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OVERVIEW

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BETTER POLICIES FOR BETTER LIVES

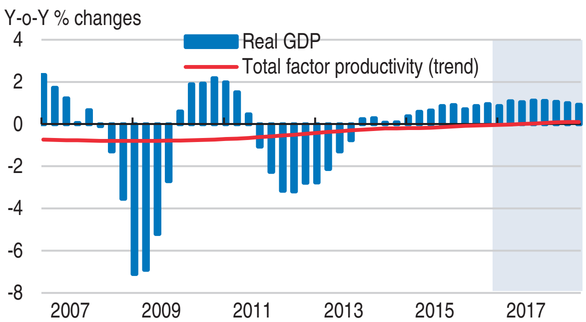
This Overview is extracted from the 2017 Economic Survey of Italy. The Survey is published on the responsibility of the Economic and Development Review Committee (EDRC) of the OECD, which is charged with the examination of the economic situation of member countries.

Executive summary

- *The economy is recovering*
- *Despite ambitious reforms, doing business remains complicated, thus hindering productivity*
- *Reforming education and active labour market policies will improve inclusiveness*

The economy is recovering

Growth has resumed but productivity is still falling



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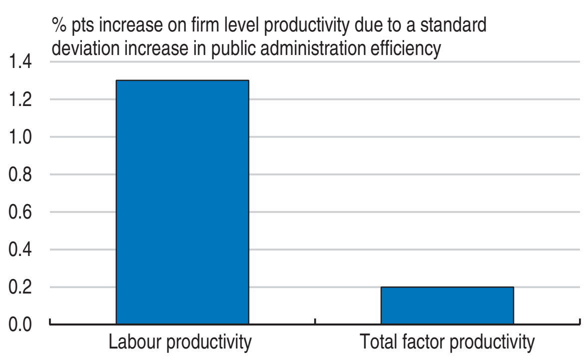
Italy is recovering after a deep and long recession. Structural reforms, accommodative monetary and fiscal conditions, and low commodity prices have helped the economy to turn the corner. The Jobs Act, part of a wide and ambitious structural reform programme, and social security contribution exemptions have improved the labour market and raised employment. Yet, the recovery remains weak and productivity continues to decline. Returning the banking system to health will be crucial to revive growth and private investment. More investment in infrastructure will be essential to raise productivity.

Despite ambitious reforms, doing business remains complicated, thus hindering productivity

Increasing public administration efficiency boosts firms' productivity



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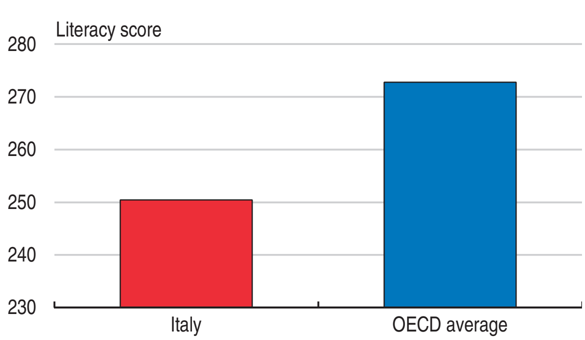
The government has made significant progress on tackling structural impediments to growth and productivity. Yet public-administration inefficiencies, slow judicial processes, poorly designed regulation and weak competition still make it difficult to do business in Italy. Labour and capital resources are trapped in low-productivity firms, which hold down wages and well-being. Innovative start-ups and SMEs continue to suffer from difficult access to bank and equity finance, curbing incomes for many.

Reforming education and active labour market policies will improve inclusiveness

Skills are low



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Literacy scores are low and job-skill mismatch is one of the highest among OECD countries, depressing earnings and well-being. Many workers are under-skilled in the jobs they hold, highlighting mismatches between workers' skills and those required by employers. Improving the education system and labour market policies are crucial to raising real wages, job satisfaction and living standards. The Jobs Act and the Good School reform go in the right direction and need to be fully implemented.

MAIN CHALLENGES	KEY RECOMMENDATIONS
Macroeconomic and financial policies to sustain inclusive growth	
The planned fiscal stance is appropriate. Weak economic growth, low inflation and high tax evasion are contributing to the slow reduction in the budget deficit and high public debt. Public spending restraint has partly relied on infrastructure-spending cuts.	Continue on the path of prudent fiscal policies and prioritise spending on effective infrastructure and innovation programmes. Increase tax revenue by enhancing tax compliance (by investing more in IT systems and human resources, extending the use of e-invoicing and lowering the threshold for cash payments); and introducing real estate taxes based on updated cadastral values. Use additional tax revenues to gradually reduce social security contributions on permanent contracts.
The Italian banking system features low profits and high non-performing loans. These weaknesses may discourage lending and investment. Policy has started to address these issues.	Continue to develop the secondary market for NPLs. As envisaged by the European Supervisory Mechanism, set gradual and bank-specific targets to reduce non-performing loans, backed up by sanctions such as additional provisions, asset sales, suspension of dividend payments and restructuring banks operations. If public funds are needed to recapitalise distressed banks, take full advantage of EU regulations, imposing losses on equity and bondholders, and restructuring banks' operations. Compensate retail bondholders for the losses they will incur.
Small and poorly targeted cash transfers fail to reduce poverty rates among the young and children.	Fully legislate and implement the planned nationwide anti-poverty programme, target it towards the young and children and ensure it is sufficiently funded.
Improving business conditions	
Low public administration efficiency hurts private sector productivity and social welfare.	Continue efforts to enhance the efficiency and transparency of the public administration by: making further progress on e-services; fully implementing the broad public administration reform; amending the parts of public-administration reform blocked by the Constitutional Court and swiftly implementing them.
Insolvency procedures are slow, costly and uncertain.	Use debt-equity swaps more frequently by forcing creditors to share the burden of firm restructuring.
Regulatory bottlenecks curb competition in key professional services holding back performance and reducing incentives to invest.	Approve the competition law under discussion by Parliament.
Innovation and knowledge based capital are low, especially among small and medium enterprises. The venture capital industry is small. The Government has recently introduced a wide array of measures addressing these problems.	Evaluate the effectiveness of recently introduced research and development tax credits and other fiscal incentives in terms of innovation outcomes and forgone tax receipts. Foster the development of the venture capital industry by leveraging private funds and expertise.
Enhancing skills and matching skills with labour market needs	
The unemployment rate is decreasing but remains high, especially among the young and long term unemployed.	Employ more specialised counsellors and profiling tools in the public employment services. Assess the labour market impact of job-search and training programmes and focus funding on those that are performing well.
Workers skills are deficient. The early school leaving rate is decreasing yet remains high.	Build partnerships between schools and businesses to create high quality work-based learning for students as envisaged by the Good School reform.
The share of workers with tertiary education is low. Apprenticeships are underused and the share of students with working experience is low. Post-secondary vocational education and training (VET) is weak.	Scale up post-secondary VET with strong involvement of the business sector, based on the example of Istituti Tecnici Superiori. Establish a national body on VET involving the business sector and all key stakeholders to link the training component of VET with apprenticeships; ensure high-quality workplace training and identify skills needed in the labour market.

