD (2017) *OECD Employment Outlook 2017*, OECD Publishing, Paris.

Sector-level collective agreements that prescribe the acceptable range of negotiations while ensuring minimum standards are respected, so-called "framework agreements", can provide sufficient flexibility for the diversity of firms and workers. In this model, social partners agree in sector-level collective agreement to the acceptable range of bargaining to ensure that minimum standards are respected. Firm-level bargaining defines the precise details of pay and working conditions. Social partners at the firm are able to negotiate mutually beneficial trade-offs, for example between working times or leave allowances and pay rates and tailor working conditions to their specific needs. Portugal extended the capacity to enter such bargains to firms with more than 150 employees within its early 2010s reforms (OECD, 2017b). Firm-level bargaining processes should be easily actionable if smaller firms are to be able to adapt a framework agreement to their circumstances (OECD, 2017a).

Greece can better protect employment from future shocks by ensuring that collective agreements include clauses that allow firms to temporarily adjust terms. Current law allows employers to unilaterally cut work time in response to demand shocks, and this flexibility can be broadened and made accessible. France, the Netherlands, Portugal, Spain and Switzerland adopted these clauses after Germany demonstrated their effectiveness during the crisis (OECD, 2017a; OECD, 2017b). These clauses allow firms to agree to deviate temporarily from sectoral collective agreements in response to economic difficulties. During the crisis, they were most often used to cut work time following a drop in demand (Eurofound, 2015; Visser, 2016).

Clauses allowing for temporary adjustments to agreements are most effective when clear rules prescribe their use and prevent them being exploited. In countries with a multi-tiered system for agreeing wages and work conditions, a common approach is to allow a firm's social partners to suspend or adjust agreed terms. If the partners cannot reach agreement, or workers lack representation at the workplace, partners may refer to a

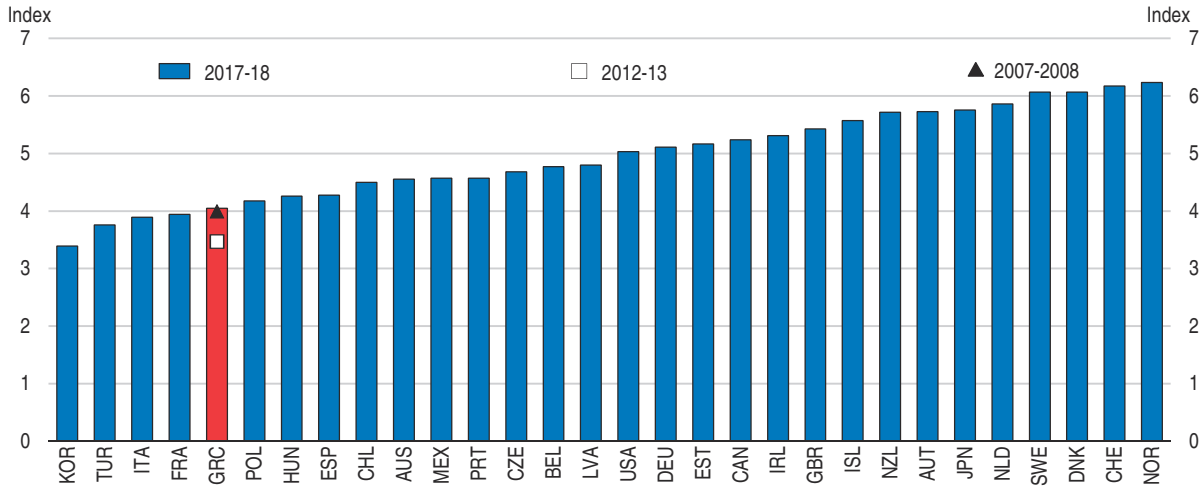
mediator. In its labour market reforms, Spain provided for a tripartite commission to fill this role. In Greece, it could be taken by the Supreme Labour Council, or the arbitration and mediation procedures under review.

Improving dialogue between social partners

Co-operation between social partners in Greece remains below most other OECD countries even if it has improved since the peak of the crisis (Figure 2.13). Lower trust reduces the efficiency of collective bargaining and labour market outcomes (OECD, 2017a). The government expects to complete a review of existing arrangements for mediation and arbitration in the first half of 2018 (European Commission, 2018). A better framework for negotiations could improve trust and the quality of social dialogue and of outcomes for workers and employers in Greece.

Figure 2.13. **Trust between social partners rebuilt after the changes to the wage-setting framework, but remains low**

Global Competitiveness Index on co-operation in labour-employer relations, scale from 1 (generally confrontational) to 7 (generally co-operative)[1]



1. Executive Opinion Survey

Source: World Economic Forum, *Global Competitiveness Index historical dataset 2007-2016.*

StatLink http://dx.doi.org/10.1787/888933714543

Support of a mediator in negotiations and shared information could improve negotiation processes and outcomes (ILO, 2015; OECD, 2017b; OECD, 2017d). Following the examples of the labour mediators in Scandinavian countries or of the Japan Productivity Center, a mediator in Greece would share analysis with social partners of developments in the national and competitor labour markets, in productivity and in living costs, and the effects of changes in transfer and tax policies. The mediator would also intervene to address blockages and to advance negotiations. Given the overlap in their tasks, the mediator could be a function of the minimum wage commission proposed below.

To overcome low unionisation in medium and smaller firms (Figure 2.12 – Panel A), during the crisis "associations of persons" were given standing to enter work condition agreements if they represented at least 60% of an affected workforce and the firm lacked a union representative. However these associations were not provided with the protections enjoyed by union representatives. These associations entered the majority of enterprise

wage agreements, and generally with terms that were less favourable to workers than those negotiated by unions (Eurofound, 2015).

Associations of persons can contribute to social dialogue by facilitating the use of opening and opt-out clauses. They are consistent with the freedom of association and assembly recognised in various international conventions. Extending to the associations the protections enjoyed by union representatives would strengthen their capacity to negotiate on an equal footing with employers. Advice and representation by trade unions may also support the associations and improve worker organisation, while ensuring that social partners adapt to each firm's conditions.

The sequencing of collective negotiations between sectors can contribute to dialogue and outcomes. To help retain the new-found competitiveness of Greece's export industries, collective agreements for these sectors can be negotiated first. Following the approach of several Scandinavian countries, Germany and Austria (OECD, 2017a), negotiations in these sectors account for movements in external economic conditions and of economy-wide productivity and competitiveness, and act as a non-binding "norm" that guides agreements in other sectors and adjustments to minimum wage rates.

Minimum wages that are equitable and support employment

Greece adopted a statutory minimum wage as part of the crisis period wage-setting changes. Minimum wages prescribed by statute provide a hard floor to workers' wages in 27 out of 35 OECD countries, 22 of 28 EU members, and 90% of countries surveyed by the ILO (Eurofound, 2017a; ILO, 2014; OECD, 2015a, updated). Minimum wages can improve earnings equality, ensure workers enjoy a minimum standard of living, and overcome imbalances in negotiating power between employers and lower-skilled workers. They also serve as a basic labour standard, and guide collective and firm-level agreements. At the same time, they must ensure that unemployed or new or lower productivity workers can compete with other workers and enter the labour force. Further, they can make only a limited direct contribution to anti-poverty goals, which are best achieved through expanding employment, supported by well-targeted social protection, which is discussed below.

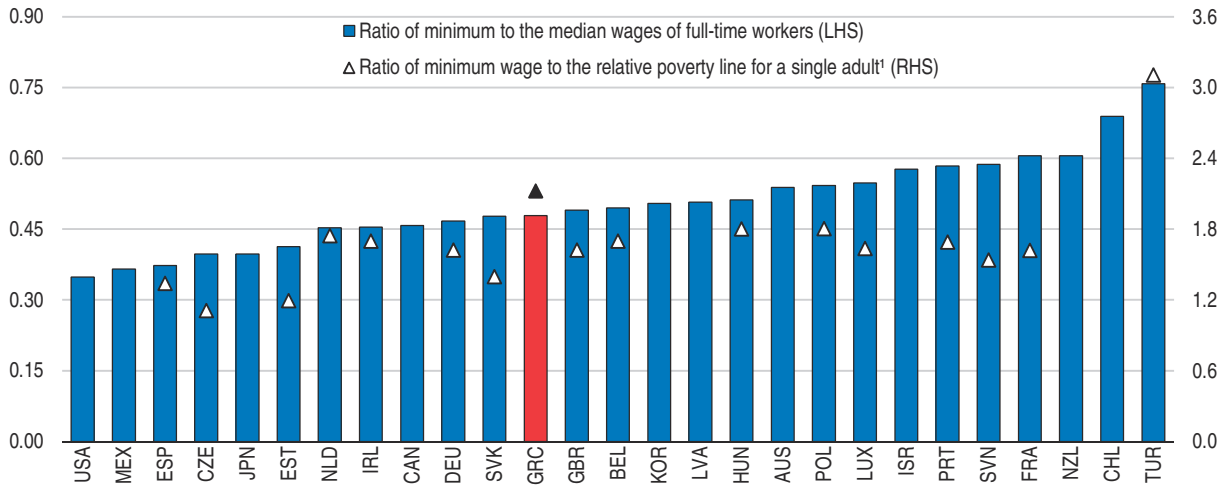
In February 2012 the gross minimum wage was cut by 22% to EUR 586 per month or EUR 684 per month for private sector workers who receive two bonus months annually. In 2011 minimum wage supplements for years of experience were suspended until unemployment falls below 10%, while others were cancelled, for factors including a worker's family situation, qualifications, and work that was classified as arduous or unhealthy. These supplements created approximately 50 different minimum wages rates (OECD, 2007a), and, together, they could lead to effective minimum wages that were higher relative to the average wage than in other OECD economies.

The minimum wage is fixed until the ESM Stability Support Programme concludes. The cuts brought the basic minimum wage into line with other OECD countries, either relative to the median salary or to output per capita. In 2016, the minimum wage was 48% of the median wage, near the average for the basic minimum wage between 2003 and 2009, and below the ratio of most other OECD economies – and the current net income at-risk-of poverty line for a family of four (Figure 2.14).

The minimum wage rate has a greater influence on employment conditions in smaller firms than larger firms. Smaller firms report paying a larger share of their employees the full-time minimum wage rate or less, reflecting part-time workers (Figure 2.15). The share

Figure 2.14. **Greece's minimum wage is comparable to other OECD economies**

2016 or latest year



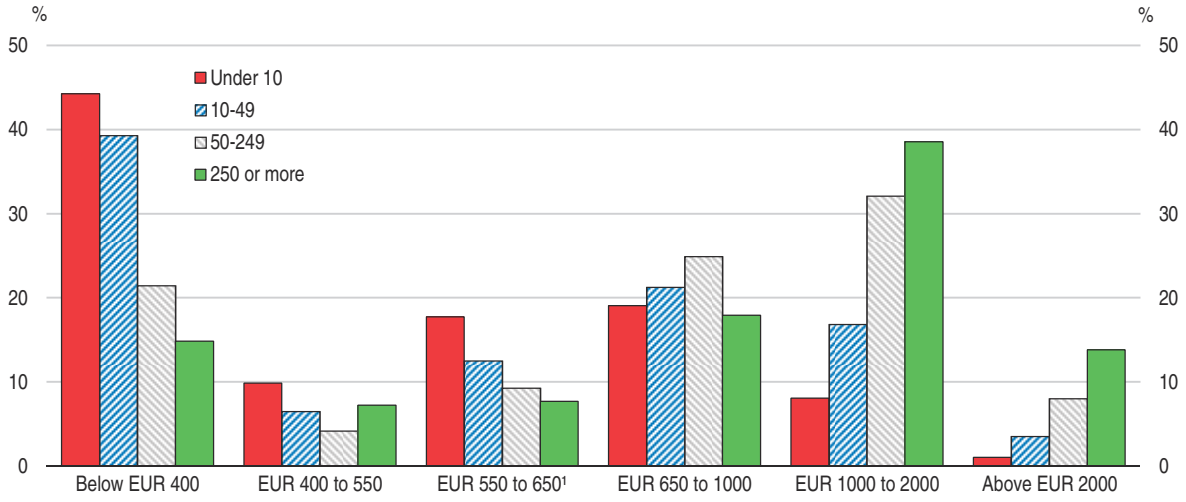
1. The poverty line refers to 50% of the median disposable income in the corresponding year. Household income is adjusted for household size. 2015 for Turkey.

Source: OECD (2018), *Labour Statistics* (database) and Eurostat (2018), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714562

Figure 2.15. **More workers in small firms earn low wages**

Share of workers with reported monthly wages within specified ranges, by firm size, private sector, September 2017



1. Includes the full-time minimum wage.

Source: OECD calculations based on the *ERGANI* database from the Greek Ministry of Labour, Social Insurance and Social Solidarity.

StatLink http://dx.doi.org/10.1787/888933714581

of workers earning higher wages increases with firm size, which may reflect larger workplaces' higher productivity and greater resources to negotiate wage rates that reflect workers' productivity. In contrast, the distribution of salaries differs little between regions.

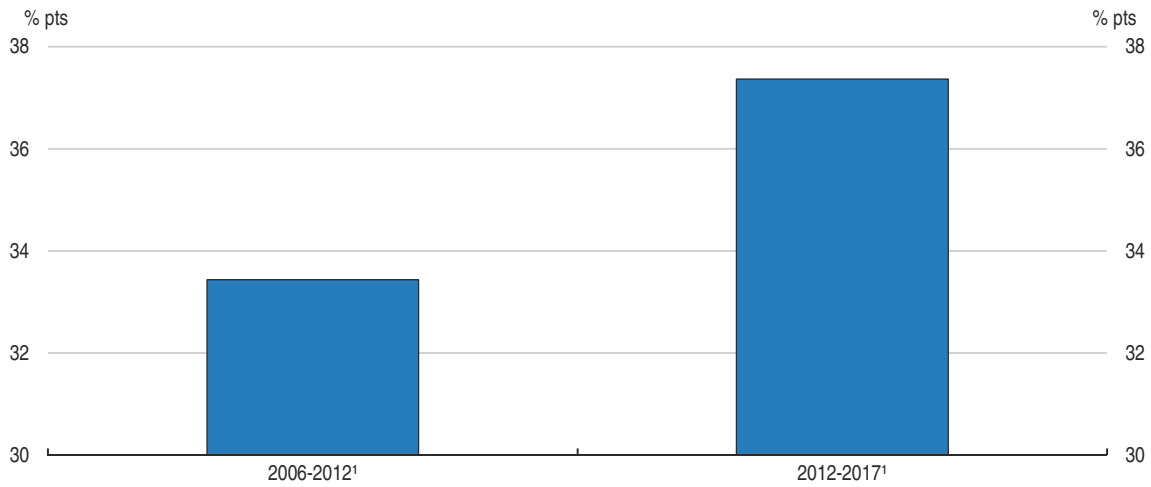
Minimum wages for young workers

Greece has a youth sub-minimum wage, however this has not provided younger workers with a path into employment. About half of OECD countries reduce the minimum wages for younger workers, apprentices and new labour market entrants, and, in several

countries, workers with health issues (OECD 2015b). These are intended to allow targeted groups of lower productivity workers to enter the labour force, earn a living wage, gain experience and improve their skills and productivity. Greece's youth sub-minimum wage, alongside a sub-minimum wage for apprentices, replaced the previous minimum wage supplements. Introduced in 2012, its age threshold of 25 is higher than in other countries, although the 12% discount to the minimum wage is modest. Since its introduction, the share of those younger than 25 in total employment fell across nearly all sectors, and the labour force participation of those aged 20-24 gradually declined while it rose for those aged 25-29 (Figure 2.16).

Figure 2.16. **Labour force participation fell among those receiving the youth minimum wage relative to the cohort receiving the adult wage**

Difference between labour force participation rates of the population aged 25-29 and the population aged 20-24



1. Average of differences for the two sub-periods: from 2006Q1 to 2012Q1 and from 2012Q2 to 2017Q3.
Source: OECD calculation based on Eurostat (2018), *Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714600

Linking the sub-minimum wage to a worker's overall employment experience rather than their age may improve employment outcomes for Greece's youth. The minimum wage may be discounted significantly for a worker in their first year of work, with the discount diminishing for the second and third years. It would be consistent with the general ambition of amendments to wage setting processes to strengthen the link between wages and productivity. A number of OECD countries adjust the subminimum wage in several steps, and in Ireland these steps are related to both age and experience in the sector or progress through training programmes (Table 2.3; Eurofound, 2017a). In practice, the strengthened ERGANI labour database would be able to report a worker's experience.

Inclusive processes to inform minimum wage adjustments

After the EU programme concludes, the government may adjust the minimum wage rate, following consultations with social partners and export bodies and addressing competitiveness and labour market conditions and prospects. Adopting a pay commission can strengthen this process, by helping to build evidence and social consensus for minimum wage adjustments, in light of the experience with such commissions in France, Germany, the United Kingdom and Ireland (Box 2.2). These countries' commissions

Table 2.3. **Minimum wage levels, determination and differential across groups**

Country	Standard annual rate, 2016 (USD 2015 PPP)	Youth	Type of determination
Australia	21 967	Annual steps, from 15 (36%) to 20 (97%)	The Fair Work Commission's Minimum Wage Panel decides the national minimum wage after consultation with industry, unions, individuals as well as the state and federal governments. The Wage Panel consists of 7 people: 4 are from FWC, 3 are experts from business, unions and academia.
Belgium	21 170	N/A	Minimum wages are determined by the National Labour Council, and laid down in collective agreements which are binding.
Czech Republic	8 399		Set by government following consultation of the social partners.
Estonia	8 595		Set by government following agreement between social partners.
France	20 414	< 17: 80%; 17-18: 90% + lower rates for young people on training contracts	Consultation process. Commission made up of government representatives, trade unions and employer organisations annually submits an opinion on minimum wages. A commission of independent experts provides official advice to the government and to the Higher Commission for Collective Agreements.
Germany	20 847	< 18: no minimum wage	Set by a Commission of a president, three employer representatives, 3 employee representatives, and 2 experts (without voting rights).
Greece	11 492	< 25: 89%	After expiry of EU Assistance Programme, set by government following consultations with social partners,
Hungary	9 155	Adjusted for workers in professional occupations	Set by government following consensus between the social partners.
Ireland	18 943	< 18: 70%	Set by government following recommendations of a '"Low Pay Commission"
Israel	13 060	16: 70%; 17: 75%; 18: 83%	Government legislated.
Japan	15 292	N/A	Set by government based on the opinion of the Central or Prefectural Minimum Wages Council, composed of representatives of workers, employers and the public interest (academic experts).
Korea	14 441	N/A	Set by government, following a proposal by the tripartite Minimum Wage Council (representing workers, employers and the public interest).
Latvia	7 830	Higher hourly rates for < 18 (114%)	Set by the government following social partners' recommendations.
Mexico	1 896	N/A	Minimum wages are fixed by the National Commission on Minimum Wages, which is a tripartite institution made up of representatives from the government, employers and workers.
Nether–lands	22 210	Annual steps from 15: (30%) to 22 (85%)	Government legislated.
New Zealand	19 346	< 20: 80% for some workers with <6 months tenure	Government legislated.
Poland	11 978	N/A	Adjusted (yearly) by the Tripartite Commission for Socio-Economic issues.
Portugal	10 941	< 18: 75%	Set by government, after consulting the Permanent Committee for Social Dialogue.
Slovak Republic	8 980	< 18: 80% 18-21: 90%	Set by government after consulting social partners.
Slovenia	14 521	N/A	Set by government after consulting social partners (Economic and Social Council).
Spain	12 317	N/A	Set by government following consultation of social partners.
Turkey	12 075	N/A	Set by the Minimum Wage Fixing Committee consisting of government, employee and employers' representatives.
United Kingdom	17 568	15-17: 59% 18-20: 80%	Set by government following recommendations of the Low Pay Commission.
United States	14 892	< 20: 58% during the first 90 days with an employer	Government legislated.