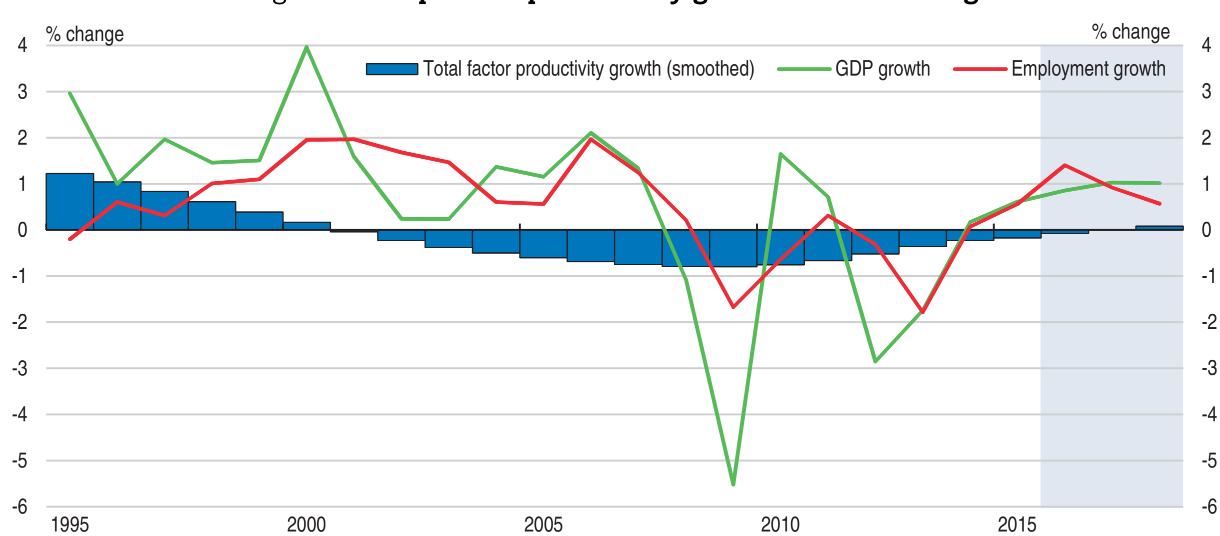
Assessment and recommendations

- *The economy is recovering gradually from a deep and long recession*
- *Reforms to improve the business environment and increase productivity*
- *Reforms to boost inclusive and sustainable growth*

Italy is emerging from a long and deep recession (Figure 1). Macroeconomic policies initiated by the Italian government and supportive monetary policy have contributed to the turnaround, along with lower commodity prices. The Jobs Act and social security contribution exemptions jolted the labour market, leading to rising employment and higher consumer spending. Mildly expansionary fiscal policy is supporting growth. Impressive progress has been made on the structural reform programme. Reforms in different areas, including the labour market, school system and public administration, have been passed and implemented or are in the course of implementation (Table 1). Greater focus has also been put on past reforms, with a sharp reduction in the backlog of decrees needed to implement them. The rejection of the constitutional reform in a referendum in December 2016 has heightened political uncertainty but the structural reform process must continue if Italy is to build a more inclusive society and improve growth prospects.

Reforms, especially the Jobs Act and lower social security contributions, have started to reverse the damages the crisis inflicted on the economy and the social fabric of the country. Since the start of the crisis, real GDP per capita dropped by about 10% and is now at the same level as in 1997. Absolute poverty nearly doubled from its pre-crisis level, hitting especially hard youths and children. These developments have resulted in mixed well-being outcomes. Italy performs well in some dimensions, such as work-life balance, social connections and health status, while it ranks below the OECD average in others, such as subjective well-being, environmental quality, jobs and earnings, housing, and education and skills (Figure 2). Also, there is considerable heterogeneity across the population with

Figure 1. **Output and productivity growth are recovering**



Source: OECD *Economic Outlook 100 Database*, projections revised as of 20 January 2017.

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

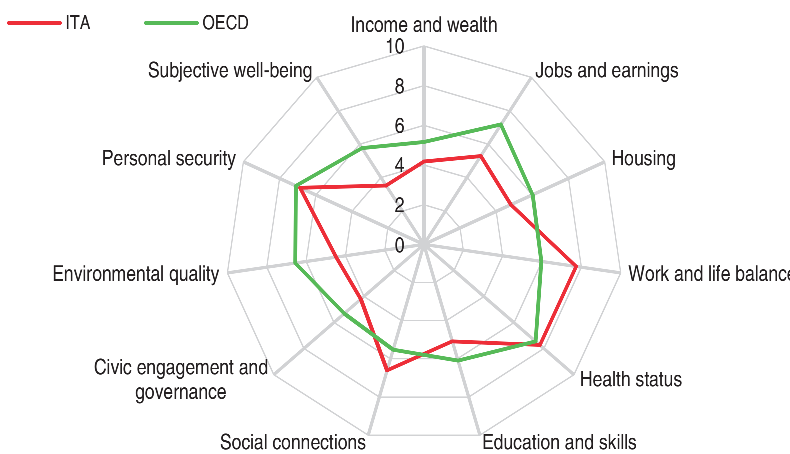
Reforms	Purpose of the reform	Approved	To be approved by
Institutional reforms			
Electoral law	Stronger and more stable parliamentary majority	✓	
Constitutional reform (confirmatory referendum)	End the perfect bicameralism and centralise local government responsibilities		Rejected in December 2016 referendum
Bill on the prevention of conflict of interest	For deputies and government members		March 2017
Labour market and social policies			
Jobs Act	Single open-ended contract, new unemployment benefit system (NASPI)	✓	
ANPAL (National Agency)	New ALMPs and agreements with regions	✓	
Training voucher	Conditionality of unemployment benefits on activation	✓	
Youth Guarantee scheme	Second phase	✓	
Second level contractual bargaining	Lower taxation on firm-level negotiated productivity premium	✓	
Jobs Act for self-employed workers	Strengthen social protection for the self-employed		June 2017
Single family code	Coordination of legislation to support families		June 2017
Fight poverty and reorganise social services	More funds to combat poverty (2016 and 2017 budget laws); introduction of a national anti-poverty programme		2017
Law "Dopo di noi"	Assistance for people with severe disabilities	✓	
Plan for early-childhood educational services	Refinancing the Plan	✓	
Fiscal issues			
Revision of cadastral values	Complete the reform of the cadastral system		2017-18
Combating tax evasion	Monitoring of tax evasion, reorganisation of fiscal agencies	✓	
Fiscal Federalism	Standard requirements and fiscal rules for local governments	✓	
Spending review	Phase II of spending review; rationalisation of e-procurement and thresholds for independent tenders	✓	
Privatisation			
ENAV, Poste Italiane and ENEL		✓	
Other privatisations under consideration			2017-18
Justice			
Rules on corporate crisis and insolvency procedures	Reorganisation of the insolvency law		June 2017
Reform of civil and criminal procedures	Strengthening guarantees for defendants, lowering length of proceedings; reinforcing business and family courts		June 2017
Fighting organised crime	Measures to fight organised crime and illicit wealth		June 2017
Infrastructure			
Reform of public procurement	Strengthen ANAC role; update awarding criteria; qualification system of contracting authorities	✓	
Ultra-Broadband Plan	2020 target: 85% of population covered		2017-20
Competition and competitiveness			
2015 Annual law on competition			2017
2016 Annual law on competition			2017
Public administration			
Enabling Law on reforming the Public Administration	Increase efficiency (through simplification and reorganisation procedures), transparency and anti-corruption	✓	
Education – Good School Reform			
Legislative Decrees	Review and simplification of the Single Code; training and access to secondary school teaching positions; review of vocational education courses and link them with education system; evaluation and certification of students skills; pre-school education; scholarships		2017
National Plan for digital school	Digital education and innovation in education	✓	

Table 1. **Main elements of the reform programme** *(cont.)*

Reforms	Purpose of the reform	Approved	To be approved by
Environment			
Green economy measures	Crimes against the environment; measures for the containment of excessive use of natural resources	✓	
Green Act Bill	Environmental taxation; circular economy, renewables, mobility		2017
Waste management	Regulatory authority and progressive transition from tax (Tarsu) to tariff		2017

Source: MEF (2016), *National reform Programme*.