Note: Austria, Denmark, Finland, Italy, Sweden and Switzerland do not have a nation-wide statutory minimum wage.
Source: OECD (2015), "FOCUS on Minimum wages after the crisis: Making them pay"; *OECD Employment Outlook 2015*, OECD Publishing; Arpia, A., P. Cardoso, A. Kiss, K. Van Herck, A. Vandeplas (2017), "Statutory Minimum Wages in the EU: Institutional Settings and Macroeconomic Implications", *IZA Policy Paper* No. 124.

consider a range of perspectives on wage adjustments by including representatives of large and smaller firms, workers, and independent academics and analysts, and by holding regular public consultations, including with advocates for the unemployed and others facing disadvantage accessing work. They publish recommendations and in some cases determine the minimum wage adjustments.

Box 2.2. **A dedicated commission to advise on minimum wage adjustments**

The United Kingdom's Low Pay Commission has been seen as effective at ensuring moderate and sustainable movements in minimum wage rates with limited social conflict. Its role has informed the design of similar commissions in Australia, Germany and Ireland. The commission is composed of worker and employer representatives and academics. It holds public and closed consultations across the country. Its deliberations are independent of government. Its members reach a consensus and publish an annual report with recommendations for the minimum wage arrangements. The government makes the final decision, but has been politically obliged to follow the Commission's recommendations. In the UK the role of the Commission was re-framed in 2016 when the UK government shifted to a "living wage" goal, of raising the minimum wage to 60% of the median wage by 2020, subject to "sustained economic growth". Advising on movements towards this goal has been added to the Commission's ongoing advice on the national minimum wage.

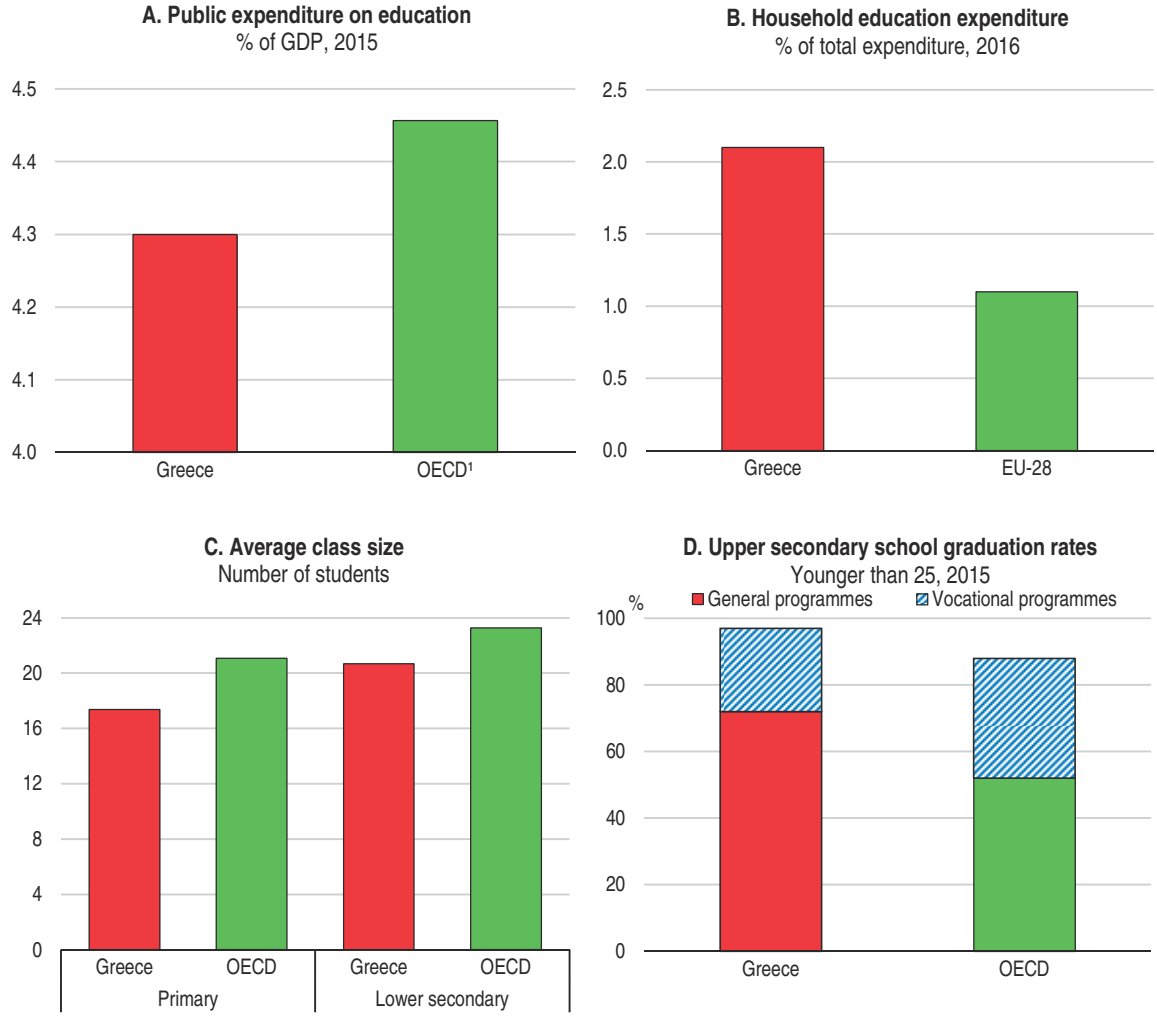
Retaining the final decision on minimum wage adjustments with the government would allow it to arbitrate across conflicting opinions of commission members. Governments tend to take a stronger role in minimum wage adjustments in countries where social partners are in greater conflict or do not represent groups that would be affected by wage decisions (OECD, 2017a; OECD, 2017b). Conversely, a stronger role of the government increases the risk that wage decisions will reflect shorter-term political pressures. Requiring the government to explain its decision and any divergence from the Commission's recommendations may help avoid these. This framework of consultation, analysis and discussion, backed by data and published externally, is supported by the relevant ILO conventions.

Expanding opportunities through a stronger education system

Strengthening skills and competencies through an effective education system is essential for improving employability, income and well-being in Greece. Participation in education is strong given Greece's social and economic conditions. Spending on education relative to GDP by government and households approaches the average of OECD countries (Figure 2.17 – Panel A), despite a smaller share of the population being at school age. The ratio of school teachers to students is high (Figure 2.17 – Panel C) and teachers have fewer teaching hours than in other countries. Rates of high school completion and transitions to university are higher than in most other OECD countries (Figure 2.17 – Panels C and D; OECD, 2017i), especially for younger cohorts. Greek workers spend near the OECD average number of years in education (Barro-Lee 2016) (Figure 2.18). These strengths reflect the high social value attached to education.

Greece's best students build on these resources to be world-leaders – for example, Greece's emigrants are the tenth most prolific inventors globally, adjusting for population size (World Intellectual Property Organisation, 2013). However there is great scope to improve outcomes for most participants. Fifteen-year-olds' achievements in standardised tests are below other OECD countries, as are adults' skills, and these improve less with longer or more recent education than in most other countries (Figure 2.19, Figure 2.20; OECD, 2016a; OECD, 2016c). After adjusting time in education for the level of young adults' skills, Greece ranks only above Turkey across OECD countries (Figure 2.18). Additional education raises wages or the likelihood of finding work by less than most other OECD countries (OECD, 2016a). These

Figure 2.17. **Greece's education input effort is in-line with other OECD countries**



1. 2014 for the OECD aggregate.

Source: OECD (2017), *OECD Education at a Glance 2017: OECD indicators*, Eurostat (2018), National Accounts Statistics (database) and European Commission (2017), Education and Training Monitor 2017: Greece.

StatLink http://dx.doi.org/10.1787/888933714619

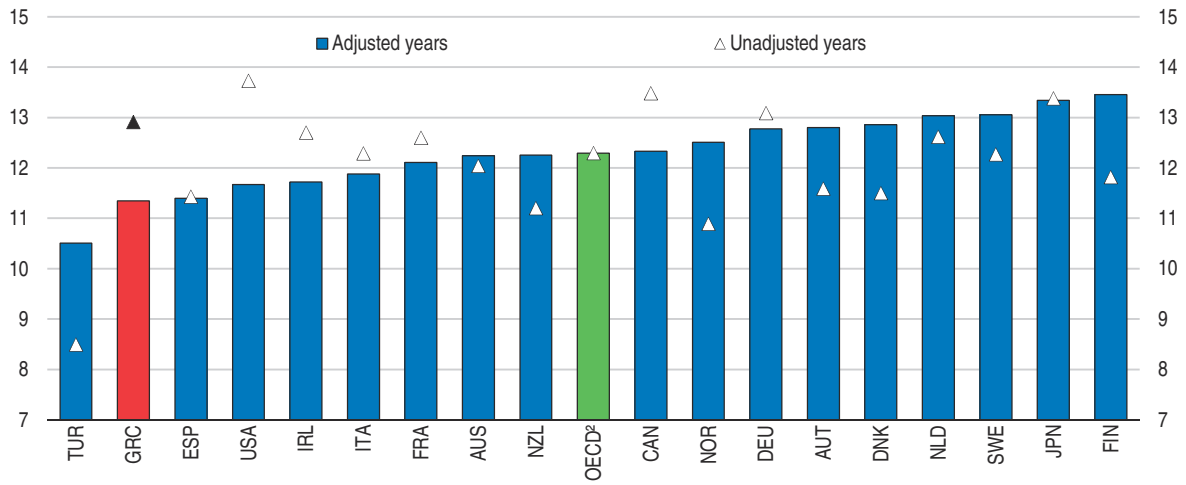
weaknesses are reflected in the public's limited satisfaction with the public education system (European Parliament, 2014; OECD, 2017g).

The economic crisis has added to the sector's challenges, by reducing resources while bringing into focus the shortfalls in the system's outcomes. Public spending on education declined by 36% in nominal terms during the crisis (OECD, 2017j), and cuts affected school teachers in particular. Their real salaries fell by 28% in the decade to 2015, to among the lowest across OECD countries (OECD, 2017j). The workforce of permanent teachers is ageing, but a general recruitment freeze introduced in 2012 has placed all new teachers on annual "substitute" contracts which lack security and are funded in parallel to the main education budget (OECD, 2017i; OECD, 2017j).

The demands on the education system have grown. The large numbers of adults who lost their jobs during the crisis require re-skilling to be able to return to work. Newly-arrived refugee children and teenagers need education and training to be able to contribute

Figure 2.18. **Years of schooling are above average**

Average years of schooling, 25-29 year olds, 2010[1]



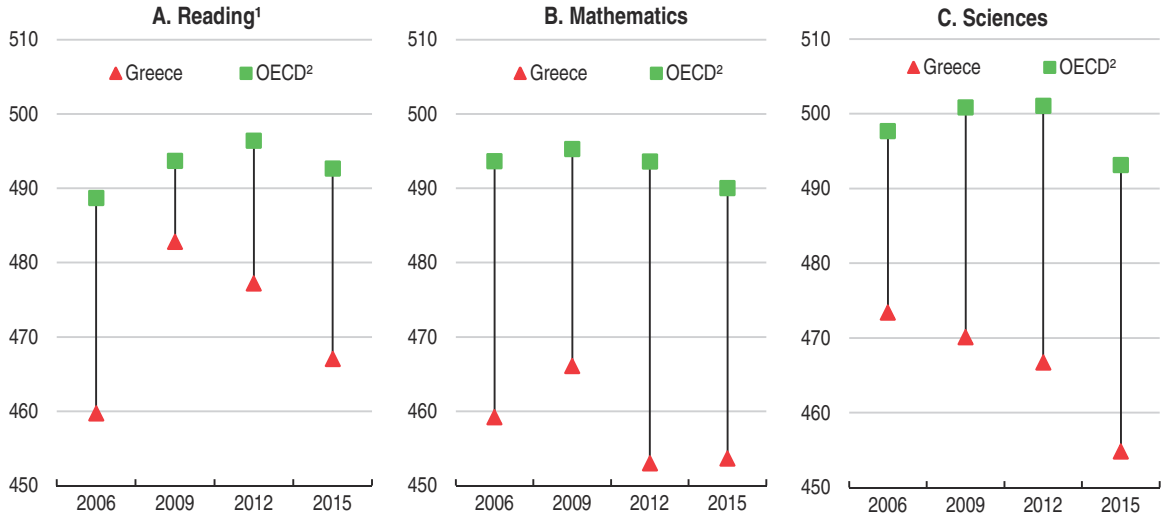
1. Unadjusted years of schooling are based on Barro and Lee (2016). Years of schooling are adjusted for the strength of educational outcomes using the PIAAC numeracy mean assessment in the following way: a country's unadjusted years of schooling are multiplied by the ratio of its median PIAAC numeracy score to its average years of schooling, divided by the benchmark ratio of the OECD median score to OECD average years of schooling. The benchmark ratio is calculated by dividing the median PIAAC numeracy score across available OECD countries by the average years of schooling across available OECD countries. The median PIAAC scores are from the 2012 assessment for 25-29 year olds, while estimates of average years of schooling are for 2010, also for 25 to 29 year olds.
2. Unweighted average of data shown.

Source: Barro and Lee (2016), *Education Attainment Dataset*, February, OECD (2016), *Skills Matter: Further Results from the Survey of Adult Skills* and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933713574

Figure 2.19. **Student performance at school is below the OECD average**

Mean PISA score in reading, mathematics and sciences



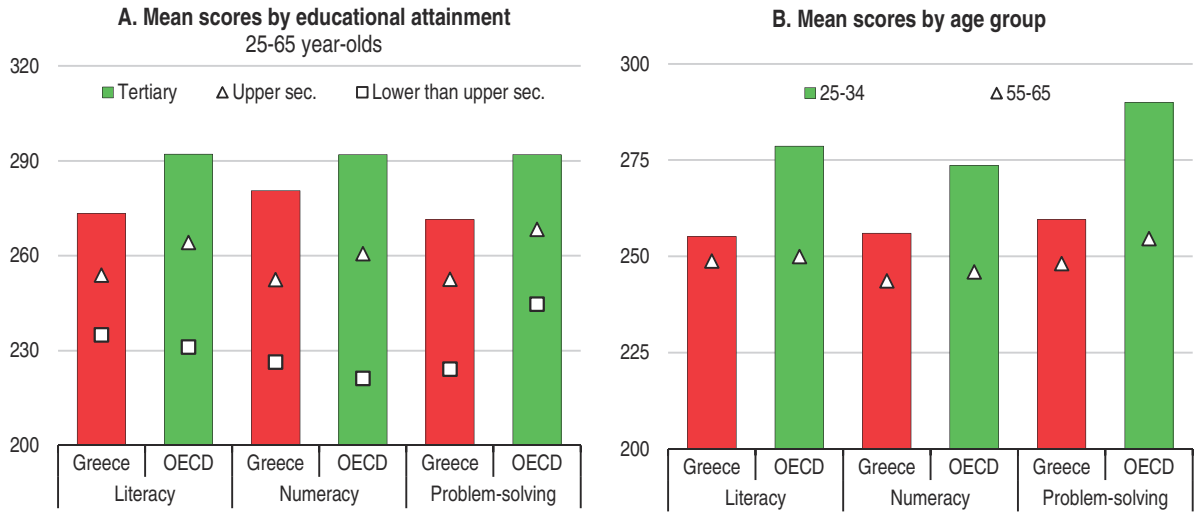
1. The PISA reading assessment is comparable across years.
2. The OECD aggregate covers all OECD countries except Austria and the USA for reading and all OECD countries excluding the USA for mathematics and sciences.

Source: OECD, *PISA 2006, 2009, 2012 and 2015* databases.

StatLink http://dx.doi.org/10.1787/888933713631

Figure 2.20. **Adults' skills lag the OECD average**

Mean PIAAC proficiency scores, 2014-15[1]



1. 6 OECD member countries including Greece took part in the second round of the assessment from April 2014 to end-March 2015. OECD average covers all OECD member countries participating in the first and second round of the assessment.

Source: Calculations based on the *PIAAC database*.

StatLink http://dx.doi.org/10.1787/888933713593

to Greece. Somewhat offsetting these pressures are the falling number of children entering school age, following the low birth rates of recent decades. ELSTAT projects the number of children entering primary school to decline by one-quarter between 2017 and 2023 (ELSTAT, 2016; Lazaretou, 2016).

Repeated efforts to address these weaknesses have fallen short. Previous reforms suffered from limited resources and ownership, or from a lack of a coherent long-term strategy. Improving the education system again features among the government's policy priorities, in agreement with the EU, and the government, led by the Ministry of Education, Research and Religious Affairs (MoERRA), is making new efforts (European Commission et al., 2017; MoERRA, 2017a). It launched a nation-wide consultation in 2016, and specific interventions are being trailed in pilot programmes. The European Education and Training 2020 targets is also framing these efforts. The OECD is supporting through an *Education Policy Review*, which will recommend measures to: improve the sector's school and tertiary education governance through decentralisation, autonomy and funding; improving school performance with respect to teacher professionalism, evaluation and assessment; and raising the system's efficiency and equity.

These efforts go in the right direction, but should be incorporated into a comprehensive and coherent long-term programme which provides policy continuity, co-ordination among different stakeholders, and ongoing monitoring and dialogue with affected groups (OECD, 2015c; World Bank, 2018).

Starting skill development from early childhood

Greece's education and skill levels would benefit from stronger early childhood education and care (ECEC). ECEC supports the development of emotional control, language and social skills, especially of disadvantaged children (Doyle et al., 2009; Cunha and Heckman, 2007). Accessible ECEC systems improve the equity of overall learning outcomes

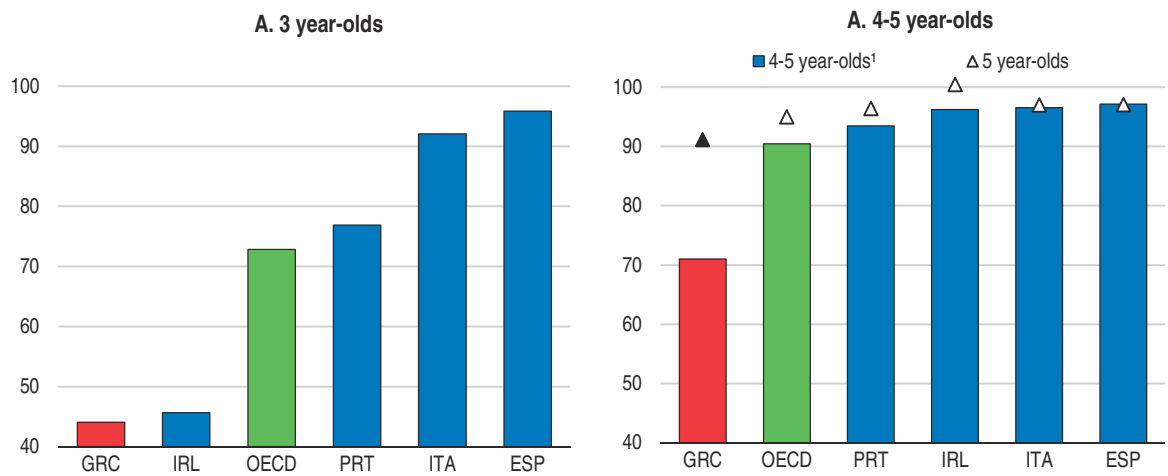
and raise social mobility between generations (OECD, 2016c; OECD, 2017k; European Commission et al., 2014). ECEC is less costly than interventions later in life (Naudeau et al., 2011). Two years spent in ECEC gives the equivalent of approximately one full year of additional schooling by age 15 as measured by PISA test results, controlling for various socio-economic characteristics (OECD, 2017k), which is the difference in the mean PISA score between Greece and the OECD average (OECD, 2016c).