Figure 2. **Italy's well-being outcomes are mixed**



Source: OECD Better Life Index 2016.

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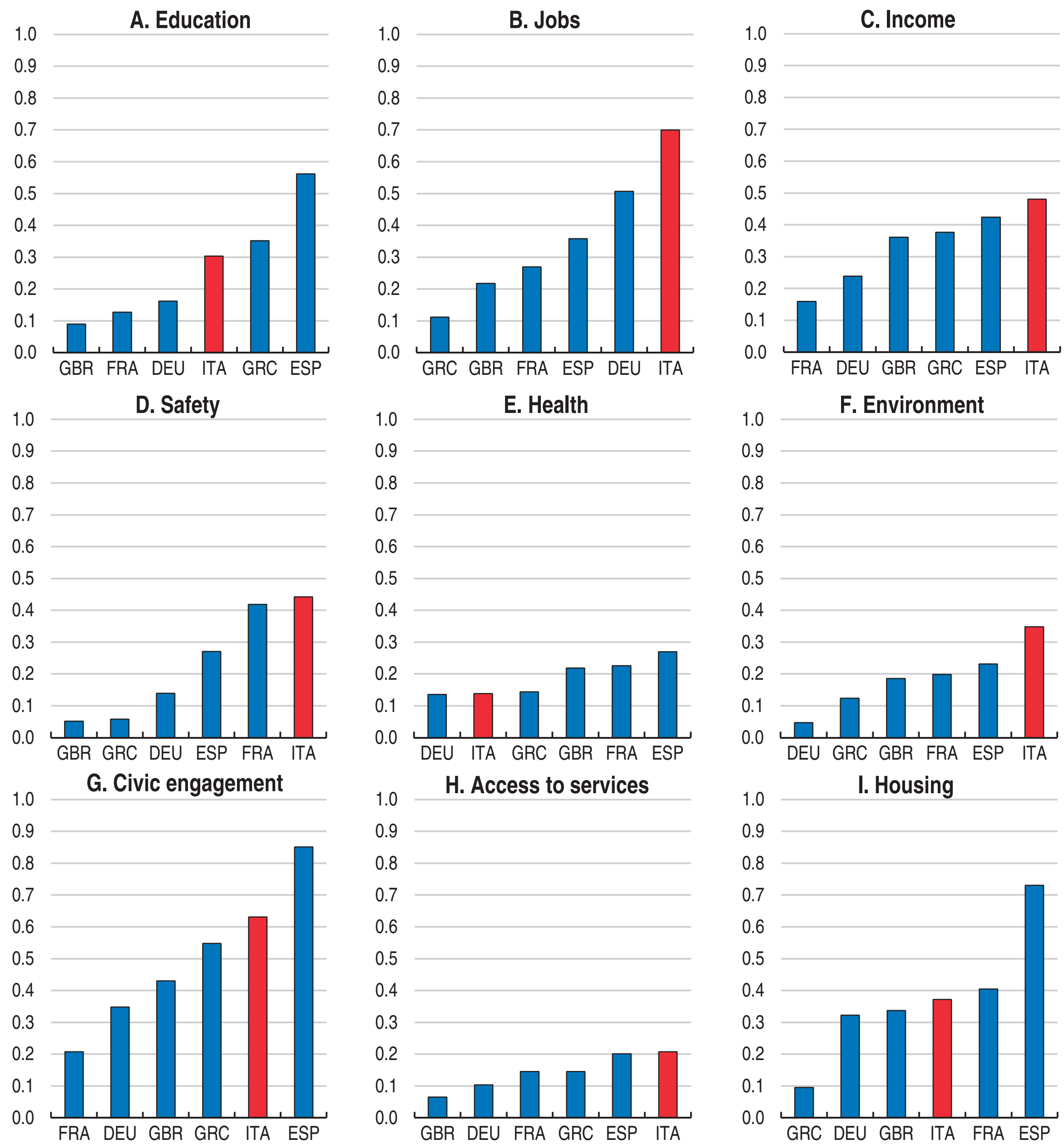
some groups faring considerably better than others, especially with respect to income and wealth, and jobs and earnings. Regional dispersion in well-being is also high compared to other OECD countries (Figure 3).

Addressing Italy's economic and social challenges will require raising the public administration's efficiency, improving the business environment and workers' skills, and reducing poverty to deliver inclusive and sustainable economic growth. Against this background the main messages of this *Survey* are:

- A gradual recovery is underway. Changes in the fiscal-policy mix are required to boost investment and productivity and achieve a higher GDP growth rate.
- Italy has implemented many structural reforms in recent years, but raising chronically low productivity growth – which in the medium term is the only way to raise living standards – will require a more effective public administration, an improved business environment, increased innovation, stronger competition, and a better match between the demand and supply of skills.
- Prolonged weak growth and low productivity have eroded social inclusion, requiring renewed efforts to raise employment, especially of women and youth, reduce poverty, especially among youths and children, and improve skills.

Figure 3. **Regional dispersion in well-being is high**



Note: The indicator measures the dispersion in well-being index across regions within a country; it is standardised between 0 and 1; 1 being maximum dispersion.
Source: OECD Regional Well-Being Database 2016.

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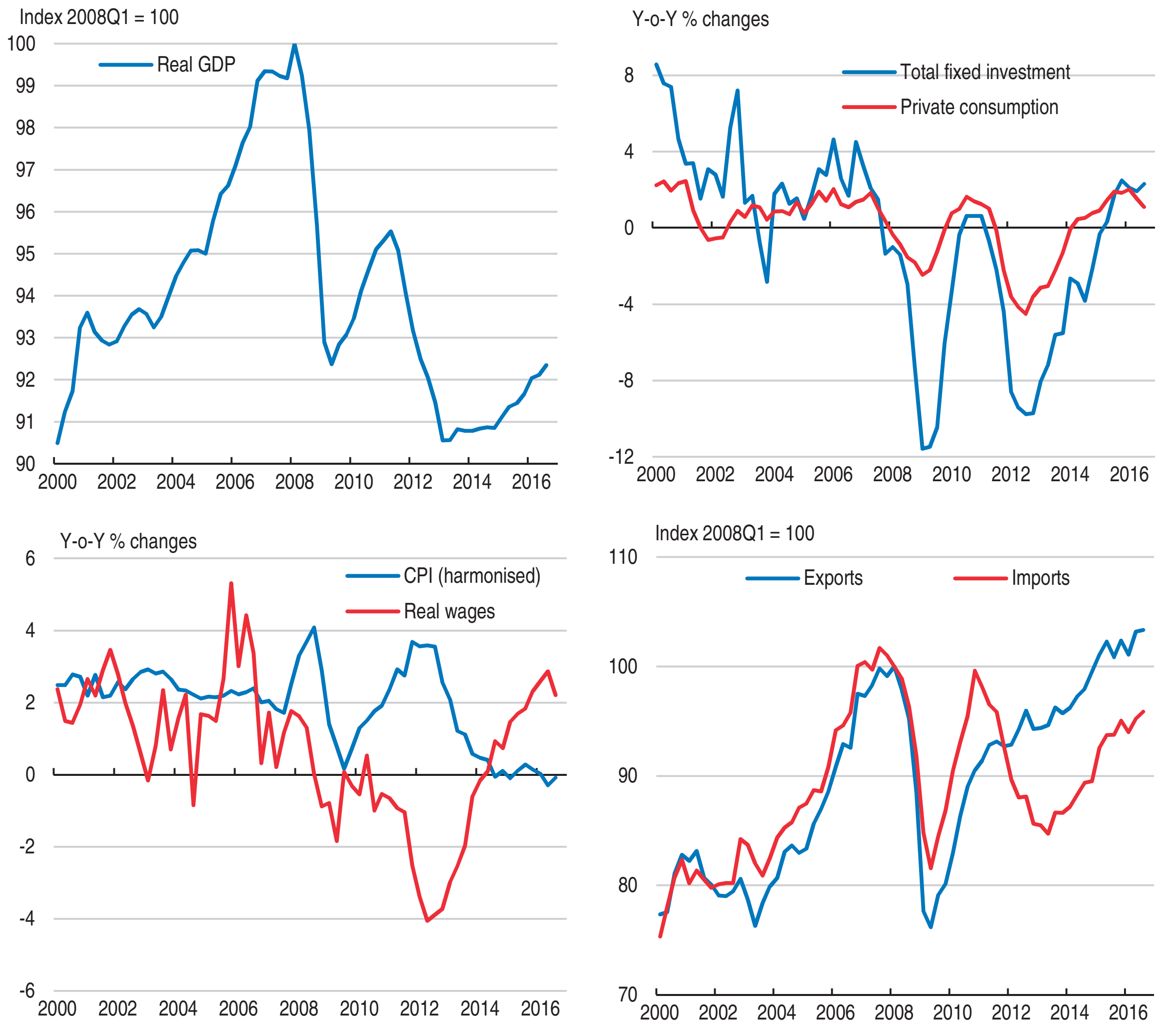
The economy is recovering gradually from a deep and long recession