Greater access to ECEC would also address Greece's major long-term policy challenges of low fertility and an ageing workforce. It would help caregivers return to the workforce, expanding families' income and employment possibilities. This especially benefits women and single-parent families, both of which have lower labour market participation in Greece than in other OECD countries (OECD, 2017k). Access to quality childcare may support fertility rates, reversing the pattern of earlier generations (OECD, 2017k).

Participation and capacity in ECEC need to be further developed in Greece. Fewer than half of 4 year olds are enrolled in ECEC, and among younger age groups enrolment is lower and fell slightly between 2005 and 2014. Only 13% of 0-to-2 year olds are enrolled, compared with an OECD average of 34%. Enrolment jumps to over 90% at age 5, when pre-primary school becomes compulsory. In contrast, across other OECD and EU members pre-primary enrolment has become near-universal at the age of 4, and is rising for younger age groups (Figure 2.21).

Figure 2.21. **Enrolment in early childhood education and care below compulsory school age lags other OECD countries**

Enrolment rates in early childhood and primary education by age, 2014 or latest year



1. 2017 data for Greece provided by the Greek Ministry of Interior and may not be fully comparable with other countries' statistics.

Note: Enrolment is currently compulsory from age 5 in Greece.

Source: OECD (2017), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care* and Greek Ministry of Interior.

StatLink http://dx.doi.org/10.1787/888933714638

The government will expand compulsory pre-primary school from 5 to 4 year olds over the coming years, which is welcome. Increasing enrolment of younger children would also be beneficial (MoERRA, 2017a). Parents can enrol their infants in childcare starting from the age of 2 months in private facilities charging relatively high fees and from 7 months in public facilities managed by the local authority at low fees (OECD, 2017m). At 2.5 years, children may be enrolled in a public child centre, also charging modest fees, which are

reduced further or eliminated for low income households (OECD, 2017m). Limited availability of places appears to limit enrolment rates (OECD, 2017j).

Greater enrolment rates will first require investing in ECEC capacity, especially in population centres. At the same time, children are typically enrolled in ECEC full-time (OECD, 2017k). Greater use of part-time enrolment can expand the capacity of existing facilities and limit costs for parents, without significantly reducing the pedagogical benefits (OECD, 2017k). Demands on the system from increasing enrolment will also be offset by fewer children entering the system, due to low birth rates.

Provision and supervision of ECEC in Greece is fragmented across institutions according to age. The Ministry of Health and Welfare supervises the provision of private early childcare while the Ministry of the Interior supervises the local authorities' child centres. Pre-primary school is managed by the MoERRA (European Commission, et al., 2014; UNESCO, 2015). This fragmentation reflects how most OECD countries have traditionally approached ECEC. However in some countries a fragmented system has been associated with a greater focus on care rather than education, and distances ECEC activities from the primary school curriculum.

Effective ECEC systems provide the foundations for school, while ensuring that care exceeds a minimum. The first priority to achieve this is ensuring that supervisors emphasise quality standards, especially in staff's interactions with children. Many countries are unifying responsibility for the supervision of ECEC systems into one ministry (Box 2.3). In Greece, this could be achieved by consolidating ECEC supervision into the MERRA.

Box 2.3. **Integrating early education with early childhood care**

A number of OECD countries have unified responsibility and supervision of their early childhood education and care (ECEC) systems into one agency, including Australia, the Flemish and the French Communities of Belgium, Chile, Finland, France, Germany, Ireland, Italy, Kazakhstan, Korea, New Zealand, Norway, Sweden and England (United Kingdom). Conversely, some Scandinavian countries have maintained divisions of responsibility while focusing on enforcing quality standards. In Italy, supervision and responsibility for ECEC systems has traditionally been split between many agencies. Monitoring children's development has been at the local level, if it occurs at all, and is not standardised nationally. The Italian comprehensive school reform program, "*La Buona Scuola*", announced in 2015 and progressively being implemented, has made ECEC reform was a central component.

The Italian ECEC reforms propose to integrate education and instruction from birth to age 6, when compulsory education starts, shifting the focus of ECEC from care to broader education. The reforms propose to consolidate governance of ECEC by giving the Ministry of Education, University and Research responsibility for co-ordinating the new system with regional and local authorities. "Infancy hubs" are planned for children aged 0 to 6. These will be hosted within state comprehensive institutes and primary schools, in order to foster pedagogical continuity. They will be supported by specific infrastructure funding. Tertiary training will be provided for educators for children aged 0-3, to improve the pedagogical value of the system. For the first time, a maximum threshold for family contributions will be set. Children with disabilities will receive particular attention.

Sources: OECD, 2017e; OECD, 2017f.

The MERRA's experience in recruiting and training pre-primary school teachers can raise the ECEC workforce's teaching skills. Its management of pre-primary and primary schools can help ensure that ECEC activities prepare children for the school curriculum. Retaining responsibility for running facilities with local authorities and private sector providers would maintain the benefits of decentralised management and of closer relationship with their local communities, although it may create difficulties for ensuring consistent quality across the country (OECD, 2017k). A number of countries have achieved strong results through a central body supervising services delivered by local governments and private agencies (Box 2.3; OECD, 2017k).

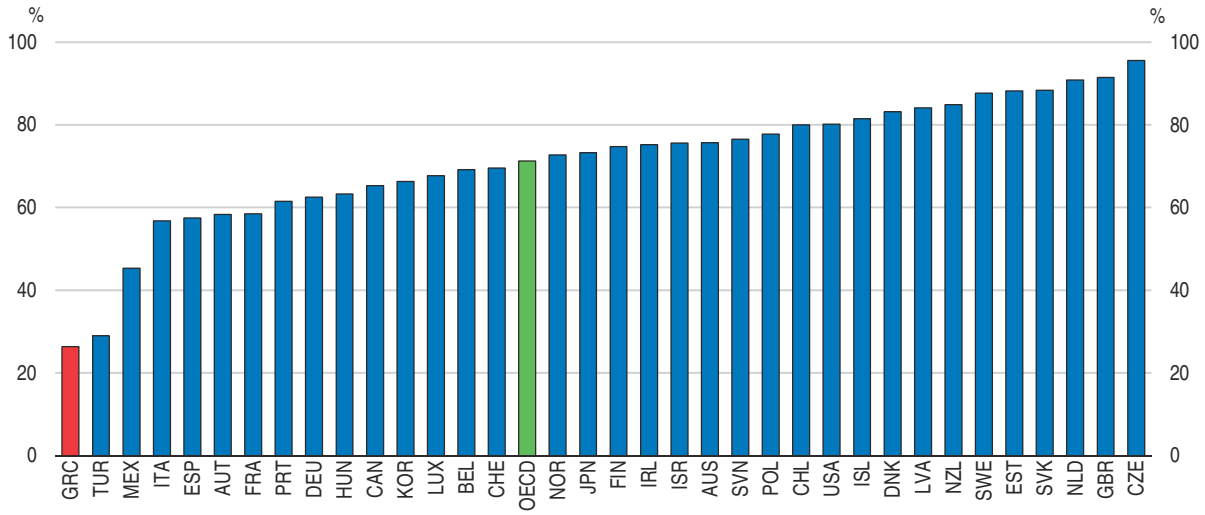
Improving schools

Providing schools and teachers with greater autonomy

Curriculum and resource management in the Greek education system are among the most centralised of OECD countries. There is little flexibility within the compulsory curriculum at either primary or secondary levels, with even individual lesson plans determined centrally. Teacher staffing decisions are made almost exclusively by regional or national authorities, while building spending is managed by local authorities on behalf of the Ministry of Infrastructure (OECD, 2015c; OECD, 2017j; OECD, 2017n) (Figure 2.22).

Figure 2.22. **Schools and teachers have limited influence over resource and curriculum management**

Index of school autonomy[1]



1. % of tasks for which the principal, the teachers or the school governing board have considerable responsibility including allocating resources to schools (appointing and dismissing teachers; determining teachers' starting salaries and salary raises; and formulating school budgets and allocating them within the school) and responsibility for the curriculum and instructional assessment within the school (establishing student-assessment policies; choosing textbooks; and determining which courses are offered and the content of those courses). Results based on school principals' reports.

Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools* and *PISA 2015* database, Table II.4.5.

StatLink *http://dx.doi.org/10.1787/888933713650*

Across OECD countries, learning outcomes are stronger where educators in schools are able to manage teaching programmes and resources, at the same time as the education system's capacity is strengthened (Hanushek et al., 2011; OECD, 2012; OECD, 2015c; OECD, 2016c; Woessmann, 2003). Giving local school management more autonomy on how resources are used, teaching time is spent and which teachers to employ, accompanied by

the necessary skills and support, would allow schools to adapt learning processes and resources to students. For example, this can help address the Greece's challenges in classroom discipline or students' self-perception (OECD, 2016c).

Given the historical organisation of teaching in Greece, investments in teachers' and schools capacities need to accompany decentralisation (Hanushek, et al., 2011; OECD, 2010; OECD, 2017n). Developing these capacities is a decade-long process, requiring long-term policy continuity (World Bank, 2018). Current pilot programmes can be effective initial steps. During the 2016-17 school year MoERRA piloted a programme to develop greater pedagogical autonomy, requiring teachers to prepare classes over one week on issues relevant to local communities. This trial challenged schools, and found that teachers were short of motivation to recognise and respond to their students' needs. Over coming years, MoERRA plans to offer teachers greater ongoing professional support and skill upgrading (MoERRA, 2017a). Such processes of trials, evaluations and new trials should be integrated into a longer-term school reform agenda.

Providing schools with limited additional discretionary funds may help develop their resource management capacity, and to innovate and adapt their activities to their communities. Evidence suggests that improving schools' capacity to manage funds can do more to improve education outcomes than a general increase in funding (Leuven, et al, 2007; OECD, 2015c). Additional funding should be allocated through a transparent, non-discretionary formula (OECD, 2012). Practically, this could build on the successful aspects of the Zones of Educational Priority (ZEP) programme that prioritises schools in disadvantaged socio-economic zones, while aiding other schools to develop their capacity to mobilise resources in their communities (OECD, 2017j).

Supporting educators with performance frameworks

Decentralising decision-making hinges on developing performance standards and evaluation frameworks for pre-primary, primary and secondary schools and their students, as well as central agencies such as the MoERRA. Generalised evaluation for Greek students in compulsory education is dominated by the university entrance exam, the standard of which varies between years. Portugal is the only other OECD country without regular national assessments of students. Evaluations have been absent or were suspended for teachers, schools and their principals and for the administration (OECD, 2017i; OECD, 2017n).

The end-high school university entrance exam is prestigious and competitive, and is students' main assessment throughout their schooling. Greece is one of only few OECD countries where tertiary education admission is solely determined by a test at the end of secondary school, alongside Portugal and South Korea (Edwards et al., 2012). Its design and pre-eminence creates incentives for families to use extra-curricular tutoring and cram schools, which can create socio-economic inequities and undermine other objectives of high school. Greece's households spend more than other European countries on education (Figure 2.17 – Panel B) during secondary school, which particularly disadvantages lower-income households and amplifies the effects of income loss following the crisis (OECD, 2017g). Only in Japan and Korea do larger shares of students attend after-school lessons among OECD countries (OECD, 2013c). Authorities in Korea as well as Turkey are restricting the shadow education sector (OECD, 2017i).

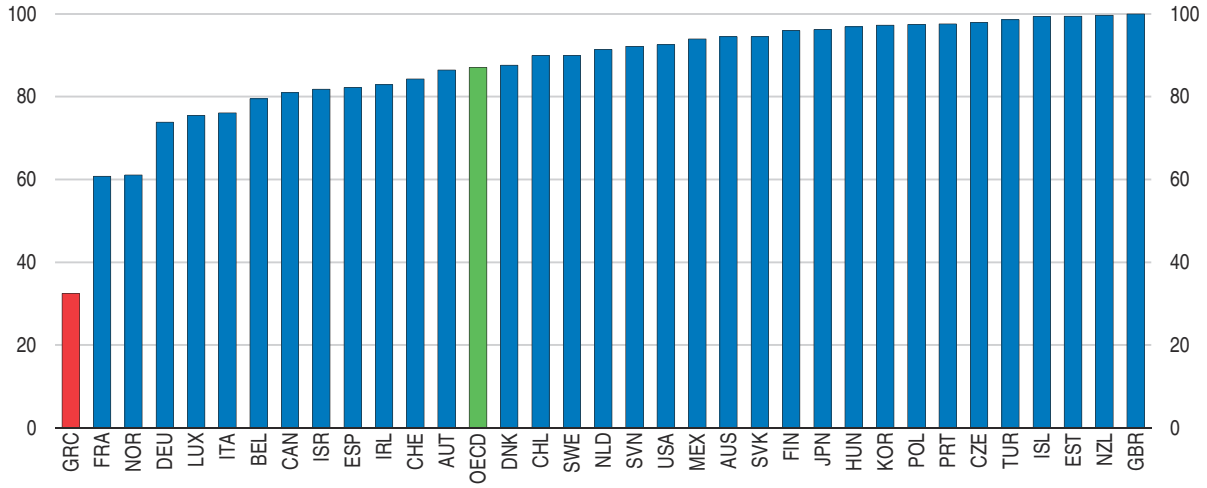
Reform of the exam is a priority for the government (European Commission, 2016a; MoERRA, 2017a). It could be replaced by a strengthened assessment of students' performance

throughout their schooling. The government is developing a central bank of tests that would contribute to this. A centralised system generally achieves better educational outcomes compared to assessments developed by schools (Woessemann, 2003; OECD, 2015c). In due course, broader performance reviews against open-ended tasks can complement these tests. The various assessments can aid educators shape the classroom curriculum and teaching techniques (OECD, 2013b). In Australia, Sweden, Turkey, the United Kingdom and some U.S institutions, a general aptitude test calibrates the results of different class and school tests, which can also serve as an entry point to tertiary education for mature students.

In a welcome step to assessing schools' performance, MoERRA will roll out school-wide self-evaluation process over the coming years, alongside evaluation of administrators (MoERRA, 2017a). School-level evaluations have been rare in Greece (Figure 2.23). Past efforts to introduce evaluations of schools, teachers and students have failed, largely due to distrust in the evaluations' use (OECD, 2017j). Successful evaluation system build trust (Hopfenbeck et al., 2013), and are collaborative and constructive. In MoERRA's trail programmes, teachers can work with colleagues from neighbouring schools in assessing how their school performs against agreed standards. In the future, the assessments can be linked to access to professional development, for example that helps teachers adapt classes to their classrooms. Trust could also be built through 360-degree assessments that allow teachers and school principals to provide feedback to MoERRA, and by publicising successes (OECD, 2017n).

Figure 2.23. **School evaluations are infrequent in Greece**

% of school principals reporting that evaluations are used, 2012



Source: OECD (2015), *Education Policy Outlook 2015: Making Reforms Happen and PISA 2012 Database*, Table IV.4.32.

StatLink http://dx.doi.org/10.1787/888933714657

Investing in educators' skills

School teachers at all levels must complete university-level pedagogical training to be eligible for recruitment, and secondary school teachers must also complete subject-matter education at university level. The government is only now developing opportunities for serving school teachers and principals to update and develop their skills (OECD, 2017j). The maturity of Greece's permanent teacher workforce and the lack of support for the "substitute" teachers employed since the crisis make this a priority. Pre-service training and

training for active teachers is most effective when it is practical, focuses on concrete methods in a teacher's subject areas, and is class-room based. It works better when it provides teachers with continuous support rather than one-off workshops (Walter and Briggs, 2012; World Bank, 2018). Strengthening pre-service can complement in-service training, as demonstrated by Portugal's reforms (Matthews et al., 2009).

Improvements in school teachers' and principals' pay and conditions over the medium-term could accompany skill development and other efforts to improve the education system. They have supported successful reforms programmes in a number of OECD countries, including Estonia and Israel (OECD, 2015c; World Bank, 2018). A priority should be to regularise the "substitute" teacher workforce on temporary contracts, in in a manner that is fiscally sustainable and does not perpetuate existing rigidities, for example by offering fixed and longer-term contacts. Teachers' salaries should be able to move with those of equivalently skilled workers in Greece. These improvements in conditions can accompany progress in the measures discussed above, such as involvement in training, adopting performance assessment frameworks, and increasing responsibility for class design.

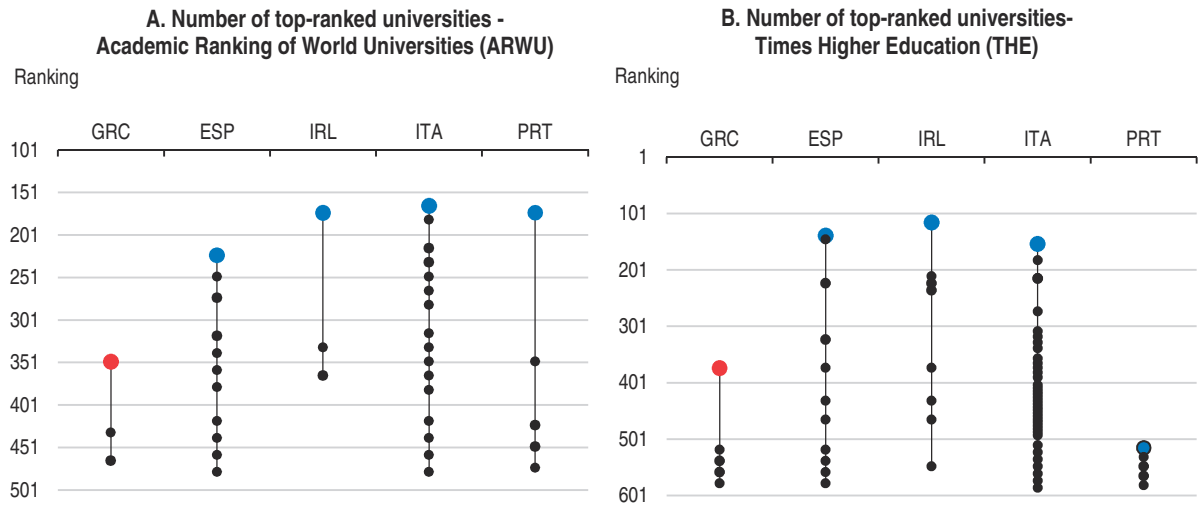
Strengthening tertiary education

Tertiary education encompasses both universities and technical institutes. Greece's university graduation rate is above the OECD average among younger demographics and near average for the overall workforce. In general, university education has a high social status, and demand by high school graduates' for university education is strong. However, access can be inequitable. Like in many countries, students' perception of technical institutes is poorer, and enrolment rates are lower than for universities and fell during the crisis (European Commission, 2011; OECD, 2017*j*). Tertiary education has focused more on theoretical than professional skills. Greece's top graduates are able to achieve international success, for example Greece's diaspora ranked tenth globally for the number of patents registered relative to the population (WIPF, 2013). . However, most students take longer to graduate, receive lower wage premiums and achieve lower adult skills than in other OECD countries. To become internationally competitive, Greek universities need to raise their performance relative to their global peers (Figure 2.24; Mylonas, 2017).

Past reform efforts made some progress in addressing universities and technical institutes' fragmentation, lack of scale and large number of courses offerings (European Commission, 2016a; OECD, 2017*j*). The 2013-2014 *Athina* programme sought to strengthen leading departments, and to better connect institutions with their region's development and labour market needs, while consolidating or closing departments and universities. The consolidation efforts should resume. However, institutions have little autonomy across broader areas of management, and 2017 legislation reduced these further (European Commission, 2016a; Mylonas, 2017). Incentives and autonomy may motivate institutions to reach the financial scale for better teaching and to attract back some of Greece's highly educated and successful diaspora (Theodoropoulos et al., 2014).

The availability of places in university and technical institute courses does not reflect the preferences of students and employers. Students nominate their preferred courses and location, and are allocated places based on their university entrance exam scores, but only 6% of 2011 entrants obtained their first, second or third choice. Once students are enrolled, in practice they cannot change courses (OECD, 2017*j*). The lack of choice may partly explain the limited income gains for most students from tertiary education, and why fewer students go on to post-graduate study than in other OECD countries.

Figure 2.24. **Greece has few universities ranked among the world's best**[1]



1. Number of universities in each country that are ranked in the world top 500 (ARWU) and 1 000 (THE). The ranking of each country is depicted on a line connecting the highest and lowest ranked among world top 500/600 universities.

Source: OECD calculations based on the Times Higher Education (THE), "World University Rankings 2018" and Center for World-Class Universities at Shanghai Jiao Tong University, "The 2017 Academic Ranking of World Universities (ARWU)".

StatLink http://dx.doi.org/10.1787/888933714676

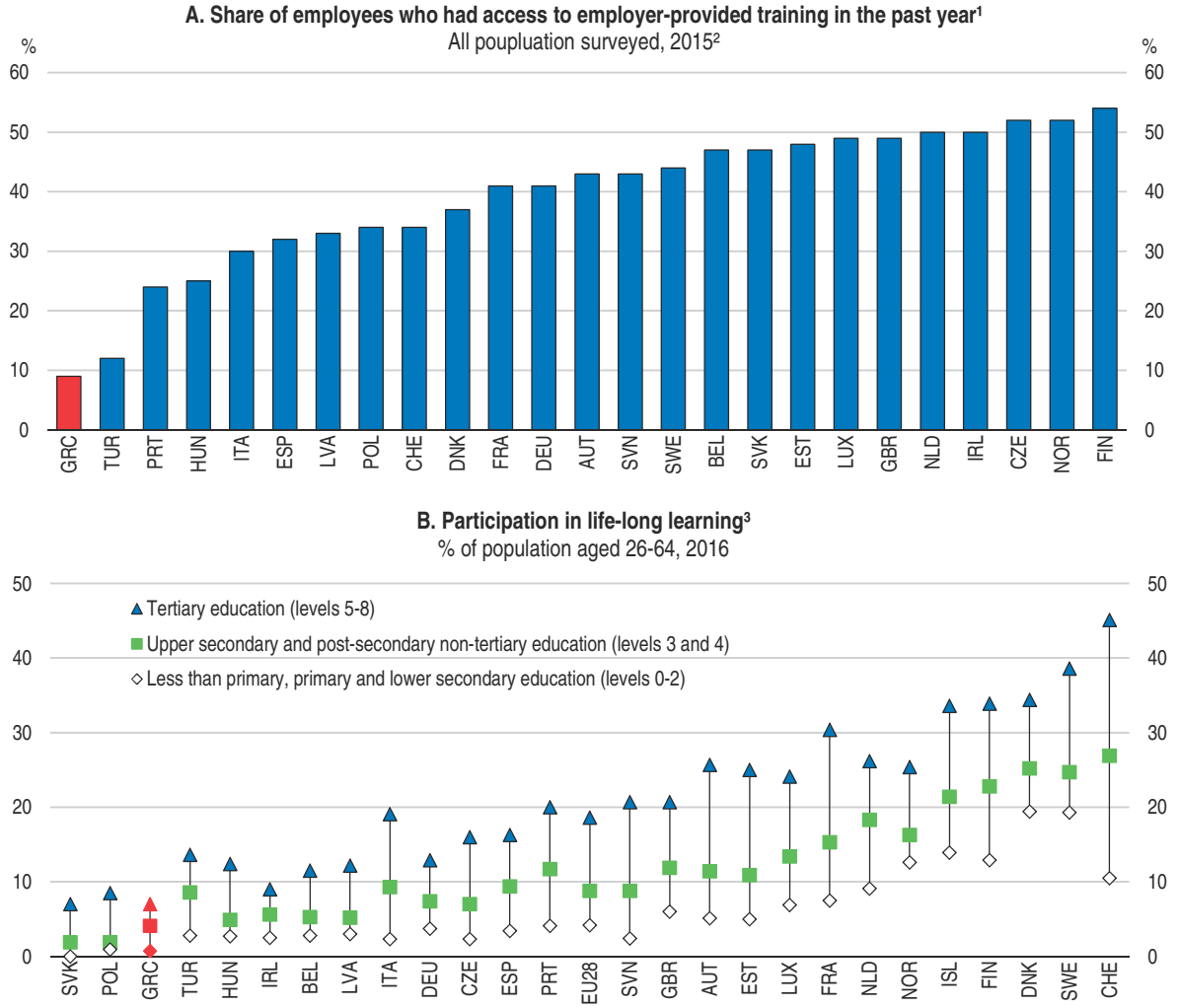
More autonomy would enable universities and technical institutes to better respond to students' and employers' needs. Funding could follow demand and allow institutions to adapt their course offerings. Australia's recent reforms to tertiary education offer an example of how well-designed incentives, coupled with strong career guidance, can expand access to tertiary education (OECD, 2017o). The government can steer students towards priority courses and skill-sets through ear-marked funding. Allowing students to study their preferred subjects, while ensuring that those preferences are well-informed, is likely to improve learning outcomes, and can draw excluded groups into higher education, providing a pathway to employment and higher-skilled jobs, and boosting overall productivity.

With greater autonomy, students' learning choices should be better informed. Personal interest in a subject has determined Greek students' study preferences (European Commission, 2011). This should be complemented by information from graduate tracking surveys and job market assessments anticipating future skill needs (OECD, 2016d), and the advice of guidance counsellors, which Greek students are the least likely in Europe to use (European Commission, 2011). The ERGANI database may enable better career tracking. Complementing this information are the new, regular quality evaluations of tertiary education institutions. These are prepared by institutions, assessed by external bodies, and are published (HQA, 2014; OECD, 2017j).

New pathways to develop professional skills

Adult education has a growing role in Greeks' careers, although from a very low level and was set back by the crisis (Karalis, 2017). For adults entering the workforce and later in life, the tertiary education system has offered few pathways to develop professional expertise or to re-skill for evolving workplace needs. Universities offer limited possibilities of entry later in life (OECD, 2017g). Access to on-the-job training is limited (Figure 2.25 – Panel A), especially for the majority of the workforce employed by SMEs. The quality and cost of adult training is patchy and participation is limited (Figure 2.25 – Panel B).

Figure 2.25. **Few adults participate in professional training or life-long learning**



1. % of persons responding positively to the question "Have you had training paid for by your employer (or self if self-employed) in the last 12 months?".
2. Survey reference year. Data is based on the 2015 European Working Conditions Survey (EWCS).
3. Includes formal as well as non-formal education and training.

Source: Eurofound (*www.eurofound.europa.eu/*) and Eurostat (2017), *Education and training* (database).

StatLink *http://dx.doi.org/10.1787/888933714695*

Recent reforms to technical and adult education seek to better connect teaching with workplace needs. Tertiary and vocational education institutions are better co-ordinating with regional employers, and pilot programmes support students' transition from technical high schools into workplaces (MoERRA, 2017b). The government is developing 2-year professional courses that are linked with universities, towards ensuring they offer both practical skills and rigour. These efforts must expand to provide adults with the skills for the growing number of 'technicians and associate professionals' jobs (Athanasouli et al., 2017). Specialised language courses for refugees would allow them to participate in these courses and contribute their skills to the labour force (OECD, 2015e).

Clear information about the content and quality of adult education courses needs to accompany expanded supply. Reforms in 2012 sought to redress the limited supply of places in vocational education programmes at public institutions by liberalising private institutions'

offerings. Programmes proliferated, but their quality and effectiveness has been patchy (OECD, 2017j). Following the approach developed in Chile, an existing education quality assessment body with a track record for independence, rigour and clarity should certify the quality of courses, at the request of course providers. It can aid institution needing support (OECD, 2017j).

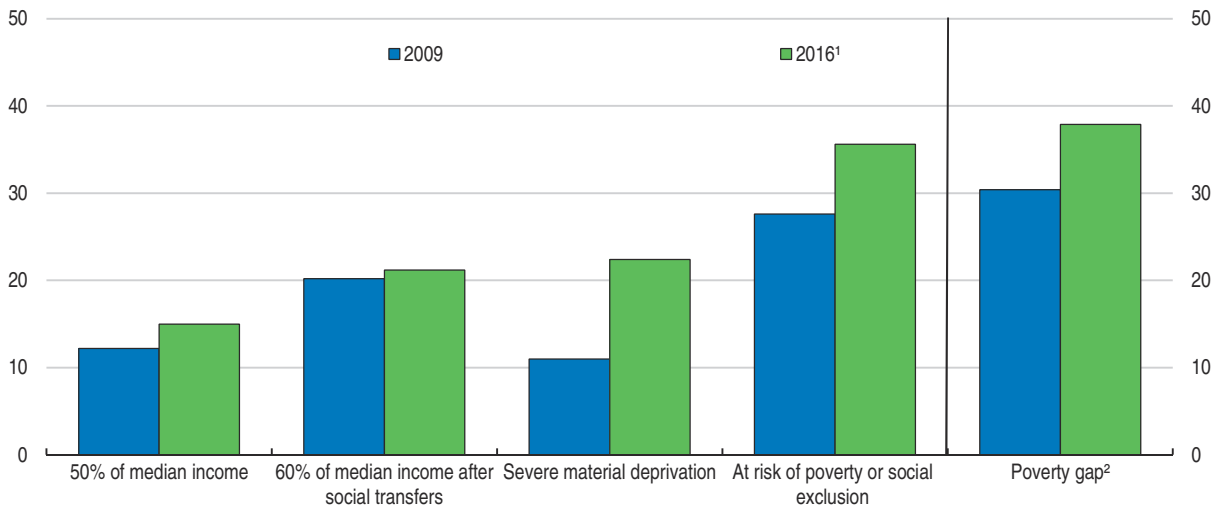
Lowering poverty through more effective social protection

Loss of jobs has led poverty to surge

Poverty rates rose after the onset of the crisis, and became deeper and more persistent (see Box 2.4). Absolute poverty measures show that Greece's poverty rate rose to become one of the highest rates in the OECD and EU. Poor households fell further below the poverty line during the crisis (Figure 2.26 and Figure 2.27), and they became less able to escape poverty. In 2015, 57% of households reporting incomes below half of the median income were also below the poverty line in two of the preceding three years, a higher rate than in most other OECD countries (Eurostat, 2017).

Figure 2.26. **Poverty rates and the poverty gap rose in Greece over the crisis**

% of the population living in households below the respective poverty lines



1. 2015 for poverty gap.
2. The poverty gap is the percentage by which the mean income of poor households falls below the poverty line of 50% of the median household income, adjusted for household size.

Source: OECD (2018), *OECD Social and Welfare Statistics* (database) and Eurostat (2017), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714714

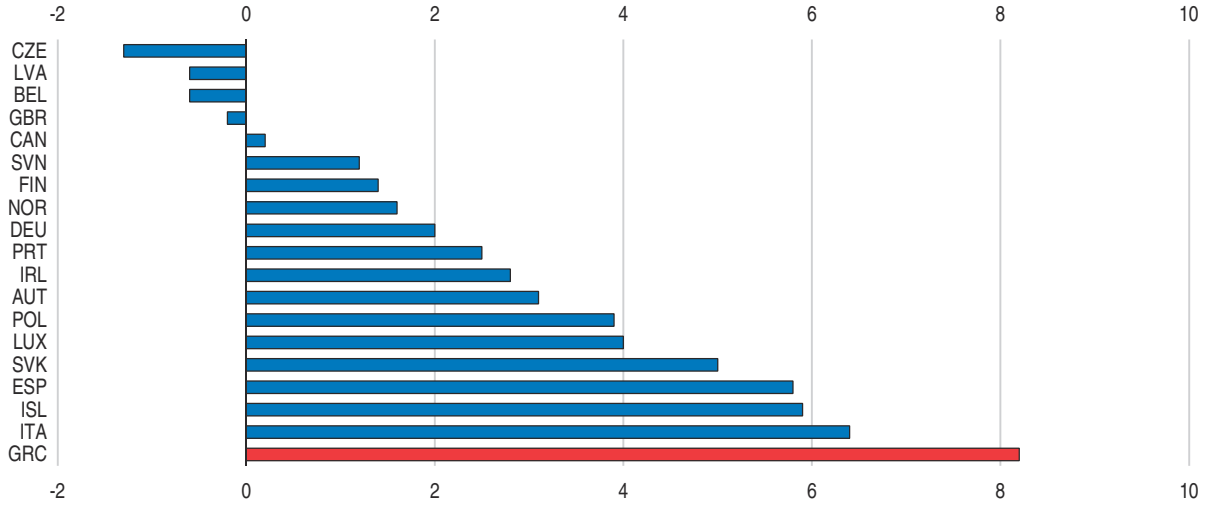
Good jobs are the best antidote to poverty

Jobs remain the best antidote to poverty (Causa et al., 2016). Across OECD countries poverty rates are lowest among employees holding stable full-time positions. In Greece, the unemployed and those out of the workforce have the highest poverty rates of any group and they experienced the largest increase in poverty during the crisis (Figure 2.28).

Poverty also affects those in employment. In-work poverty rates increased during the crisis and are among the highest across OECD countries. Most private sector employees' gross salaries are below the poverty line for a household of two adults and two children of a net monthly household income of EUR 656.25, according to the Ministry of Labour's

Figure 2.27. **The poverty gap has widened**

Percentage changes in the poverty gap[1] between 2008 and 2015, total population



1. The ratio by which the mean income of poor households falls below the poverty line of 50% of the median household income adjusted for household size. A larger poverty gap indicates that larger transfers would be needed to raise poor households above the poverty line.

Source: OECD (2018), *OECD Social and Welfare Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714733

Box 2.4. **Measuring poverty**

Poverty indicators summarise the incidence and depth of poverty across a population. These measures generally require information from household surveys of incomes or other aspects of their living conditions, which means they may only be available with a lag.

- Relative poverty rate: The proportion of individuals living in households where the total income is below a poverty line that is determined by the current distribution of incomes. To compare across countries, the OECD uses a threshold of 50% of the median disposable income. This chapter uses this threshold, unless otherwise indicated. Eurostat and most EU countries use a threshold of 60% of the median income after accounting for transfers. Households with incomes below these thresholds are described as being "at risk of poverty", as their actual material circumstances are not observed. The poverty threshold moves over time with the income distribution. In Greece, the fall in wages during the crisis reduced the threshold at 50% of the median annual income from a peak of EUR 5 981 for a single adult in 2010 to EUR 3 750 in 2016.
- Material deprivation rate: The proportion of people whose living conditions are severely affected by a lack of resources. For higher income countries, this is descrivbed as being unable to afford a range of items or activities which are typically accessible in a society at a given point in time. This approach avoids determining a rule to adjust for households' size. Eurostat surveys the ability to afford unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, to adequately heat a dwelling, or durable goods like a washing machine, colour television, telephone or car, or being confronted with payment arrears. Eurostat defines *severe material deprivation* as the inability to pay for at least four of these items.
- At risk of poverty or social exclusion: The share of the population living in households where the equivalised income after social transfers is below the relative poverty line, or that are severely materially deprived, or where work intensity is low, meaning that working age members worked less than 20% of their total potential during the previous 12 months.

Box 2.4. **Measuring poverty** *(cont.)*

- Poverty gap: The depth of poverty for those below a given poverty line as the percentage difference between the average income of households below the poverty line and the value of the poverty line. A higher poverty gap indicates that larger transfers would be needed to raise poor households above the poverty line.

Poverty indicators should adjust a household's income for the size and composition of the household. "Equivalence scales" are used to make these adjustments, and may also determine social benefit entitlements for different household sizes.

- Square root scale is the square root of the household size. This is used by the OECD for cross-country comparisons.
- The "modified OECD equivalence scale" gives a weight of 1.0 to the first person aged 14 or older, 0.5 to the next person in the household aged 14 or older, whether they are adult or child, and a weight of 0.3 to each child. It is used by Eurostat and some national statistical agencies.

Sources: Eurostat, 2014; OECD, 2007b; OECD, 2014. See also *www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf*.

information system (Figure 2.11). Part-time workers, especially those working part-time involuntarily, and the self-employed are more likely to experience material deprivation than full-time employees (Eurofound, 2017c).

During the crisis, retirees were better protected from income loss and rates in relative poverty fell (Figure 2.28, Figure 2.29). Fewer than 5% of retirees reported incomes below half of the median in 2016, the lowest rate on record in Greece and the lowest across population groups in 2016. In contrast, in 2000 retirees recorded the highest rate across population groups, at 23%. Absolute poverty indicators also fell among those older than 65.

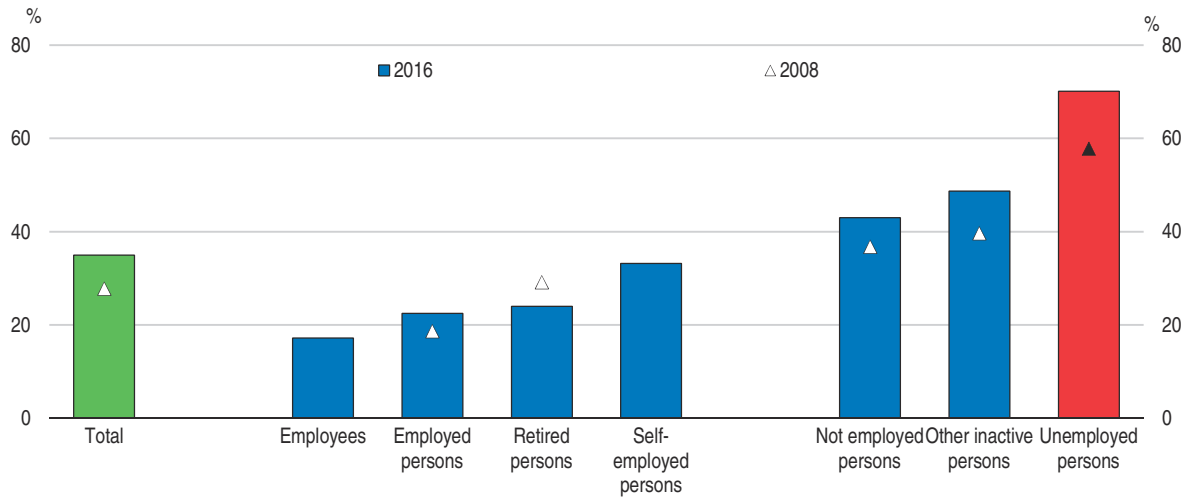
Child poverty has become common

Poverty rose most dramatically among households with dependent children as their parents lost income. Among those aged under 18, 27% lived in households reporting severe material deprivation in 2016, compared with 9.5% in 2006 (Figure 2.28, Figure 2.29), among the highest rates across the OECD. This increase was particularly severe in households where parents had less than upper secondary school education, making them less likely to be employed. Other indicators also suggest a growing incidence of poverty among families with children. Greece recorded the second largest increase in the share of low birth weight infants during the crisis period, and the highest rate among OECD countries after Japan (OECD, 2016e; OECD, 2015b).