A self-reinforcing cycle between employment, household income and private consumption supported a modest recovery in 2015 and 2016 (Figure 4). The Jobs Act and the temporary exemptions in social security contributions for new permanent contracts, accompanied by accommodative monetary policy, have raised employment and participation rates (Figure 5). Real wage gains due to moderate nominal wage increases and persistent low consumer price inflation – reflecting the still sizeable output gap and

Figure 4. **Private consumption is driving the recovery**



Source: *OECD Analytical Database*; and *OECD Economic Outlook Database*.

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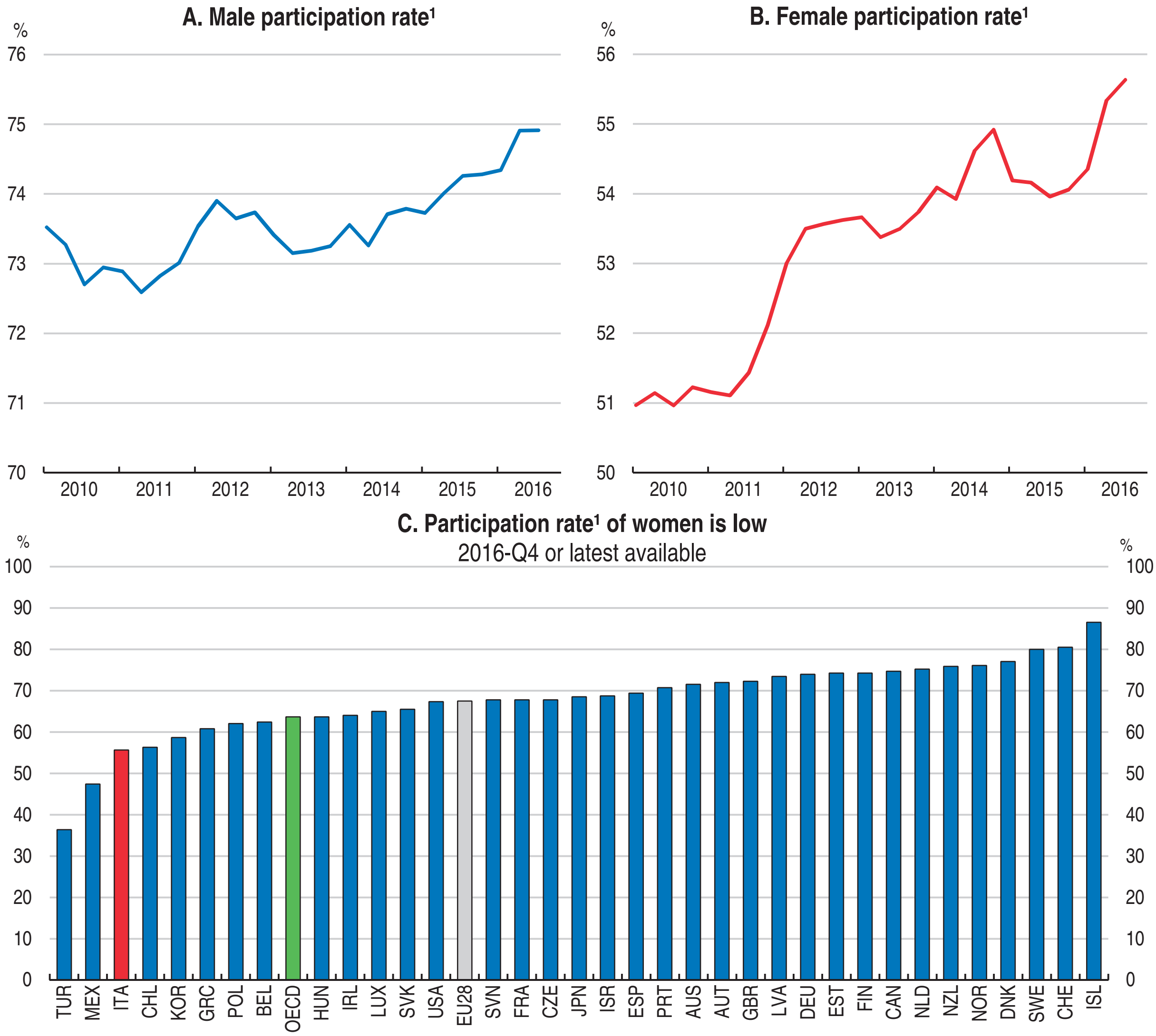
subdued energy prices – have supported household purchasing power. Unemployment has declined and labour market participation has increased – especially among women. The youth unemployment rate has also fallen after having increased for most of the crisis, but remains high (Figure 6). Low growth in Italy's main trade partners and geopolitical tensions in the Mediterranean area have hindered sales abroad, while weak investment has checked import growth. Overall, the pattern of the recovery differs from previous ones, which were usually driven by export growth following exchange rate devaluations (Figure 7, Panels A and B). Italy's export performance has lagged that of other euro area countries, such as Portugal and Spain (Figure 7, Panels C and D), as a consequence of faster growth in unit labour costs, slower integration in global value chains (Figure 7, Panels E and F) and poor productivity growth.

In 2015, the Jobs Act and temporary social security contribution exemptions boosted the creation of jobs with open-ended contracts, which represented 36% of the new jobs, against 26% in 2014 (Figure 8, Panel A). Almost two-thirds of the new open-ended contracts benefited from social security contribution exemptions (Figure 8, Panel B). The reform also

Figure 5. **Labour market participation rates are increasing**



1. The labour force participation rate is defined as the ratio of the labour force to the working age population (15-64 year old), expressed in percentages.

Source: OECD Labour Force Statistics.