Poverty affecting children needs urgent action to avoid lasting harm. Across OECD countries, children who grow up poor achieve substantially weaker cognitive and educational outcomes, and mental and physical health. These effects are stronger the longer the period in poverty (OECD, 2009a). In Greece, parents' income level is correlated with educational performance at age 15 and students from low socio-economic backgrounds are less likely to be among the top performers than in most other OECD countries (OECD, 2015d; OECD, 2016c; OECD and Eurofound, 2017). Weaker outcomes in childhood can undermine an individual's well-being and life satisfaction, in addition to income and employment prospects (OECD, 2015d). Economy-wide, high level of poverty among children reduces productivity and potential output (Machin, 2006; OECD and Eurofound, 2017).

Figure 2.28. **Those in work are at lowest risk of poverty**

Share of population at risk of poverty or social exclusion[1], 18 year-olds and over



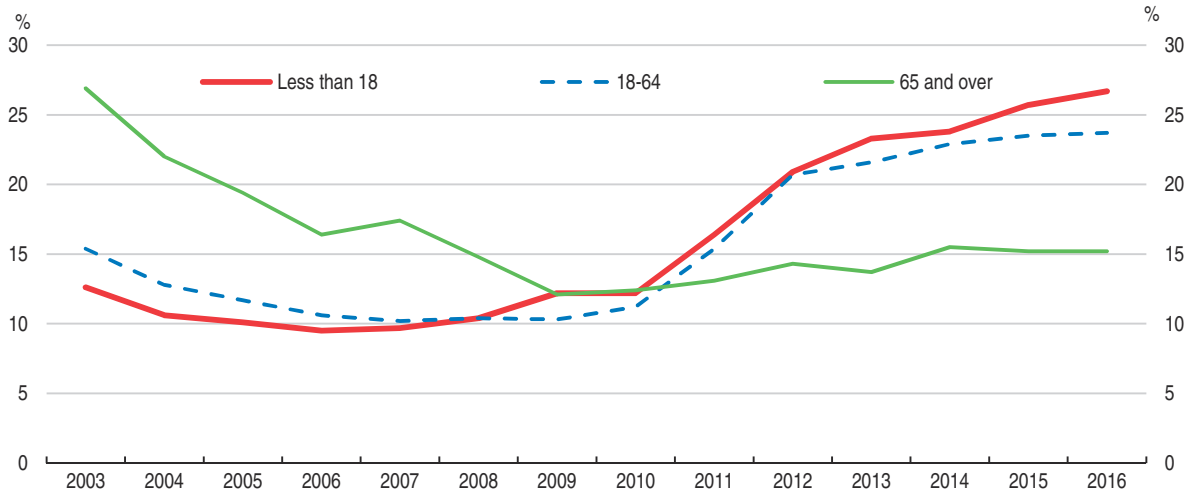
1. Share of population with disposable income below the relative poverty line or experiencing severe material deprivation, or living in households with very low work intensity where members of working age worked less than 20% of their total potential during the last year.

Source: Eurostat (2018), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714752

Figure 2.29. **Poverty has shifted from retirees to young households with children**

Severe material deprivation rate[1] by age group



1. The severe material deprivation rate is the proportion of the population living in households unable to afford at least four of the following items: unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, adequate heating of a dwelling, durable goods like a washing machine, colour television, telephone or car, or are confronted with payment arrears.

Source: Eurostat (2018), *EU Statistics on Income and Living Conditions* (database).

StatLink http://dx.doi.org/10.1787/888933714771

The social transfer system is costly yet does not support many in need

Greece's social protection system is complex and fragmented, but steps are being taken towards consolidation. A 2016 World Bank assessment identified over 200 social protection programmes, ranging from benefits for large families to unemployment allowances to a variety of holiday camps and transport benefits. Most programmes were

small and poorly targeted, and only 5.4% of social spending (including pensions) was means-tested in 2015. The system developed incrementally over decades, with occasional rationalisation efforts reversed by the introduction of new programmes targeting specific groups (OECD, 2013a).

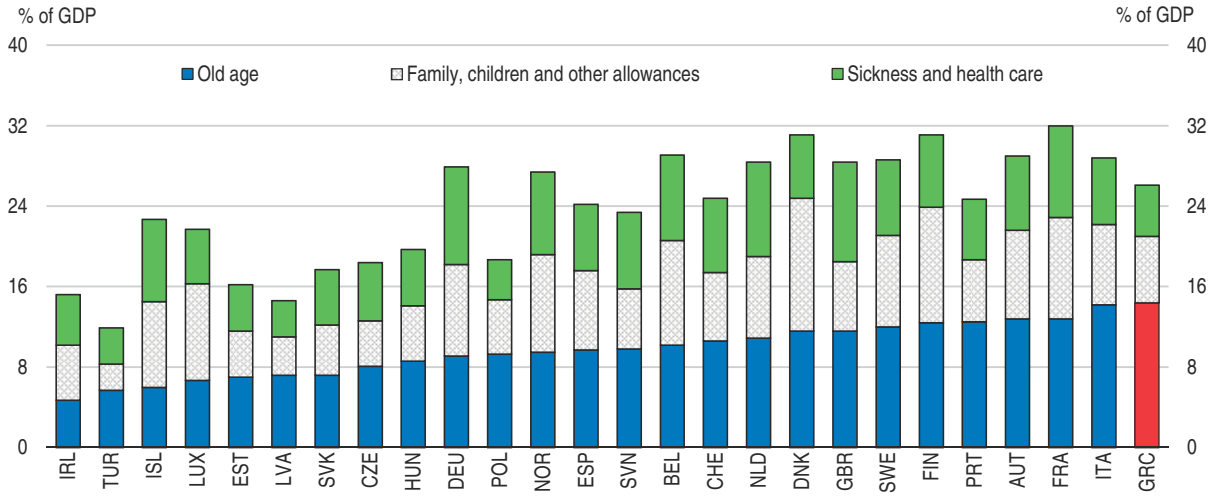
The programmes have been overseen, administered and funded by different agencies, ministries and levels of government, and multiple bodies can be involved in individual programmes (World Bank, 2016). This has created gaps and overlaps in mandates and activities (OECD, 2013a), and raised administrative costs (Stefan, 2015). For example, twenty-four different programmes supporting the disabled are administered and provided by different levels of government, which follow varying and inconsistent procedures (World Bank, 2017a).

Some efforts are now being made to consolidate both programmes and their administration, for example by cutting heating allowances and some tax expenditures, reorganising the administration of certain benefits, introducing new IT systems to assess eligibility, and developing bodies with stronger administrative capacity (World Bank, 2017a).

Public social expenditure, at 27.0% of GDP in 2016 or nearly half of government expenditure, is higher than most OECD and European countries (OECD, 2017e; Figure 2.30). In Greece, social spending, in conjunction with taxes, significantly reduces income inequality and poverty (Figure 2.31). This reflects the scale of pensions. Old-age and survivor benefits absorb over half of social spending, the largest share across OECD countries (Figure 2.30). About 43% of households received at least one pension, but pensions provide little support to families with children (World Bank, 2016). The pension system has been in deficit for some time (OECD, 2009b; Tinios, 2005; World Bank, 2016). In 2016, contributions covered only half of payments, creating a deficit of close to 11% of GDP or four times the average of Euro area countries (European Commission, forthcoming; IMF, 2017a; IMF, 2017b; World Bank, 2016).

Figure 2.30. **Pensions dominate Greece's social spending**

Social protection expenditure by function of social protection, 2015 or latest year

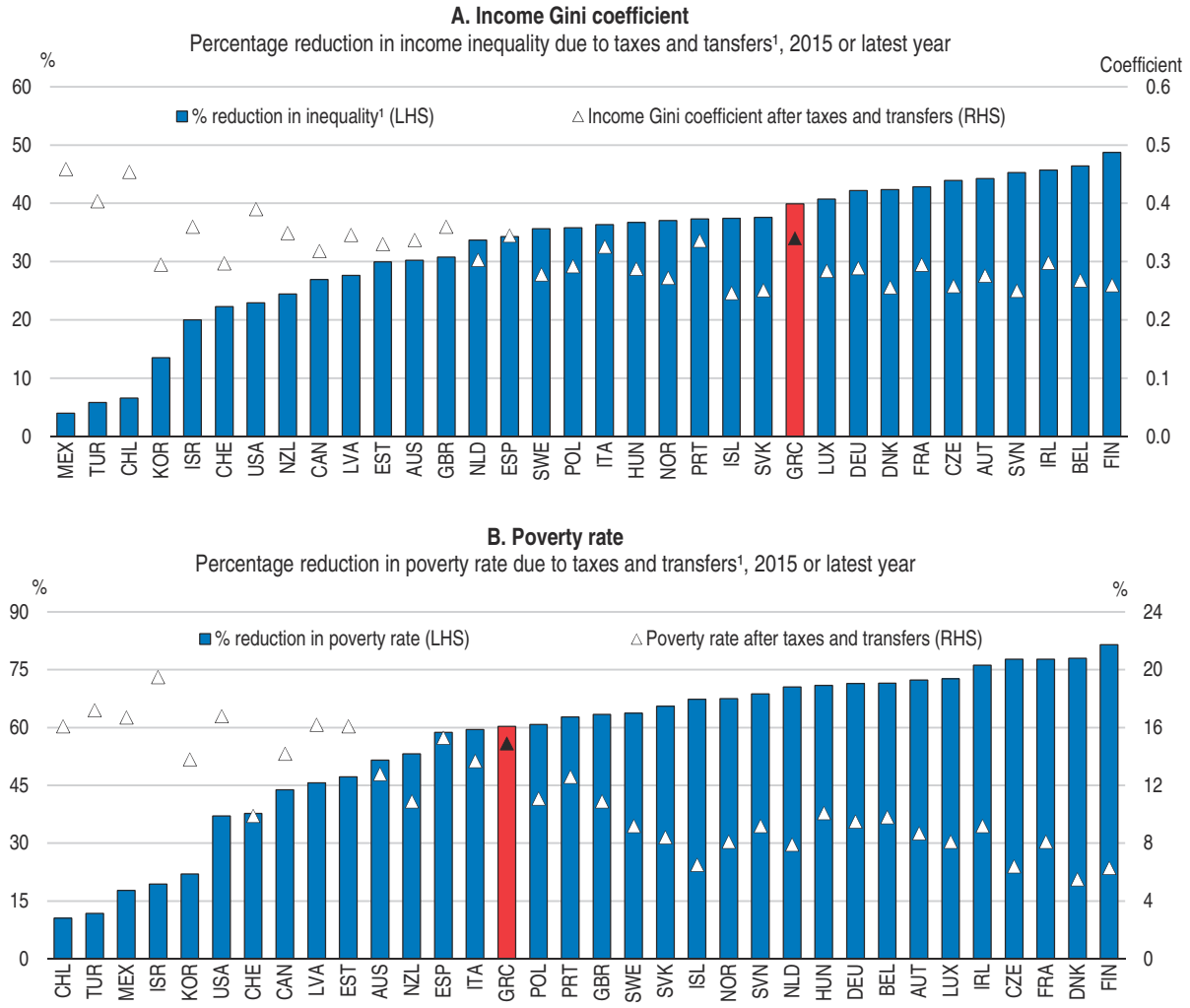


Note: Social protection encompasses interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a simultaneous reciprocal nor an individual arrangement involved. The eight main risks or needs are: old age, sickness/healthcare, survivors, disability, family/children, unemployment, housing, and social exclusion not elsewhere classified (n.e.c). The category 'family, children and other allowances' includes social expenditure on unemployment, housing and social exclusion n.e.c.

Source: Eurostat (2018), *Social Protection Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713707

Figure 2.31. **Poverty and income inequality remain high even after extensive redistribution through taxes and benefits**



1. The ratio of the difference between the income Gini coefficient before taxes and transfers (market income) and the income Gini coefficient after taxes and transfers (disposable income), to the income Gini coefficient before taxes and transfers.
2. The ratio of the difference between the poverty rate before taxes and transfers and the poverty rate after taxes and transfers (disposable income), to the poverty rate before taxes and transfers. The poverty line refers to half of the median disposable income. Household income is adjusted to take into account household size.

Source: OECD (2018), *OECD Social and Welfare Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933714790

The crisis gave urgency to addressing the pension system's long-recognised imbalances (OECD, 2007; OECD 2009b; OECD, 2013a; Tinios, 2005). Crisis-period reforms' first goal was to cut the system's demand on government finances. Pension entitlements were reduced overall. Changed eligibility and contribution requirements encourage later retirements, greater contributions and ended a patchwork of scheme-specific allowances (Ziomas and Theodoroulakis, 2016; IMF, 2017b). The fragmented array of funds, administrations, and entitlements (OECD, 2016g) are in the process of being consolidated or closed (European Commission, 2018), including those providing various special allowances. Inter-generational equity is gradually improving as the entitlements of existing and new pensioners come into line. The system is more generous for some low income earners and younger workers, and

cuts to existing pensions have been capped through compensatory payments, which will unwind only slowly (IMF, 2017a; Tinios, 2016). The early 2010s reforms were anticipated by a surge of early retirements, which, with the fall in GDP, led pension spending to peak at 17.3% of GDP in 2016 (National Actuarial Authority, 2018; OECD, 2016f). Further reforms to improve the system's equity and long-term sustainability are scheduled for 2019 and should be pursued. Together, these efforts are expected to reduce the cost of pensions to 13% of GDP in 2020 and to 10.5% by 2070 (European Commission, forthcoming).

Low-income households need stronger support

Greece's social protection system is being reformed through the introduction and strengthening of means-tested cash benefit programmes. Reforms are shifting from emergency measures in response to the economic crisis to changes to the structure of social protection so as to more effectively support vulnerable households while strengthening work incentives. The World Bank is supporting the design of benefits and the reformed management systems. The introduction of the social solidarity income (SSI), strengthening of family benefits, plans to redesign disability support and to introduce an accessible housing allowance, and the consolidation of different benefit administrations are important steps. However a large number of smaller, mostly in-kind programmes, and fragmented management systems remain.

A number of the low-income household support programmes found in most OECD countries are still being developed in Greece:

- A minimum income scheme, the Social Solidarity Income (SSI), targeted to the poorest households, was rolled out nationally in February 2017, bringing Greece into line with other EU and most OECD countries. Several overlapping programmes were consolidated into the SSI. In 2018, recipients able to work and who are not employed or in education will be required to register with the public employment service to receive the SSI.
- The main family benefit programmes were unified in 2018 to better and more consistently target poorer households and larger families, and to improve their administration. Smaller schemes continue to provide a mix of mostly in-kind benefits, such as transport subsidies, student living-away-from home allowances, or access to summer camps and vacations. These programmes are poorly targeted, leave coverage gaps, and their administration is fragmented and costly (World Bank, 2016).
- A school meal programme is being progressively expanded and extended to the whole school year. The programme is geographically targeted as it benefits all school children within communities with high unemployment, rather than targeting children living in poor households.
- The many disability schemes support few beneficiaries relative to the overall population, although disability rates are also relatively low. Those eligible have received inconsistent support, depending on factors such as where they live, or whether they are insured or are eligible for a particular benefit regime. Co-ordination across these systems is limited (World Bank, 2016 and 2017a). The government plans to reform the disability support system over the coming years and in 2018 is piloting a shift to assessing beneficiaries according to their functional capacity.
- Over the crisis, housing costs became a significant stress for low income households, particularly renters, but housing-cost support programmes are very narrow or expiring. A stronger and better-targeted benefit to reduce housing-cost stress of low-income

households and to complement other allowances is being designed for approval in 2018, with two benefit designs being considered.

Other programmes supporting specific groups at higher risk of poverty are weak. For example:

- Unemployment benefits are low, eligibility criteria are strict, and they support few of those out of work (World Bank, 2016), especially as unemployment duration lengthens (Lyberaki et al., 2017).
- Survivor benefits are not well-designed and targeted, as demonstrated by persistently higher poverty rates among elderly women (World Bank, 2016) despite high spending on survivor benefits. Planned pension reforms will reduce survivor benefits overall.

Ensuring all households can access a minimum income

The Social Solidarity Income (SSI) was rolled out nationally in February 2017. It provides an income of last resort to low-income and low-wealth households. By early January 2018, 630 000 beneficiaries had been accepted (World Bank, 2017b; European Commission, 2018). The SSI is an important step towards protecting poor households not benefitting from any other social protection programme.

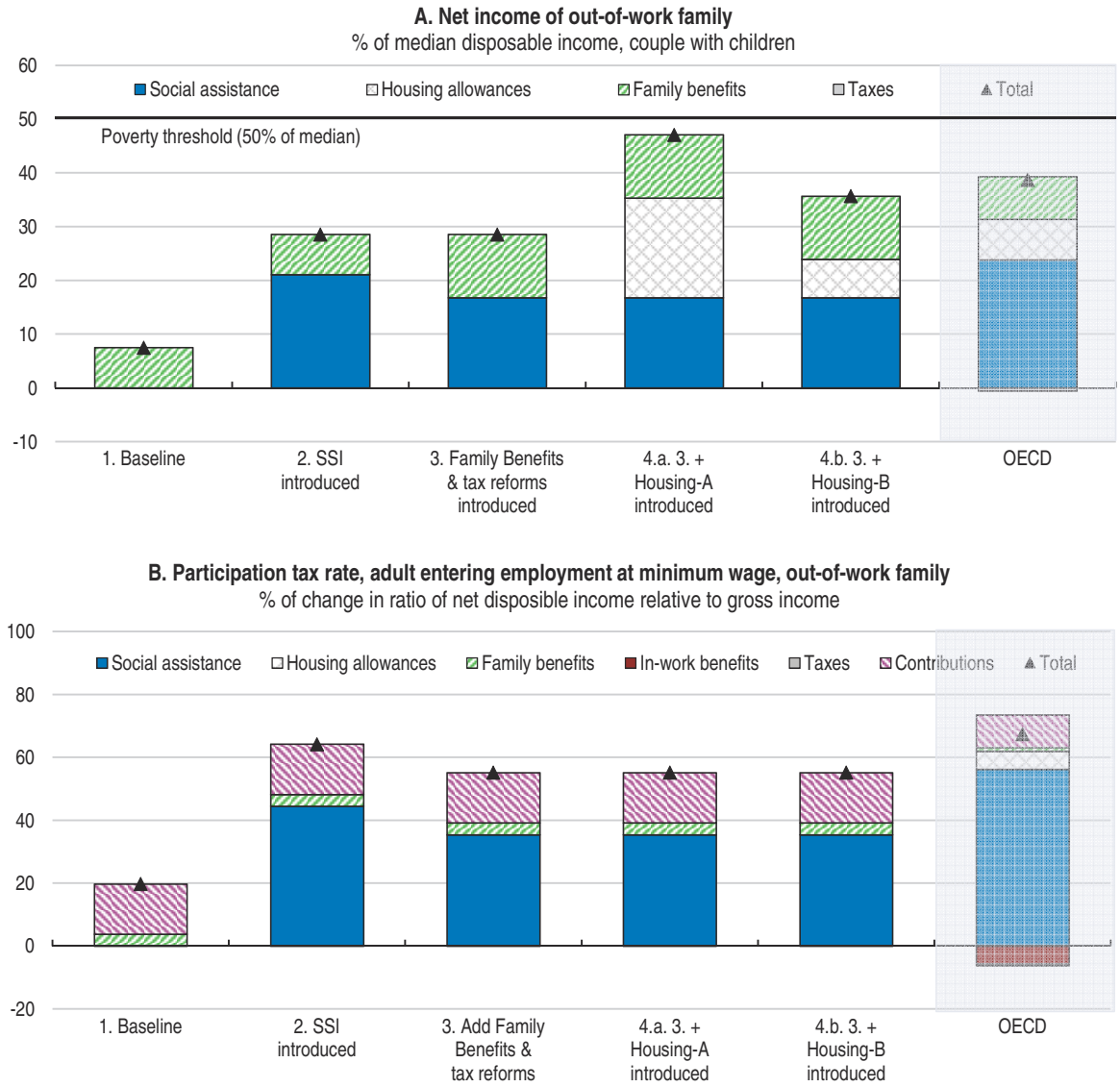
The SSI provides a monthly transfer of EUR 200 for the first adult in a household, EUR 100 for the second person, and EUR 50 for each child, up to a maximum allowance of EUR 900. To be eligible for the SSI, a household's total net income over the preceding six months must be less than the value of six months of the SSI, disregarding 20% of employment income and disability allowances. The household's assets must also be below certain thresholds.

The SSI raises poor households' income and reduces the poverty gap (Figure 2.32 – Panel A, Scenario 2). However, its effect on poverty headcounts is small as the transfer amount is below the poverty line, like in other OECD countries. For a family of two adults and two children without other sources of income, the SSI would amount to 21% of the median household income, similar to most countries' minimum income schemes (Figure 2.32). Simulations suggest that the SSI may reduce the poverty rate by up to 0.6 percentage points from an initial rate of 21.2% (World Bank, 2015; Ziomas et al., 2015).

Over 2018, the government intends to make SSI access conditional on engagement with social services, by linking it with social-service delivery and with active labour market programmes. This will improve low income households' access to social protection, and help recipients develop their human capital and move into employment:

- Improved access to other social services and goods. Recipients receive information and better access to other types of social services, such as free medical care for the uninsured, food and basic materials assistance programmes, and priority placement in child care centres. As well as supporting recipients' welfare, this access may improve the targeting of these benefits, while some benefits that overlap with the SSI have been streamlined or eliminated (European Commission, 2018).
- Participation in ALMPs and other social inclusion policies. Unemployed beneficiaries who are able to work are included in pro-employment programmes such as community services, vocational training and "second opportunity" schools for adults. All unemployed beneficiaries are required to register with the public employment agency and to report monthly on their activities. In the SSI pilots, the link between the income transfer and

Figure 2.32. **The Social Solidarity Income, reformed family benefits, and proposed housing allowances raise poor households' incomes but also raise participation tax rates**



1. Panels A and B illustrate, respectively, the effects on net income and participation tax rates for a family of 2 unemployed adults and 2 children under 14 of various policy scenarios. Box 2.5 describes these simulations.

Source: OECD calculations based on the *OECD tax-benefit model*.

StatLink http://dx.doi.org/10.1787/888933714809

ALMP was a challenge (Ziomas et al., 2015), which the growing network of community centres, the ongoing enhancement of ALMP, especially at the public employment services, and improved information systems may help to address.

The information and administration systems developed for the SSI exemplify the cost-effective and fit-for-purpose reforms to processes and systems needed across Greece's social protection system (World Bank, 2017a). Access to the SSI is supported by the 250 community service centres being set-up across the country with EU Social Fund support. At these centres, access to new information systems and databases allow applicants' eligibility for the SSI to be assessed objectively and transparently against quantitative criteria. In contrast, access to other

Box 2.5. **Simulating tax and benefit policies**

The OECD Tax-Benefit model simulates the impact of tax and benefit rules on families' net income both in and out of work. It incorporates detailed and up-to-date tax and benefit rules in EU and OECD countries, and assesses tax burdens and benefit entitlements for different household circumstances, much like a tax administration or benefit administration would. National governments validate the rules and key model outputs. The model can also assess the consequences of different tax-benefit reform options or scenarios.

For Greece, ten different policy settings are simulated, six showing the progressive implementation of recent and legislated future policy reforms (Table 2.4), and four representing hypothetical policy reforms that may be considered in the future. These policy settings are used to calculate the net disposable income and participation tax rate for a family of two unemployed adults and two children younger than 14. Table 2.4 summarises these policy settings. Figure 2.32 presents the results of these simulations for the net income (Panel A) and participation tax rate from moving into work (Panel B), relative to the average of OECD countries. Figure 2.33 shows the same kind of results for the hypothetical future reforms, relative to selected OECD countries and the average.

Table 2.4. **Recent and legislated policy settings**

Scenario	Income tax rates	Family allowances	Housing benefit	SSI	SSI earnings disregard
		Recent and legislated future reforms:			
1. Baseline	Policies at June 2016.	Policies at June 2016.	No programme in simulation.	No programme included.	No programme in simulation.
2. SSI introduced	Policies at June 2016.	Policies at June 2016.	No programme in simulation.	2017 programme: EUR 200/mth for 1st adult, scaled to 50% for 2nd adult or 1st child; 25% per child, to max. transfer of EUR 900 / mth. Previous 6 mths' income must be less than value of 6 mths of SSI transfers, and household assets below thresholds.	Disregard 20% of earned income in assessing eligibility.
3. Add family benefit & tax reforms	2020 reform: Reduce personal income tax credit by EUR 650 across family sizes: cut personal income tax rates, with lowest rate cut to 20%; cut special solidarity contributions rates.	2018 programme: Monthly benefit of EUR 70 for 1st and 2ndchild; EUR 140 for each additional child for the lowest equivalised income tier (EUR 0-EUR 6000), 60% and 40% of benefit for income brackets EUR 6001-EUR 10 000 and EUR 10 001-EUR 15 000. Cancels large family benefit.	No programme in simulation.	2017 programme.	20% of income disregarded.
4.a Add housing allowance option A	2020 reform.	2018 programme.	SSI income definition. Income eligibility thresholds of 2 x SSI. Monthly transfer of EUR 130 for 1st adult; scaled to 50% for 2nd adult or 1st child; and 25% per child, to max. transfer of EUR 260/mth.	2017 programme.	20% of income disregarded.

Box 2.5. **Simulating tax and benefit policies** *(cont.)*

Table 2.4. **Recent and legislated policy settings** *(cont.)*

Scenario	Income tax rates	Family allowances	Housing benefit	SSI	SSI earnings disregard
4.b Add housing allowance option B	2020 reform.	2018 programme.	SSI income definition. Income eligibility thresholds 4 x SSI. Monthly transfer of EUR 50 for 1st adult; scaled to 50% for 2nd adult or 1st child; and 25% per child, to max. transfer of EUR 150/mth.	2017 programme.	20% of income disregarded.
Hypothetical future reforms:					
5.a Add 20%↑ in SSI income disregard to 4.a	2020 reform.	2018 programme.	Option A (4.a)	2017 programme.	Disregard 40% of earned income in assessing eligibility.
5.b Add 20%↑ in SSI income disregard to 4.b	2020 reform.	2018 programme.	Option B (4.b.)	2017 programme.	Disregard 40% of earned income in assessing eligibility.
6.a Add 20%↑ SSI allowances & eligibility thresholds to 5.a	2020 reform.	2018 programme.	Option A (4.a) with income eligibility threshold increased by 20%.	20% increase in 2017 allowances and eligibility thresholds	40% of income disregard.
6.b Add 20%↑ SSI allowances & eligibility thresholds to 5.b	2020 reform.	2018 programme.	Option B (4.b) with income eligibility threshold increased by 20%.	20% increase in 2017 allowances and eligibility thresholds	40% of income disregard.

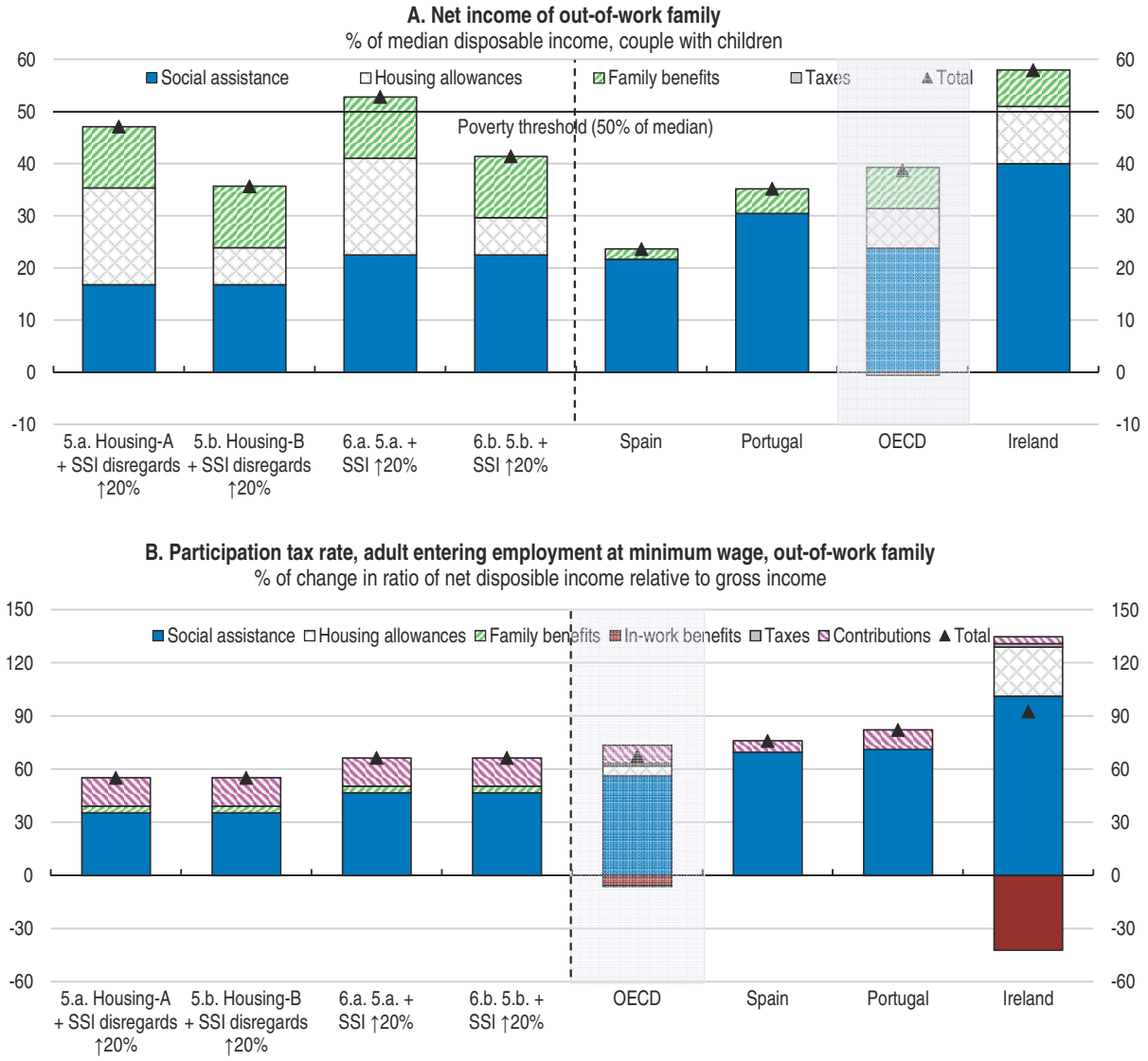
Note: The 2020 reforms to income tax rates may be brought forward to 2019 depending on macroeconomic conditions. The SSI and proposed housing allowance programmes adjust benefits and income eligibility thresholds for family size following the same scale: the first member receives 100% of the allowance, with an additional 50% provided for the second adult or first child in single parent families, and an additional 25% for each additional child, up to a prescribed transfer maximum. The 2017 SSI programme provides EUR 200 per month to the first household member, EUR 100 to the second adult or first child, EUR 50 for additional children, to a maximum of EUR 900. The income tax and family benefit reforms are presented together given that the simulations apply to a family without income and not affected by the income tax rate reforms.

social protection programmes, notably those provided by municipalities, remains through parallel agencies, managed by separate administrations and through systems that may overlap or be inconsistent. Some existing programmes rely on welfare officers' manual assessments and are recorded and exchanged through paper-based systems (World Bank, 2017a). These complex, subjective and less transparent processes risk resulting in leakage and excluding households in need, especially foreign-born applicants and Roma who may not have the necessary documents. Ongoing efforts to strengthen the integrity and coherence of these systems need to continue (World Bank, 2017b; Ziomas et al., 2015).

Reforms to family benefits legislated in 2018 and planned housing allowances programmes add to the SSI's effort to improve poor households' well-being (Figure 2.32 – Panel A, Scenario 3 and 4). At least two designs for housing allowances are being considered for introduction in 2019 (Table 2.4, Scenarios 4.a and 4.b). One proposed design of the housing allowance would provide higher benefits and eligibility thresholds at twice those of the SSI (Table 2.4, Scenario 4.a), while the alternative would provide lower allowances with eligibility up to four times the SSI. The first proposal, combined with the SSI and reformed family benefits, would lift an out-of-work family's income to near the poverty line (Figure 2.32 –

Panel A, Scenario 4.a). The housing allowance proposal with lower benefits and higher eligibility thresholds (Table 2.4, Scenario 4.b), combined with the other benefits, would lift the family's income to above 35% of the median disposable income (Figure 2.33 – Panel A, Scenario 4.b). By comparison, on average across OECD countries benefit and tax systems provide the out-of-work family with 38.8% of the national median income (Figure 2.32 – Panel A).

Figure 2.33. **Hypothetical increases in the Social Solidarity Income and earnings disregards would further support poor households' incomes**



1. Panels A and B illustrate, respectively, the effects on net income and participation tax rates for a family of 2 unemployed adults and 2 children under 14 of various policy scenarios. Box 2.5 describes these simulations.

Source: OECD calculations based on the *OECD tax-benefit model*.

StatLink http://dx.doi.org/10.1787/888933714828

Withdrawing benefits gradually as households gain employment income limits the rise in the participation tax rate (Figure 2.32 – Panel B, Scenario 2, 3 and 4), encouraging labour force participation and avoiding poverty traps. Providing beneficiaries with incentives to seek formal employment is especially important in Greece, given that

opportunities for informal income abound (Medina and Schneider, 2018), and that Greece is still developing effective monitoring and control systems for its growing income-targeted welfare programmes. Increasing the share of earned income that is disregarded in assessing SSI eligibility would reduce the participation tax rate for beneficiaries, with its effects emerging as families' employment income grows. Modestly increasing the SSI income disregard is likely to have limited cost, estimated at 0.05% of GDP for a hypothetical increase from the current scheme's 20% disregard to 40%.

A hypothetical modest increase in the SSI allowances and eligibility thresholds, added to the family benefits reforms and proposed housing allowance programmes, would further lift low-income households' incomes closer to the poverty threshold (Figure 2.33 – Panel A). Combining the housing allowance option with higher transfers and lower eligibility with a 20% increase in the SSI allowance would raise the out-of-work family's income above the poverty threshold (Figure 2.33 – Panel A, Scenario 6.a). Combining the hypothetical increase in the SSI with the housing allowance proposal offering lower benefits and higher thresholds would lift the household's income to above 40% of the median income (Figure 2.33 – Panel A, Scenario 6.b). However, the hypothetical increase in the SSI allowance would also raise the participation tax rate to near the OECD average (Figure 2.33 – Panel B, Scenarios 6.a and 6.b), weakening work incentives.

Over time, as administrative capacity improves, the government should consider introducing working tax credits as a way to reduce in-work poverty, encourage labour force participation and formalise the shadow economy. Systems already in place in some OECD countries, such as France, the Netherlands, the United Kingdom and the United States, have proved effective if targeted and designed well (OECD, 2005; Immervoll and Pearson, 2009). Increasing the SSI's income disregard from 20% to 40% could be a step towards providing those in very low-wage jobs with top-up benefits without creating a new benefit from scratch.

Supporting families and children

During the crisis, families and children in Greece experienced the fastest increase in material deprivation rates, reaching the highest rates among OECD-EU members. This reflects the falls in salaries and employment, combined with the limited social safety net for families and children. Total spending on family and child benefits has been the lowest of OECD-EU countries, at 1.1% of GDP in 2015. Coverage falls short for some groups and the multitude of programmes mean similar households can receive different levels of benefits (World Bank, 2016).

In 2018, the main family benefit programmes were consolidated into a unified and targeted family income support. Its eligibility criteria and allowance rules were aligned with other means-tested social benefits, notably the SSI. The benefit is granted to families with up to EUR 15 000 of equivalised total gross family income, equal to EUR 30 000 of gross annual income for a couple with two children. For low-income families, benefits are considerably higher than the previous scheme, at EUR 70 per child each month for the lowest income tier, with a higher benefit for the third and additional children. Benefits are reduced for households in higher income tiers, so as to reduce the participation tax rate (Table 2.4, Scenario 3 details the revised allowances). Simulations for this Survey show that while the family benefit offsets part of the SSI receipts for a jobless family with two dependent children (Figure 2.32 – Panel A, Scenarios 2 and 3), this has the effect of reducing their participation tax rates by 9 percentage points as one adult enters work at the minimum wage (Figure 2.32 – Panel B, Scenarios 2 and 3).

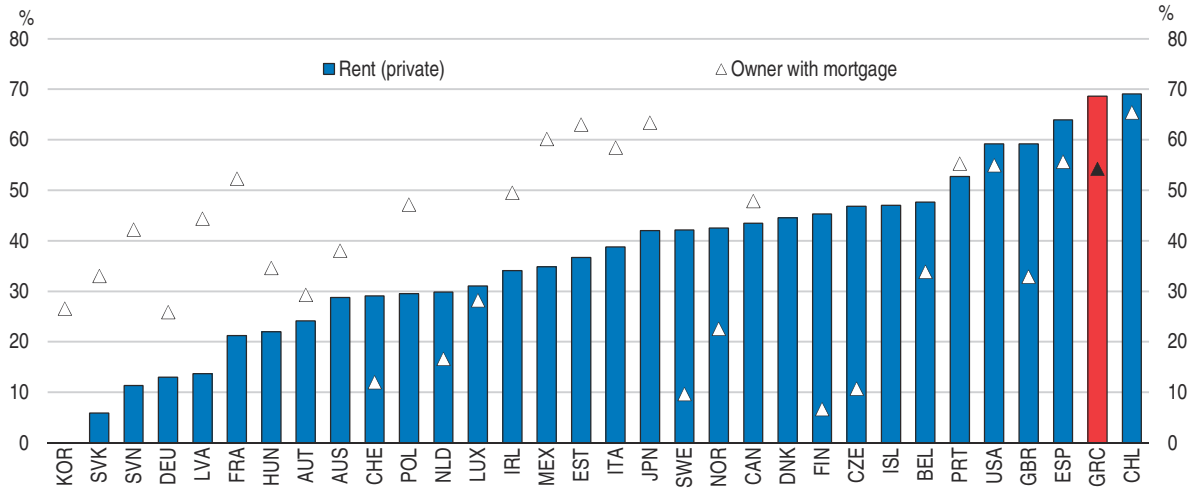
At least twelve other programmes continue to provide low levels of support to families and children. These programmes tend to be small and are administered by a variety of agencies. They are mostly poorly targeted, and a number are not means-tested. They subsidise transport for large families, provide one-off cash transfers if students pass the school year, pay for holiday camps, supplement income support for mothers on maternity leave, and pay lump sums to students studying away from home. Some transport subsidies will be reviewed over 2018, using newly available usage data.

Affordable housing for low income households

Housing costs became a significant burden for Greek households during the crisis, especially for poorer households and for renters. In 2016, over 40% of all households and 90% of poor households spent more than 40% of their disposable income on housing costs. At the onset of the crisis, these rates were respectively 20% of all households and two-thirds of poor households. These shares are high compared to other OECD countries (Figure 2.34).

Figure 2.34. **Housing costs overburden most low income households, especially renters**

Share of population in the lowest quintile of the income distribution spending more than 40% of disposable income on mortgage and rent, by tenure, 2014 or latest year



Note: Results only shown if category composed of at least 30 observations. For Chile, Mexico, Korea and the United States, gross income is used due to data limitations.

Source: OECD (2016), *OECD Affordable Housing Database*, Table HC1.2.3, December (*www.oecd.org/social/affordable-housing-database.htm*).