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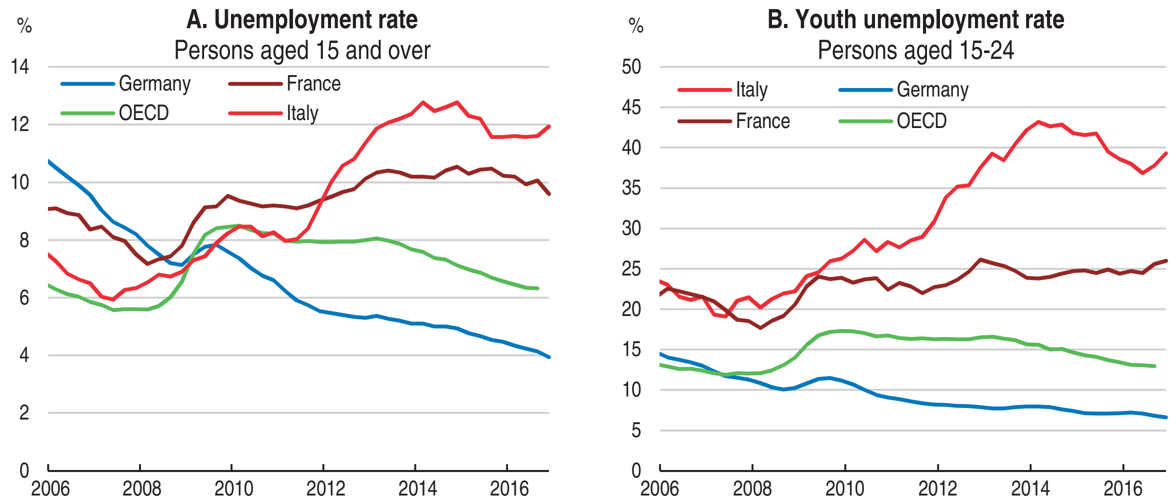
encouraged the transformation of temporary, atypical and apprenticeship contracts into permanent ones, reducing labour market duality. However, as social security contribution exemptions were more than halved in 2016, the number of new open ended contracts dropped markedly (Figure 8, Panel A). Sestito and Viviano (2016) show that the increase in new open-ended contracts is mostly attributable to the introduction of social security contribution exemptions.

Uncertainty and recently declining consumer confidence induced households to curtail consumption and increase savings (Figure 9, Panel A). Despite positive signs in early 2016, investment is 70% of its pre-crisis peak, and public investment has fallen to just above 2% of GDP (Figure 10). Lending to firms has been shrinking for some time (Figure 9, Panel B), especially in the construction sector whereas lending to manufacturing and

Figure 6. **The unemployment rate is declining**



Source: OECD Labour Force Statistics.

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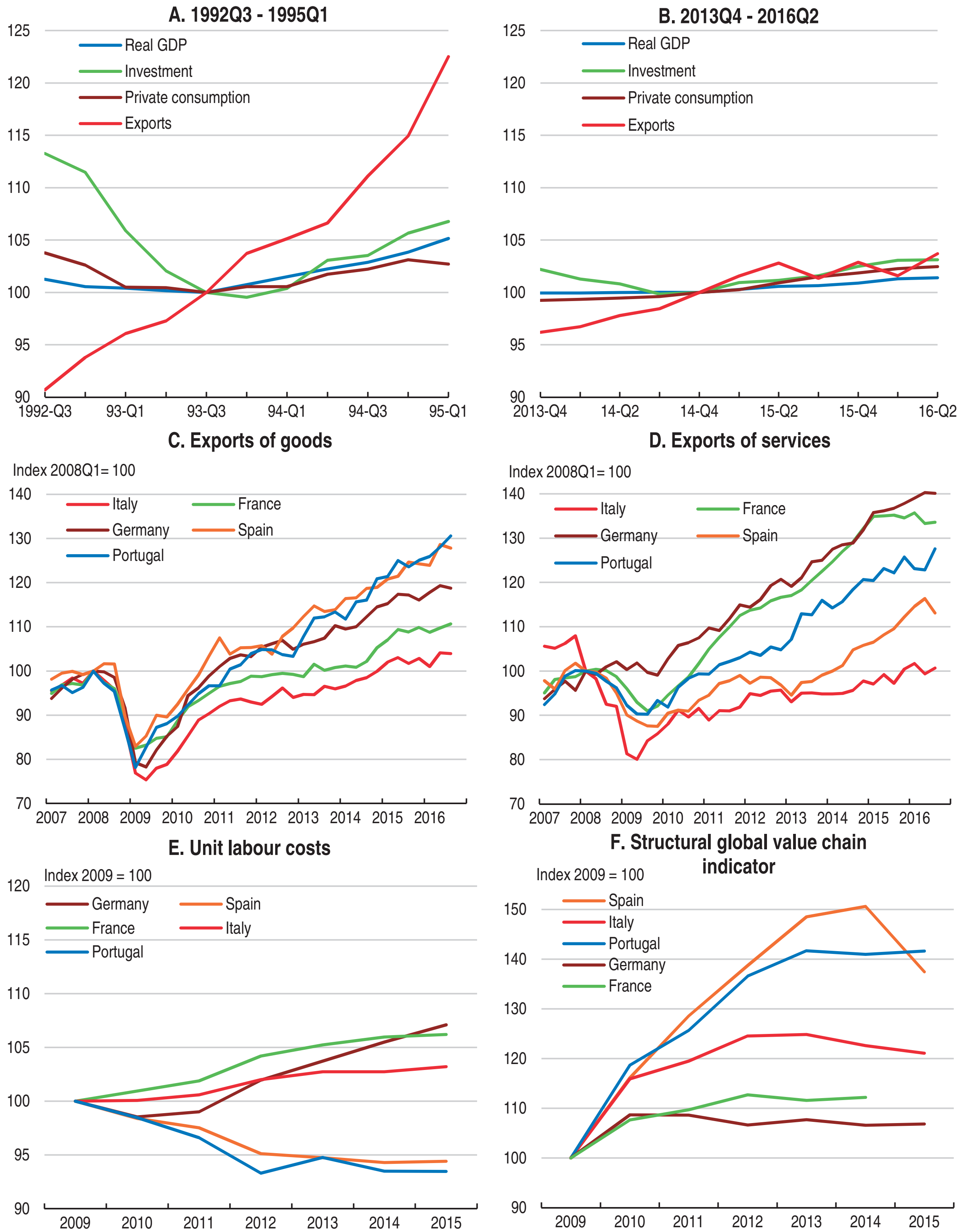
services have levelled off and show some sign of improvement (Figure 9, Panel C). The latest Purchase Managers' Index indicators for the service and manufacturing sectors indicate the perpetuation of modest output growth in the months ahead.

The economy will continue to expand moderately

GDP is projected to grow by 0.9% in 2016 and edge up to 1% in 2017 and 2018. Uncertainties concerning the banking sector and Brexit could moderate private consumption growth in 2017. In 2018, the expiration of social security contribution exemptions for open-ended contracts will mitigate employment growth. The moderate economic expansion and credit supply constraints linked to bad loans will curb private investment. Expected low growth in the euro area and Italy's main trading partners will keep restraining sales abroad (Table 2).

The resolution of uncertainties surrounding the banking sector and Brexit could help restore consumer confidence, leading to faster private consumption growth than expected. Decisive progress on reducing bad loans could further improve credit-supply developments. The planned increase in public investment could also be faster and more effective than anticipated, while implementation delays would have the opposite effect. On the other hand, renewed financial market turmoil in the euro area or an aggravation of banks' balance sheet problems could drive risk spreads higher, raise debt financing costs and require a fiscal retrenchment. Lower world trade growth would hinder exports. The refugee crisis could again intensify, straining government finance and capacity to deal with a larger influx of immigrants. Higher oil and energy prices would diminish household purchasing power, lowering private consumption. The rejection of the constitutional reform in the referendum risks slowing down the structural reform process, lowering growth prospects and making fiscal consolidation more of a challenge.

Figure 7. **Export is not adding to the recovery as in past recoveries**



Source: OECD *Analytical Database*; OECD *Productivity Database*; and Haugh, D. et al. (2016), "Cardiac Arrest or Dizzy Spell: Why is World Trade So Weak and What can Policy Do About It?", *OECD Economic Policy Papers*, No. 18, OECD Publishing, Paris.