StatLink *http://dx.doi.org/10.1787/888933714847*

Housing policy across OECD countries mostly supports rent payments and provides social housing (Salvi del Pero et al., 2016). Current housing support programmes in Greece include: payments by municipalities for the rental costs of elderly people without incomes; temporary support to re-house homeless people; temporary rental subsidy schemes; subsidised heating and energy costs (which has recently been cut as it mostly benefited higher income households). In Greece, there is effectively no social rental housing (OECD, 2017f; Pittini et al., 2015), and only 7% of poor households have access to reduced rent housing (Salvi del Pero et al., 2016). On average across European countries, 20% of poor households receive housing support.

The government plans to legislate for a new housing allowance, to become effective in 2019. Appropriately, the allowance is being designed with reference to reforms to other

benefits and taxes rates, to ensure that it supports those in need without discouraging them from seeking formal employment. Allowances and eligibility would link to household size with the same equivalence scale and using the same income definition as the SSI, improving coherence across the different programmes and reducing their administrative burden. Two proposed designs for the housing allowance are being considered, setting eligibility limits at either twice or four times the SSI's equivalised household income limits (Table 2.4, Scenarios 4.a and 4.b). Higher income eligibility thresholds than the SSI and family benefits would allow poorer households to remain eligible for the housing benefit as they gain employment income and become ineligible for other benefits, with the effect of reducing the participation tax rate (World Bank, 2017a).

Simulations for this Survey suggest that either housing allowance design would substantially lift an out-of-work family's income (Figure 2.32 – Panel A, Scenario 4.). The smaller allowance with higher eligibility thresholds, combined with other benefits, would provide the household with over 40% of the median income, close to the average provided by tax and benefit systems across OECD countries. The high eligibility thresholds for the allowances mean that they do not raise the participation tax rate as households move from unemployment into work (Figures 2.32 – Panel B, Scenario 4.), even under the hypothetical scenario of higher SSI allowances and eligibility thresholds (Figure 2.33 – Panel B).

The housing allowance rates could adjust for the differences in housing costs between areas, to ensure that it is sufficient for poorer households to live in areas with greater economic dynamism and employment opportunities but higher rental costs, such as Athens. Paying the proposed allowance directly to landlords may help poor households access housing, following the experience with such direct payments in Chile, Japan and the United States (Salvi del Pero et al., 2016).

Active labour market programmes that assist the recovery in employment

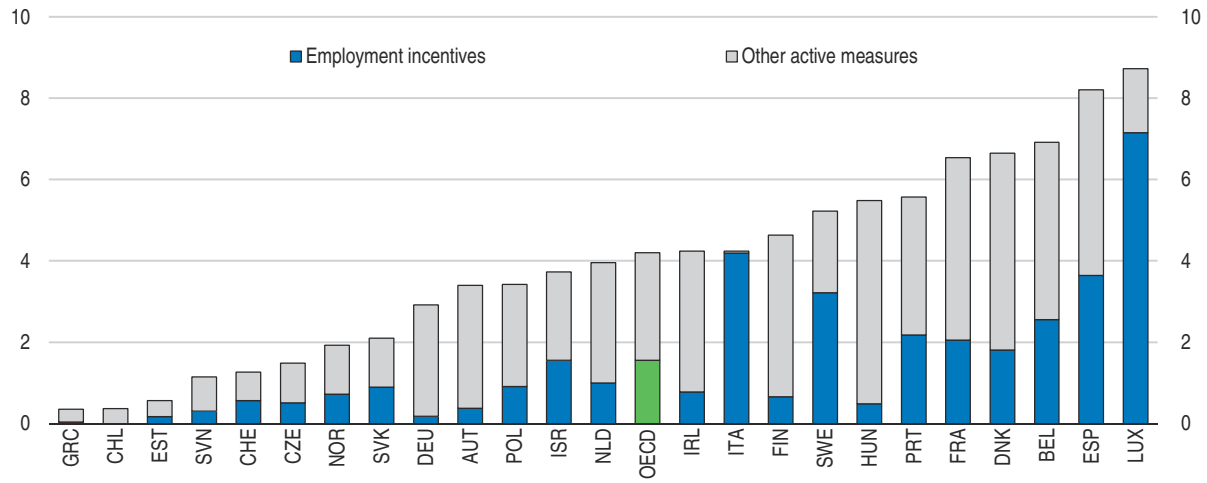
Active labour market programmes (ALMPs) play a very small role in Greece's labour markets (Figure 2.35). ALMPs can be effective at returning the unemployed to work even when unemployment is high and labour market slack is significant, as a large activation programme demonstrated at the peak of Portugal's recession in 2012 (Martins and Pessou e Costa, 2014). The government is expanding and strengthening the capacity of ALMPs to target the priority groups of the long-term unemployed and inactive youth, and to provide jobseekers with the skills that employers need. ALMPs are most effective when they provide services that adapt to the characteristics of different jobseekers and to labour market conditions. Many of the government's new efforts are still at pilot stages. Their effectiveness varies, highlighting the need for ongoing evaluations to identify the programmes that work, those that are not effective and can be scaled down, and to enable the supply of programmes to adjust as the labour market's needs evolve.

Enhancing employability

A mix of programmes is necessary to address the different skill gaps faced by different groups. For adults with work experience, programmes that develop specific skills needed by employers can be more effective than those that develop general skills. The government is developing these, focusing on the skills needed in Greece's most dynamic sectors. This effort complements the government's investments in vocational education, apprenticeship and adult learning systems. On the other hand, many out-of-work youth new to the labour force can lack solid general education. For them, reinforcing transferable, general skills,

Figure 2.35. **Participation in active labour market programmes is limited**

Participants in active labour market programmes, % of labour force, 2015[1]



1. Active labour market programmes include all social expenditure (other than education) which is aimed at the improvement of the beneficiaries' prospect of finding gainful employment or to otherwise increase their earnings capacity. This category includes spending on public employment services and administration, labour market training, special programmes for youth when in transition from school to work, labour market programmes to provide or promote employment for unemployed and other persons (excluding young and disabled persons) and special programmes for the disabled. Employment incentives consist of job rotation and job sharing schemes as well as programmes making payments for a limited period only to facilitate the recruitment, or continuing employment in the case of restructuring, of unemployed persons and other target groups into jobs where the majority of the labour cost is covered by the employer. Other active measures consist of training, sheltered and supported employment and rehabilitation, direct job creation and start-up incentives, excluding programmes related to public employment services. 2014 for Estonia and OECD average. 2012 for Greece, except for training data which are an average of 2011 and 2013 due to lack of 2012 data.

Source: OECD (2017), *OECD Employment and Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933713669

alongside work experience can improve long-term employability and earnings more than specific skill training (Card et al., 2015; OECD, 2015b).

Supply of private professional skill training programmes exploded after the sector was liberalised in 2012. However, their quality is patchy and would benefit from certification, so as that participants have the information to choose high quality programmes. The benefits of effective quality indicators is demonstrated by the better results achieved when employers, who have more experience with different providers, are able to select training providers, than when youth choose the training providers.

The effectiveness of public jobseeker training programmes has also fallen short of what Greece needs. Some programmes have been very costly, averaging EUR 21 062 per participant in nationally funded programmes in 2014, while completion rates have been low – fewer than half of entrants completed their programmes in 2013 and 2014. Ongoing monitoring, evaluation and adjustment of different programme approaches should continue, and successful programmes should be supported.

Better matching job seekers and employers

Effectively matching job seekers with employers shortens spells of unemployment, and supports labour productivity and wages by ensuring skills are used efficiently. Greece's large pool of unemployed fills any vacancy quickly, but workers report high rates of skill mismatch, hindering firms' growth and aggregate productivity. Enhancing labour market matching was central to Portugal's successful programme in the early 2010s (Martins and

Pessou e Costa, 2014). Improving vacancy registration and access via online databases and social media, coupled with better engaging with the unemployed through employment offices, were effective elements of Portugal's public employment service reforms (Martins and Pessou e Costa, 2014; OECD, 2017b).

Greece's public employment service (OAED) engaged with 323 869 people in 2015, or over one-quarter of the unemployed. Approximately 4% of those who found a job in the previous 12 months used OAED, a lower share than in most OECD countries. Greece's large number of SMEs would particularly benefit from greater recruitment support from OAED, given that most lack internal human resource departments. The government is re-engineering OAED to enhance its capacity to engage with employers and to more actively match job seekers' skills with vacancies. These efforts are welcome. The government is also expanding specific areas of OAED's capacity, in part by redesigning processes and directing counsellors to better liaise with employers and advise jobseekers. OAED is also expected to integrate into the new network of community service centres.

These are positive moves as they address reform priorities discussed in previous Surveys (OECD, 2013). Changing OAED job counsellors' responsibilities complements the investments in IT systems. More contact between counsellors and employers improves job matching rates (Frolich, et al., 2007). These changes may also require strengthening counsellors' "soft" skills, such as job brokering, counselling and social work (OECD, 2015d). In the future, OAED could offer specialised support services for SME employers, following the success of such services at the British public employment service.

Strengthening job search and training incentives

Tax and benefit systems in some countries can create incentives against seeking employment, as the loss of benefits offsets gains in employment income. Greece's limited unemployment and welfare benefits and the structure of the tax system have curbed the participation tax rate (Figure 2.32 – Panel B, Scenario 1). To avoid a large increase in participation tax rates and creating poverty traps, increasing means-tested social benefits need to be accompanied by earnings disregards and progressive income eligibility thresholds (Panel B in Figures 2.32 and 2.33). Unemployment benefit coverage is low and reforms in 2016 and 2017 largely tightened eligibility and raised job search requirements (Figure 2.34; OECD, 2017p; World Bank, 2016). This strictness is intended to prevent seasonal workers using unemployment benefits to top-up their income during off-seasons, but it may discourage jobseekers from registering, thus detaching them from the formal labour market and ALMPs.

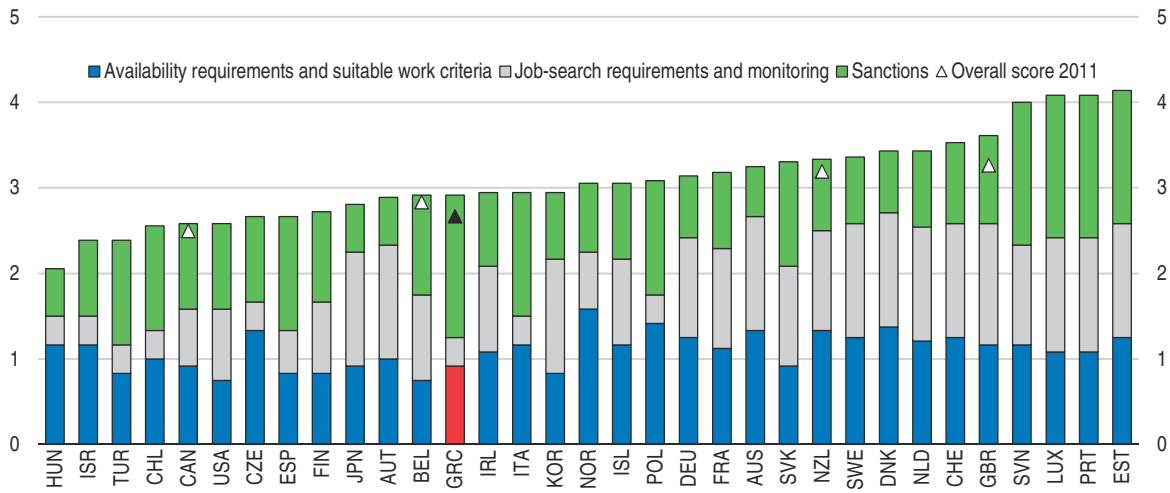
The SSI programme will oblige working-age beneficiaries who are able to work but not doing so to participate in job-search and training programmes. This mutual obligation will strengthen incentives to retrain and search for jobs. Such "mutual obligation" is becoming a typical feature of benefit systems. For example, Italy has introduced such a link as part of its plan to overhaul ALMPs (OECD, 2017q).

Bringing youth into work

Youth inactivity is a significant challenge in Greece. High before the crisis relative to other ÒECD countries, youth inactivity has since risen further (Table 2.1), due to fewer employment opportunities and weak incentives to actively engage in job search or apprenticeships. Extended periods of inactivity depreciate human capital and can do lasting harm to income prospects. Most countries' ALMPs under-target youth (ILO, 2012) and Greece is not an exception. The most effective approaches tailor strategies to individual jobseekers'

Figure 2.36. **Eligibility conditions for unemployment benefits are moderately strict**

Scale from 1 to 5 (most strict), 2014



Note: Availability criteria cover: availability during ALMP participation, demands on occupational mobility, demands on geographical mobility, and other valid reasons for refusing job offers. Job-searching requirements and monitoring cover: frequency of job-searching monitoring, and documentation of job-search monitoring. Sanctions cover those for: voluntary unemployment, refusing job offers, repeated refusal of job offers, refusing PES (Public Employment Service) activities or ALMP (Active Labour Market Programmes) placements, and refusing PES activities or ALMP placements. For the detailed coding framework and weights, see Langenbucher (2015).

Source: Langenbucher, K. (2015), "How demanding are eligibility criteria for unemployment benefits, quantitative indicators for OECD and EU countries", *OECD Social, Employment and Migration Working Papers*, No. 166, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933714866

needs, such as additional general skill development, job-specific training, or employment matching (Eurofound, 2012). This requires different agencies to co-ordinate, which is best managed through a single point of contact across agencies (European Commission 2016b). Greece's current social protection reforms go in this direction and merit pursuing resolutely.

In Greece, making a modest unemployment benefit conditional on job-search and training activities could encourage out-of-work youth to engage with the labour force. Greece also has ample scope to exploit more intensively and effectively the EU-funded youth guarantee scheme (European Commission et al., 2017).

Ensuring resources support the most effective programmes

Funding additional ALMPs is feasible with modest additional resources. Modest increases in spending and participation in ALMPs can bring high returns by improving jobseekers' likelihood of finding work, generating tax revenues and reducing social security payments (OECD, 2015c). Current ALMP reforms in Greece focus on expanding public work programmes, and may also provide ICT training. These are targeted at long-term and low-skilled unemployed towards maintaining some engagement with work. These programmes can be effective short-term responses to deep recessions, but their benefits recede with time compared with modern ALMPs (Card et al., 2015; OECD 2015d). Effectiveness of employment subsidies is also mixed, suggesting that both of these programmes should shift to longer-term skill development and employment matching.

The government's ALMP reform agenda also includes stronger monitoring and evaluation. This is essential for improving employment outcomes. To date, Greece's ALMPs have been less evaluated than those elsewhere – for example, a 2015 meta-analysis of over 200 recent ALMP evaluations across countries did not identify any evaluations of Greek

programmes (Card et al., 2015; OECD, 2015d). Developing strong evaluation culture and procedures will support more efficient public spending and, in turn, the effectiveness of spending on ALMPs (Andrews and Saia, 2017).

Policy recommendations

(Key recommendations included in the Executive Summary are bolded.)

Generating employment and supporting incomes

- **Introduce sectoral collective-wage bargaining covering broad working conditions and without automatic extensions.**
- **Ensure collective agreements are sufficiently flexible so that they can be adapted to specific firm level conditions.**
- Commence rounds of collective agreement negotiations with sectors highly exposed to external competition.
- Share with social partners an analysis of labour market developments ahead of collective agreement negotiations.
- **Establish a commission of social partners and independent experts to recommend minimum wage adjustments.**
- Link the subminimum wage for younger workers to experience rather than to age.
- Permanently cancel the minimum wage supplements that are currently suspended.

Strengthening education and skills

- **Introduce assessment frameworks and professional development schemes; gradually give schools and teachers greater pedagogical and managerial autonomy.**
- Develop regular and broad assessments of students' learning, supplemented by general aptitude tests that, in the medium-term, can replace the current university entrance exam.
- Regularise the supplementary teacher workforce in a manner that is fiscally sustainable and that encourages effective teaching.
- **Scale up post-secondary vocational education and adult education, linking them with labour market needs, and certify the quality of courses.**
- Provide tertiary institutions with autonomy and incentives to consolidate courses, departments and institutions, to raise teaching quality, and to adapt courses to students' demands and workplaces' needs.

Addressing poverty and improving well-being

- **Continue spending reviews to reallocate resources to targeted social programmes.**
- **Further rationalise remaining non-targeted programmes.**
- **Consider introducing in-work benefits.**
- Strengthen the social solidarity income by raising earned income disregards, requiring recipients to participate in active labour market programmes, and expanding its administrative systems to include other social benefits.
- Implement planned reforms to housing benefits, consolidating existing heating subsidies, and improve the administration and accessibility of disability support.

Assisting re-employment

- **Evaluate reskilling programmes, expand successful and cost-effective approaches and cancel those that are not.**
- Certify the quality of professional skill development courses.

Policy recommendations *(cont.)*

(Key recommendations included in the Executive Summary are bolded.)

- Pursue the overhaul of the public employment service to better match candidates' skills with employers' needs, including by developing a unit focused on serving SMEs.
- Finance effective job-search and training programmes by reallocating resources from public works and private employment subsidies.

References

Adalet McGowan, M., D. Andrews and V. Millot (2017), "The Walking Dead? Zombie firms and productivity performance in OECD countries", *OECD Economics Department Working Papers* No. 1372, OECD Publishing, Paris.

Andrews, D. and A. Saia (2016), "Coping with Creative Destruction: Reducing the costs of firm exit", *OECD Economics Department Working Papers*, No. 1353, OECD Publishing, Paris, *http://dx.doi.org/10.1787/bbb44644-en*.

Arpia, A., P. Cardoso, A. Kiss, K. Van Herck and A. Vandeplas (2017), "Statutory Minimum Wages in the EU: Institutional Settings and Macroeconomic Implications", *IZA Policy Paper* No. 124, *http://ftp.iza.org/pp124.pdf* (last accessed 1 November 2017).

Barro, R. and J.-W. Lee (2013), "A New Data Set of Educational Attainment in the World, 1950-2010", *Journal of Development Economics*, Vol. 104, pp.184-198, Database v. 2.1, Feb. 2016.

Boyd, D., P. Grossman, H. Lankford, S. Loeb and J. Wyckoff (2009), "Teacher Preparation and Student Achievement", *Educational Evaluation and Policy Analysis*, Vol. 31, No. 4, pp. 416-40, *http://10.3102/0162373709353129*.

Brandl, B. and C. Ibsen (2016), "Instability and Change in Collective Bargaining: An Analysis of the Effects of Changing Institutional Structures", *British Journal of Industrial Relations*, Vol. 55, No. 3, pp. 1467-1543, *http://10.1111/bjir.12207*.

Card, D., J. Kluve and A. Weber (2015), "What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations", *IZA Discussion Paper* No. 9236, *www.ftp.iza.org/dp9236.pdf*.

Causa, O., M. Hermansen and N. Ruiz (2016), "The Distributional Impact of Structural Reforms", *OECD Economics Department Working Papers*, No. 1342, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jln041nkpwc-en*.

Cholezas, I. and N.C. Kanellopoulos (2015), "Labour market reforms in Greece and the wage curve", *Economic Letters*, Vol. 136, pp. 19-21, *https://doi.org/10.1016/j.econlet.2015.08.026*.

Cunha, F. and J. Heckman (2007), "The Technology of Skill Formation", *American Economic Review*, Vol. 97, No. 2, pp. 31-47, *http://10.1257/aer.97.2.31*.

Daouli, J., M. Demoussis, N. Giannakopoulos and I.S. Laliotis (2016), "The 2011 Industrial Relations Reform and Nominal Wage Adjustments in Greece", *Journal of Labor Research,* Vol. 37, No. 4, pp. 460-483, *https://doi.org/10.1007/s1212*.