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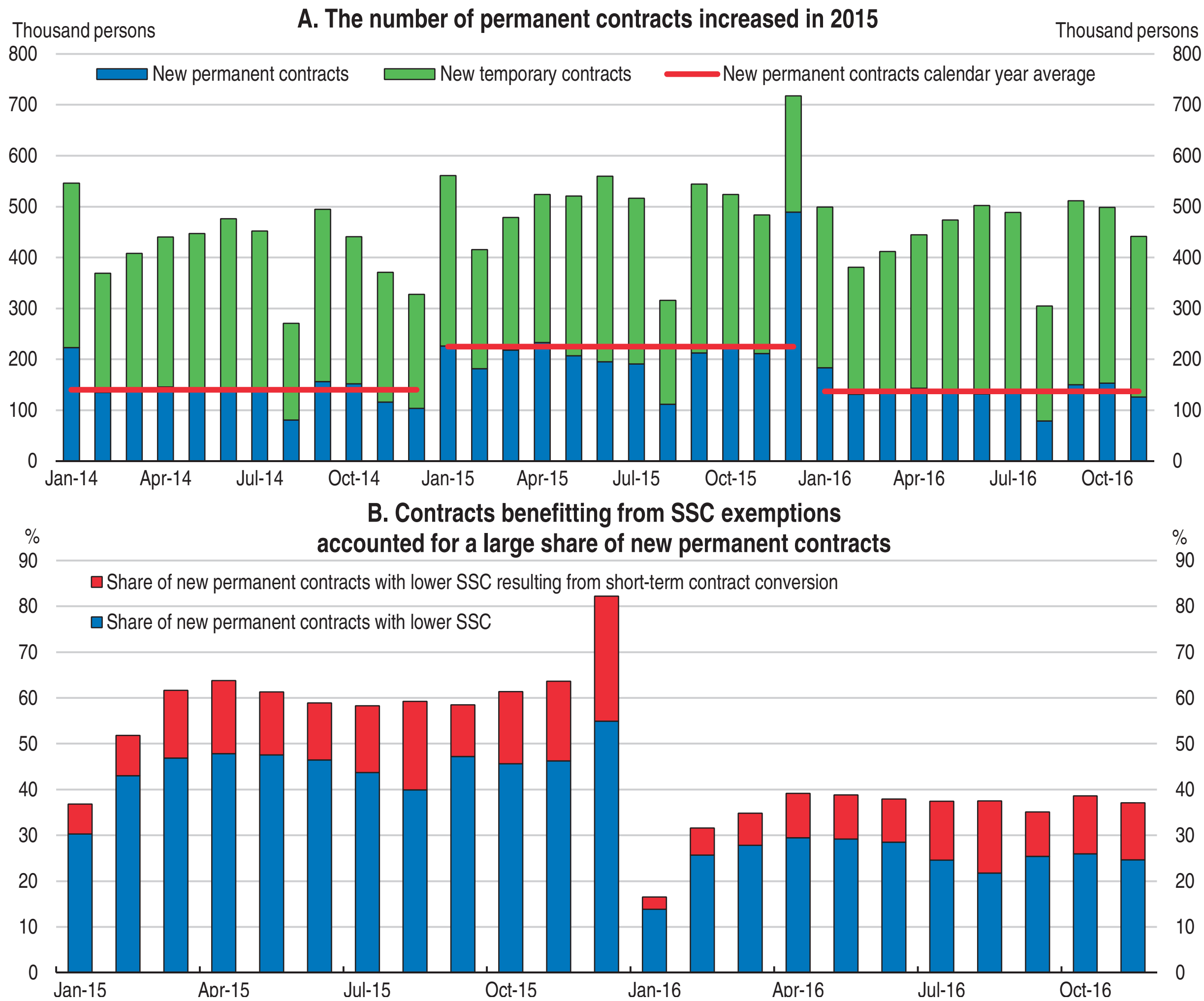
Figure 8. **The Jobs Act and social security contribution (SSC) exemptions have jolted the labour market**



Source: Istituto nazionale della previdenza sociale (INPS), *Osservatorio sul Precariato*.

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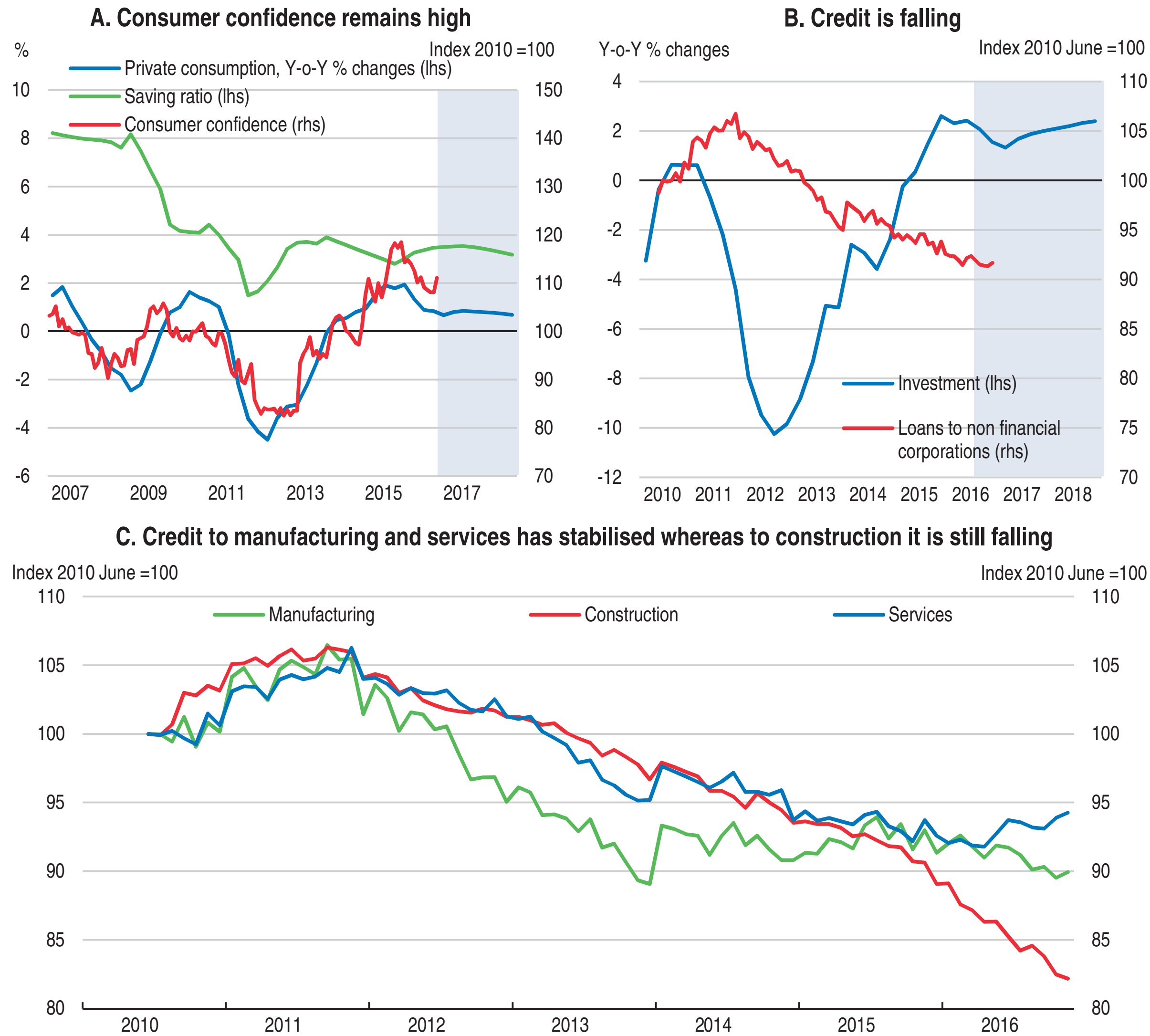
Stronger growth would help reduce public debt

The government is committed to fiscal sustainability and continues to reduce the deficit gradually. The 2017 budget provides diverse incentives to boost investment and innovation – especially through the Industry 4.0 Plan (Box 1) – and repeals a VAT hike that was previously scheduled for January 2017. It also lowers the corporate income tax rate from 27.5 to 24% and extends for two years social security contribution exemptions for new permanent contracts, but limits them to southern regions and to newly-hired students who have completed internships at the firm. Spending on low pensions and, to a much lesser extent, family benefits are increased. The government has asked the EU for additional fiscal leeway amounting to about 0.4% of GDP, reflecting exceptional economic circumstances linked to the recent earthquakes and the refugee crisis, which will result in a more gradual adjustment towards the Medium Term Objective of a balanced budget in 2019. In January 2017, the EU requested additional budget measures delivering a structural adjustment of at least 0.2% of GDP. The government subsequently announced it intends to adopt the necessary measures as part of a comprehensive fiscal strategy to be

Figure 9. **Confidence has declined but remains high while bank loan disbursements keep falling**



Source: OECD *Economic Outlook 100 Database*, projections revised as of 20 January 2017; ISTAT; and Thomson Reuters.

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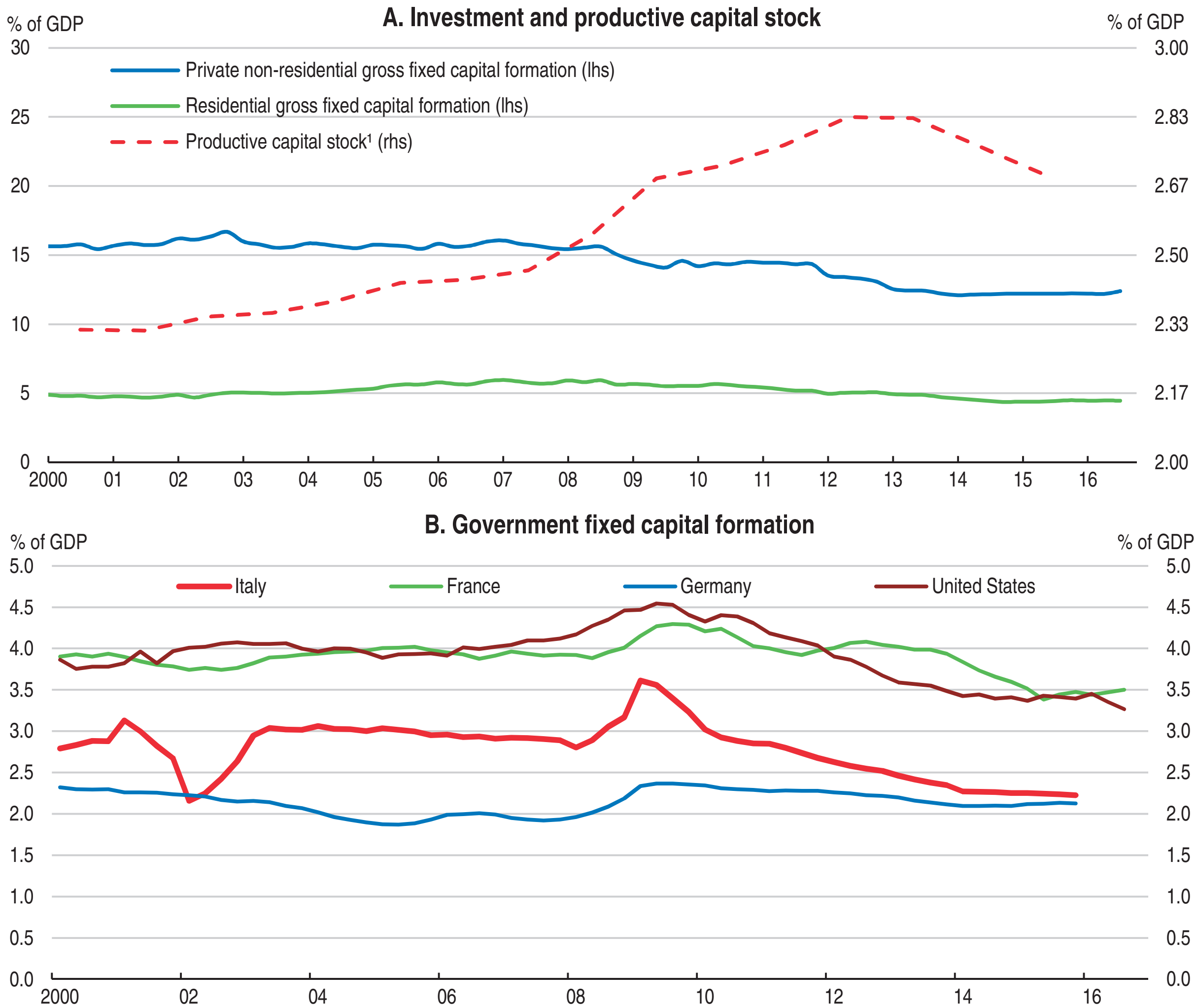
specified in the Economic and Financial Document to be published in early spring. Lower interest payments and the mild economic expansion will keep the headline budget deficit at 2.3% in 2017 and 2.2% in 2018, without considering the 0.2% structural adjustment requested by the European Commission.

Italy's fiscal stance is broadly appropriate provided that the available fiscal space is used to finance policies leading to faster and more sustainable growth. Lower interest payments, have generated fiscal space. Between 2012 and 2016 interest payments on the public debt have declined from 5.2% to an estimated 4.0% of GDP. Restoring public investment is a priority as since the start of the crisis it has dropped by more than 30% in nominal terms, to 2.2% of GDP the lowest level in more than 25 years. Effective public investment will boost growth and help reduce the debt ratio (Mourougane et al., 2016). Priorities could include transport infrastructure in addition to a multi-year programme to make buildings earthquake-proof and promoting decarbonisation of the economy in line

Figure 10. **The crisis hit investment hard and the productive capital stock is falling**



1. Total economy less housing.

Source: *OECD Analytical Database* and *OECD National Accounts Database*.

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with the COP21 goal. In addition, education spending and family benefits, which are low for an OECD country, should be raised to increase productivity and alleviate poverty (Fournier and Johansson, 2016).

Higher public investment must be accompanied by improved project selection to make sure resources are not wasted. In this respect, the government has started a broad review of existing infrastructure projects – including those of previous spending programmes but not yet started – based on an assessment of current needs, updated demand forecasts and budgetary constraints. To this end, the Ministry of Transport and Infrastructure is using a set of guidelines to evaluate public investment projects based on social and economic considerations. This review, if fully completed, along with the new public procurement code and the work of the anti-corruption commission (Table 8) hold the promise of improving the effectiveness of infrastructure spending. The government should make sure to select infrastructure projects based on objective and transparent criteria, including cost-benefit analyses, and promote their use across regions.