Daude, C. (2016), "Structural Reforms to Boost Inclusive Growth in Greece", *Economics Department Working Papers*, No. 1298, ECO/WKP(2016)22.

Doyle, O., C. Harmon, J. Heckman and R. Tremblay (2009), "Investing in early human development: Timing and economic efficiency", *Economics & Human Biology*, Vol. 7, No. 1, pp. 1-6. *https://doi.org/10.1016/j.ehb.2009.01.002*.

ELSTAT (2016), "Births – Absolute numbers and rates: 1932-2014", *www.statistics.gr/documents/ 20181/995674/01.+Births+-+Absolute+numbers+and+rates%28+Years+1932+-+2014%29 +%28+1932+-+2014+%29/9fd70d58-4202-4fbb-aeaa-eba4b735c127?version=2.0* (accessed 1 October 2017).

Eurofound (2014), "Greece: Changes to wage-setting mechanisms in the context of the crisis and the EU's new economic governance regime", Publication Office of the European Union, Luxembourg.

Eurofound (2015), *Collective Bargaining in Europe in the 21st Century*, Publication Office of the European Union, Luxembourg, *http://10.2806/135652*.

Eurofound (2017a), *Statutory minimum wages in the EU 2017*, Dublin, *www.eurofound.europa.eu/sites/default/files/ef1703en.pdf*.

Eurofound (2017b), "Greece: Selection of employees for (collective) dismissals", Publication Office of the European Union, Luxembourg.

Eurofound (2017c), *In-work poverty in the EU*, Publications Office of the European Union, Luxembourg, *http://dx.doi.org/10.2806/125135*.

European Commission (2011), *Attitudes towards vocational education and training*, Special Eurobarometer 369, Directorate-General Education and Culture, *http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/ResultDoc/download/DocumentKy/56371*.

European Commission (2016a), *Education and Training Monitor 2016: Greece*, European Union, Brussels, *https://ec.europa.eu/education/sites/education/files/monitor2016-el_en.pdf*.

European Commission (2016b), "Active Labour Market Policies", European Semester Thematic Factsheet, 11 November, *https://ec.europa.eu/info/sites/info/files/european-semester_thematic-factsheet_active-labour-market-policies_en.pdf*.

European Commission (2018), "Compliance Report: ESM Stability Support Programme for Greece – Third Review, January 2018", Directorate General for Economic and Financial Affairs, *https://ec.europa.eu/info/sites/info/files/economy-finance/compliance_report_-_3rd_review.pdf* (accessed 2 February 2018).

European Commission (forthcoming), "2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)", Directorate General for Economic and Financial Affairs, Economic Policy Committee.

European Commission/EACEA/Eurydice/Eurostat (2014), *Key Data on Early Childhood Education and Care in Europe. 2014 Edition*. Eurydice and Eurostat Report, Luxembourg: Publications Office of the European Union, *http://10.2797/75270*.

European Commission/Hellenic Republic/Bank of Greece (2017), "Supplemental Memorandum of Understanding (Second addendum to the Memorandum of Understanding)", *https://ec.europa.eu/info/sites/info/files/smou_final_to_esm_2017_07_05.pdf* (accessed 1 October 2017).

European Commission/Hellenic Republic/Bank of Greece (2017), "Supplemental Memorandum of Understanding (Second addendum to the Memorandum of Understanding)", *https://ec.europa.eu/info/sites/info/files/smou_final_to_esm_2017_07_05.pdf* (accessed 1 October 2017).

European Parliament (2014), *European Youth in 2014: Analytical synthesis*, Flash Eurobarometer of the European Parliament (EP EB395), Directorate-General for Communication, Brussels. *www.europarl.europa.eu/pdf/eurobarometre/2014/youth/eb_395_synthesis_youth_en.pdf* (accessed 1 October 2017).

Eurostat (2014), *Living Conditions Glossary*, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Category:Living_conditions_glossary* (visited 1 October 2017).

Eurostat (2017), *EU Statistics on Income and Living Conditions* (database) (last accessed 1 October 2017).

Garicano, L., C. Lelarge and J. Van Reenen (2016), "Firm Size Distortions and the Productivity Distribution: Evidence from France," *American Economic Review*, Vol. 106, No. 11, pp. 3439-79, *https://doi.org/10.1257/aer.20130232*.

Hanushek, E., S. Link and L. Woessmann (2011), "Does School Autonomy Make Sense Everywhere? Panel estimates from PISA", *Journal of Development Economics*, Vol. 104, pp. 212-232, *http://dx.doi.org/10.1016/j.jdeveco.2012.08.002*.

Hopfenbeck, T., A. Tolo, T. Florez and Y. El Masri (2013), "Balancing Trust and Accountability? The Assessment for Learning Programme in Norway: A Governing Complex Education Systems Case Study", *OECD Education Working Papers*, No. 97, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k3txnpqlsnn-en*.

HQA (Hellenic Quality Assurance and Accreditation Agency) (2014), "Assessment of Institutions and Accreditation of Internal Systems of Quality Assurance in the Higher Education Area: Preface", *www.hqa.gr/data/HQA_insteval_intro_en.pdf* (last accessed 1 October 2017).

ILO (2012), *EuroZone Job Crisis: Trends and policy responses*, International Labour Organization, ILO Publications, Geneva.

ILO (2014), "Minimum wage systems", International Labour Conference, 103rd session, ILC.103/III/1B. ILO, Geneva.

ILO (2015), *Collective Bargaining, A policy guide*, International Labour Organization, Geneva, *www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_425004.pdf*.

ILO (2016), "Negotiating for gender equality", Issue Brief No. 4, Geneva, *www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_528947.pdf*.

IMF (2017a), "Greece: Request for Stand-by Arrangement – Press Release; Staff Report; and Statement by the Executive Director for Greece", *IMF Country Report*, No. 17/229.

IMF (2017b), "Greece: Selected issues", *IMF Country Report* No. 17/41.

Izquierdo, M., J. Jimeno, T. Kosma, A. lamo, S. Millard, T. Rõõm and E. Vivianoet (2017), "Labour Market Adjustment in Europe During the Crisis: Microeconomic evidence from the WDN survey", *Eurosystem Occasional Paper Series*, No. 1/2017, *https://doi.org/10.23656/24613800/12017/0145*.

Karalis, T. (2017), "Shooting a Moving Target: The Sisyphus boulder of increasing participation in adult education during the period of economic crisis", *Journal of Adult and Continuing Education*, Vol. 23, No. 1, pp. 78-96, *http://dx.doi.org/10.1177/1477971417691782*.

Kugler, A.D. and G. Saint-Paul (2004), "How Do Firing Costs Affect Worker Flows in a World with Adverse Selection?", *Journal of Labor Economics*, Vol. 22, No. 3: 553-584, *https://doi.org/0.1086/383107*.

Lazaretou, S. (2016), "Fleeing of Human Capital: Contemporary migration tendencies of the Greeks in the years of crisis", Bank of Greece, *Economic Bulletin*, 43.

Leuven, E., M. Lindahl, H. Oosterbeek and D. Webbink (2007), "The effect of extra funding for disadvantaged students on achievement", *Review of Economics and Statistics*, Vol. 89, No. 4, pp. 721-736.

Machin, S. (2006), "Social Disadvantage and Education Experiences", *OECD Social, Employment and Migration Working Papers*, No. 32, *www.oecd.org/social/soc/36165298.pdf*.

Martins, P. and S. Pessoa e Costa (2014), "Reemployment and Substitution Effects from Increased Activation: Evidence from Times of Crisis", *IZA Discussion Paper*, No. 8600, Bonn.

Matthews, P., E. Klaver, J. Lannert, G. Conluain and A. Ventura (2009), *Policy Measures Implemented in the First Cycle of Compulsory Education In Portugal: International evaluation*, Office for Education Statistics and Planning, Lisbon, *www.oecd.org/education/school/42065538.pdf* (accessed 1 October 2017).

Medina, L. and F. Schneider (2018) "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?", *IMF Working Paper*, WP/18/17, *www.imf.org/~/media/Files/Publications/WP/2018/wp1817.ashx*.

Ministry of Education Research and Religious Affairs (2017a), "Three Year Plan", *www.minedu.gov.gr/news/28206-19-05-17-to-trietes-sxedio-gia-tin-ekpaidefsi-plaisio-katefthynseon-kai-protaseis* (last accessed 28 September 2017).

Ministry of Education Research and Religious Affairs (2017b), *Reform and Upgrading of General Lyceum and New System of Admission to Higher Education*, *www.minedu.gov.gr/rss/29783-28-08-2017-metarrythmisi-kai-anavathmisi-tou-genikoy-lykeiou-kai-neo-systima-eisagogis-stin-tritovathmia-ekpaidefsi-3* (accessed on 31 August 2017).

Mylonas, P (2017), "Turning Greece into an Education Hub", *Structural Report*, National Bank of Greece, May, *www.nbg.gr/greek/the-group/press-office/e-spot/reports/Documents/Education.pdf* (last accessed 6 October 2017).

Naudeau, S., N. Kataoka, A. Valerio, M. Neuman and L. Elder (2011), *Investing in Young Children: An Early Childhood Development Guide for Policy Dialogue and Project Preparation*, Directions in development, World Bank, Washington, DC, *http://documents.worldbank.org/curated/en/691411468153855017/pdf/578760REPLACEM053783B09780821385265.pdf*.

OECD (2007a), *OECD Economic Surveys: Greece*, Volume 2007/5, OECD Publishing, Paris.

OECD (2007b), *Society at a Glance: OECD Social Indicators, 2006 Edition*, OECD Publishing, Paris.

OECD (2009a), *Doing Better for Children*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264059344-en*.

OECD (2009b), *Economic Surveys: Greece*, OECD Publishing, Paris.

OECD (2010a), *Improving Schools: Strategies for Action in Mexico*, OECD Publishing, Paris.

OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264130852-en*.

OECD (2013a), *Greece: Reform of Social Welfare Programmes*, OECD Public Governance Reviews, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264196490-en*.

OECD (2013b), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264190658-en*.

OECD (2013c), *PISA 2012 Results: What Makes Schools Successful?: Resources, Policies and Practices (Volume IV)*, PISA, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264 201156-en*.

OECD (2014), *OECD Economic Surveys: Portugal*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-prt-2014-en*.

OECD (2015a), "FOCUS on Minimum wages after the crisis: Making them pay", *www.oecd.org/social/Focus-on-Minimum-Wages-after-the-crisis-2015.pdf*.

OECD (2015b), *How's Life? 2015: Measuring Well-being*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/how_life-2015-en*.

OECD (2015c), *Education Policy Outlook 2015: Making Reforms Happen*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264225442-en*.

OECD (2015d), *OECD Employment Outlook 2015*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2015-en*.

OECD (2015e), *Immigrant Students at School: Easing the Journey towards Integration*, OECD Reviews of Migrant Education, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264249509-en*.

OECD (2016a), *OECD Economic Surveys: Greece 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-grc-2016-en*.

OECD (2016b), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264258051-en*.

OECD (2016c), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264266490-en*.

OECD (2016d), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264252073-en*.

OECD (2016e), "CO1.3: Low birth weight", *OECD Family Database,* OECD Publishing, Paris, *www.oecd.org/els/family/CO_1_3_Low_birth_weight.pdf*

OECD (2016f), *Social Expenditure Update 2016*, OECD Publishing, Paris.

OECD (2016g), *2016 Pension Policy Notes: Greece*, OECD Publishing, Paris.

OECD (2017a), *OECD Employment Outlook 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2017-en*.

OECD (2017b), *Labour Market Reforms in Portugal 2011-15: A Preliminary Assessment*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264269576-en*.

OECD (2017c), "Draft New Jobs Strategy", COM/ECO/DELSA/ELSA(2017)2.

OECD (2017d), *OECD Economic Surveys: Iceland 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-isl-2017-en*.

OECD (2017e), *Social spending* (indicator) *http://dx.doi.org/10.1787/7497563b-en*.

OECD (2017f), *Affordable Housing Database*, Indicator PH4, *http://oe.cd/ahd*.

OECD (2017g), *Government at a Glance 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/gov_glance-2017-en*.

OECD (2017i), *Education at a Glance 2017: OECD Indicators*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eag-2017-en*.

OECD (2017j), *Education Policy in Greece: A Preliminary Assessment*, OECD Publishing, Paris.

OECD (2017k), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264276116-en*.

OECD (2017l), *Starting Strong IV: Monitoring quality in early childhood education and care country note – Italy*, OECD Publishing, Paris.

OECD (2017m), *Family Database: PF3.4: Childcare support*, *www.oecd.org/els/family/database.htm*, update 27 August 2017.

OECD (2017n), "Education Policy in Greece: Targeted policy recommendations on school and school leader evaluation for improvement", OECD Publishing, Paris.

OECD (2017o), *Financial Incentives for Steering Education and Training, Getting Skills Right*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264272415-en*.

OECD (2017p), "Eligibility Criteria for Unemployment and Social Assistance Benefits: New Evidence for OECD and EU Countries", *DELSA/ELSA/WP1/RD(2017)2*.

OECD (2017q), *OECD Economic Surveys: Italy 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-ita-2017-en*.

OECD and Eurofound (2017), "The only way is up? Social Mobility and Equal Opportunities", Issues Note, *www.oecd.org/inclusive-growth/inequality-and-opportunity/The-Issues-Note-Social-Mobility-and-Equal-Opportunities-May-4-2017.pdf*.

Pittini, A., L. Ghekière, J. Dijol and I. Kiss (2015), *The State of Housing in the EU: 2015*, Housing Europe, Brussels, *www.housingeurope.eu/resource-468/the-state-of-housing-in-the-eu-2015* (accessed 10 October 2017).

Roussakis, Y. (2017), *OECD Review, Partial Background Report for Greece*, Unpublished Report, Ministry of Education, Research and Religious Affairs.

Salvi del Pero, A. et al. (2016), "Policies to promote access to good-quality affordable housing in OECD countries", *OECD Social, Employment and Migration Working Papers*, No. 176, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jm3p5gl4djd-en*.

Stefan, G. (2015), "A Brief Analysis of the Administration Costs of National Social Protection Systems in EU member states", *Procedia Economics and Finance*, Vol. 30, pp. 780-789. *http://dx.doi.org/10.1016/S2212-5671(15)01327-1*.

Theodoropoulos, D., A. Kyridis, C. Zagkos and Z. Konstantinidou (2014), "'Brain Drain' Phenomenon in Greece: Young Greek scientists on their Way to Immigration, in an era of "crisis". Attitudes, Opinions and Beliefs towards the Prospect of Migration", *Journal of Education and Human Development December*, Vol. 3, No. 4, pp. 229-248, *https://doi.org/10.15640/jehd.v3n4a21*.

Tinios, P. (2005), "Pension Reform in Greece: 'Reform by Instalments' – A blocked process", *West European Politics*, Vol. 28, No. 2, pp. 402-419, *http://dx.doi.org/10.1080/01402380500060346*.

Tinios, P. (2016), "Towards a New Social Contract: Greek pensions halfway through adjustment", *LSE Hellenic Observatory Policy Paper*, April.

UNESCO (2015), "Education for All 2015 National Review Report: Greece", unesdoc.unesco.org/images/0022/002299/229950E.pdf, last accessed 28 September 2017.

van Ours, J., G. Bosch, W. Däubler, I. Koukiadis, A. Fernandes, B. Veneziani, J. Jimeno and P. Martins (2016), " Recommendations Expert Group for the Review of Greek Labour Market Institutions", European Parliament, *www.ypakp.gr/uploads/docs/9946.pdf* (last accessed on 20 November 2017).

Visser (2016), "What happened to collective bargaining during the great recession?", *IZA Journal of Labor Policy*, Vol. 5, No. 9: 1-35, *https://doi.org/10.1186/s40173-016-0061-1*.

Walter, C. and J. Briggs (2012), "What professional development makes the most difference to teachers?", *Working Paper*, University of Oxford Department of Education, *www.education.ox.ac.uk/wordpress/wp-content/uploads/2010/07/WalterBriggs_2012_TeacherDevelopment_public_v2.pdf* (accessed 1 October 2017).

Woessmann, L. (2003), "Schooling resources, educational institutions, and student performance: The international evidence", *Oxford Bulletin of Economics and Statistics*, Vol. 65, No. 2, pp. 117-170.

World Bank (2016), '"Greece Social Welfare Review – Weathering the Crisis: Reducing the Gaps in Social Protection in Greece", Social Protection and Labor Global Practice.

World Bank (2017a), "Greece Social Welfare Review – Reforming Social Welfare in Greece", Social Protection and Labor Global Practice.

World Bank (2017b), "Greece: Implementation Support to the Roll-out of the Social Solidarity Income – Output A2: Monitoring Strategy, Monitoring Report".

World Bank (2018), *World Development Report 2018: Learning to Realize Education's Promise*, World Bank, Washington, DC, *http://dx.doi.org/10.1596/978-1-4648-1096-1*.

World Intellectual Property Organisation (2013), *World Intellectual Property Indicators: 2013*, *www.wipo.int/edocs/pubdocs/en/intproperty/941/wipo_pub_941_2013.pdf* (accessed 1 December 2017).

Zepos and Yannopoulos (2017), "Recent legislative developments in Greek employment law", Newsletter, 1 June, *https://zeya.com/sites/default/files/docs/articles/Employment%20Newsletter%2C%2001%20June%202017.pdf*.

Ziomas, D. and M. Theodoroulakis (2016), "The new Greek pension reform: Improving governance and ensuring sustainability", *ESPN Flash Report*, No. 2016/63, European Commission.

Ziomas, D., I. Sakellis, N. Spyropoulou and N. Bouzas (2015), "ESPN Thematic Report on Minimum Income Schemes: Greece", European Commission, Brussels.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(10 2018 09 1 P) ISBN 978-92-64-29251-2 – 2018

OECD Economic Surveys

GREECE

Greece is on track to recover from a deep depression. Reforms have gathered pace and fiscal consolidation has strengthened credibility, lowering uncertainty. Exports have led the expansion and labour market reforms have improved competitiveness, supporting employment growth, but wages and productivity remain low. Real investment has yet to recover due to tight financial conditions and structural impediments. The tax collection system is improving, but the tax system still relies on high rates and narrow bases, hampering growth and creating inequities. The public debt remains high and is a source of vulnerabilities. Reducing the debt ratio will hinge on raising long-term growth, maintaining prudent fiscal policy and additional debt restructuring as needed. Improving processes to negotiate employment agreements, better matching workers' skills with workplaces' needs, strengthening firms' incentives to innovate and train workers in addition to continuing social protection reforms will raise employment and wages, and reduce poverty. The government has improved important areas of the investment climate, but more is required to fully implement the product market reforms already passed, improve regulatory quality and transparency, fight corruption and address informality. Reducing non-performing loans and phasing out capital controls while preserving financial stability will improve financing conditions and boost confidence.

SPECIAL FEATURES: BOOSTING INVESTMENT; SUPPORTING INCOMES THROUGH EMPLOYMENT AND SOCIAL PROTECTION

Consult this publication on line at ***http://dx.doi.org/10.1787/eco_surveys-grc-2018-en***.

This work is published on the OECD iLibrary, which gathers all OECD books, periodicals and statistical databases. Visit ***www.oecd-ilibrary.org*** for more information.

Volume 2018/9
April 2018

OECD*publishing*
www.oecd.org/publishing

THE LONDON BOOK FAIR WINNER
INTERNATIONAL EXCELLENCE Awards 2017
IN PARTNERSHIP WITH THE PUBLISHERS ASSOCIATION

ISSN 0376-6438
2018 SUBSCRIPTION
(18 ISSUES)

ISBN 978-92-64-29251-2
10 2018 09 1 P

9 789264 292512