Table 2. **Macroeconomic indicators and projections**

Annual percentage change, volume (2010 prices)

	2013 Current prices (EUR billion)	2014	2015	2016	2017	2018
Gross domestic product (GDP)	**1 604**	**0.2**	**0.6**	**0.9**	**1.0**	**1.0**
Private consumption	981	0.4	1.5	1.2	0.8	0.7
Government consumption	315	-0.9	-0.6	0.5	0.7	0.5
Gross fixed capital formation	277	-2.9	1.1	2.1	1.7	2.3
Housing	78	-6.9	0.3	2.2	0.7	1.4
Final domestic demand	1 573	-0.4	1.0	1.3	0.9	1.0
Stockbuilding[1]	-6	0.7	0.0	-0.3	0.1	0.0
Total domestic demand	1 567	0.3	1.0	1.0	1.0	0.9
Exports of goods and services	464	2.6	4.0	1.7	2.9	2.9
Imports of goods and services	427	3.2	5.8	2.2	3.0	2.9
Net exports[1]	37	-0.1	-0.4	-0.1	0.1	0.1
Other indicators (growth rates, unless specified)						
Potential GDP		-0.2	-0.2	-0.1	0.0	0.1
Output gap[2]		-5.9	-5.1	-4.2	-3.2	-2.3
Employment		0.4	0.8	1.3	0.9	0.6
Unemployment rate		12.6	11.9	11.5	11.1	10.7
GDP deflator		0.9	0.6	0.6	0.8	1.0
Consumer price index (harmonised)		0.2	0.1	-0.1	0.8	1.2
Core consumer prices (harmonised)		0.7	0.7	0.5	0.7	1.2
Household saving ratio, net[3]		3.7	3.0	3.3	3.5	3.3
Trade balance[4]		2.9	3.2			
Current account balance[4]		1.9	1.6	3.0	2.9	3.1
General government fiscal balance[4]		-3.0	-2.6	-2.4	-2.3	-2.2
Underlying general government fiscal balance[2]		0.2	0.4	-0.1	-0.6	-1.0
Underlying government primary fiscal balance[2]		4.4	4.1	3.6	3.0	2.6
General government gross debt (Maastricht)[4]		131.8	132.4	132.8	132.7	132.1
General government net debt[4]		130.5	132.6	133.0	132.9	132.4
Three-month money market rate, average		0.2	0.0	-0.3	-0.3	-0.3
Ten-year government bond yield, average		2.9	1.7	1.5	1.7	1.7

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.

Source: *OECD Economic Outlook 100 Database*, projections revised as of 20 January 2017.

Italy's fiscal policy needs to tread a fine line between fiscal consolidation and supporting the still uncertain economic recovery. Fiscal consolidation accompanied by ultra-low interest rates and modest output growth is stabilising the debt-to-GDP ratio at about 133% of GDP (Figure 11, Panel A). However, if growth-enhancing reforms and higher inflation lead to faster nominal income growth than seen in the past decade, the debt-GDP ratio will fall (Figure 11, Panel B).

Effective growth-oriented policies and medium term fiscal consolidation are the keys to a durable and sustainable debt reduction strategy. In a business as usual scenario considering the projections for the *OECD Economic Outlook* No. 100 until 2018 and thereafter assuming yearly real GDP growth of 1%, a primary surplus of 1.5% of GDP, an effective interest rate of 3.2% and inflation of GDP deflator rising progressively to 1.5% by 2024 and remaining constant after, the debt ratio would decline to 123% in 2030 (Figure 12). Raising yearly GDP growth by 0.5 percentage points (to 1.5%), by for instance cutting employer's social security contribution rate to one-third of their current value (as explained below), would bring the

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

Vulnerability	Possible outcome
Protracted political instability.	A long period of political instability would risk halting the implementation of reforms already approved – such as the Jobs Act, for what concerns job search and training policies, the Good School and public administration reforms – and derailing the structural reform agenda.
Intensification of geo-political tensions in the Mediterranean region and heightening of the refugee crisis.	An increase in the already large influx of refugees would require additional resources to host them and might generate internal political tensions.
Severe financial market and banking system crisis.	The banking sector could require larger public support than what is already provisioned for in the context of limited fiscal space.
Economic stagnation, higher interest rate and debt snowballing.	Slowing down structural reforms in the context of renewed tensions and uncertainties in the euro area and slower growth in main trade partners could lead to economic stagnation and higher interest rate, resulting in a rising debt to GDP ratio.
Further deterioration of the European banking system's financial health.	Aggravation of banks' problems in some European countries could have ripple effects across the EU and beyond, engendering financial market turmoil and higher interest rates besides undermining confidence in Italian banks.
Disorderly exit of the United Kingdom from the EU.	A disorderly exit of the United Kingdom from the EU could erode trust in European institutions and severely hurt consumer and producer confidence, resulting in lower investment.

Box 1. **Main elements of the Industry 4.0 Plan**

In 2016, the government launched the National Industry 4.0 Plan, which provides a range of incentives (for about EUR 13 billion) to boost innovation and skills in new technologies over 2017-20. This is the first national industry plan explicitly aiming at modernising the productive structure of the economy, following similar initiatives in other countries, such as France (Industrie du Futur), Germany (Industrie 4.0) and the United States (Manufacturing USA).

Its key elements to boost investment include:

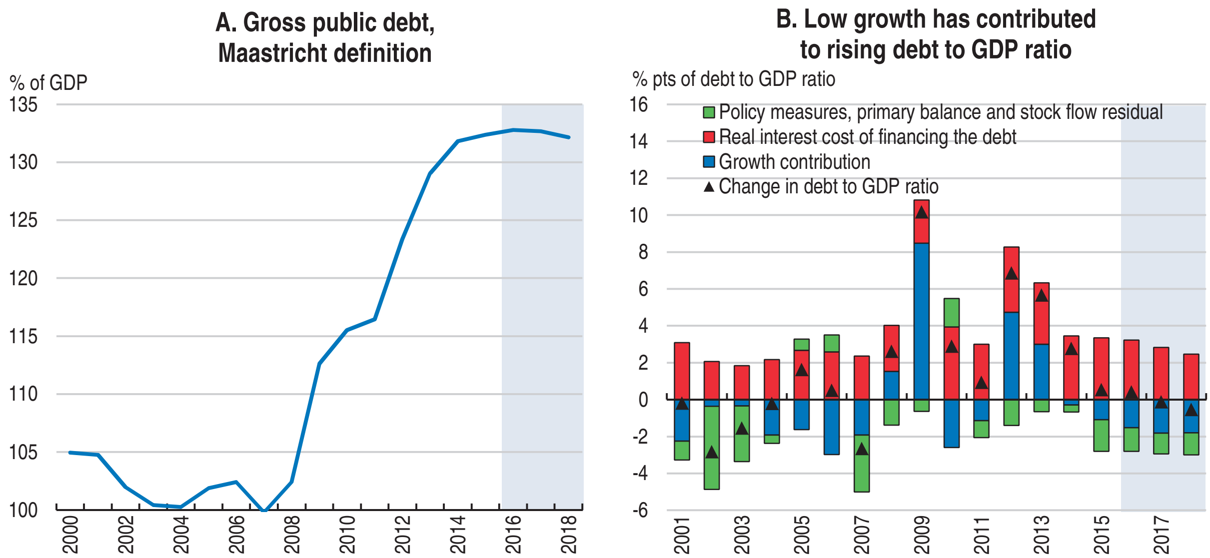
- Hyper-depreciation scheme (introduced with the budget law of 2017): companies will be allowed to deduct 250% of the value of investments in industry 4.0 technologies which are instrumental to the digitalisation and innovation of their industrial processes.
- Super-depreciation (introduced in 2016 and enhanced in 2017): companies will be allowed to deduct from their taxable income a sum equal to 140% of the original cost of eligible equipment, machineries, software (if connected to investments in industry 4.0 technologies) and other eligible equipment.
- Strengthened R&D tax credits for 2017 by raising the share of internal R&D spending that is deductible from companies' taxable income to 50% (from 25%) – the same as for external R&D spending – and raising the annual tax-credit celling to EUR 20 million (from EUR 5 million).
- Stronger incentives for investing in start-ups and innovative SMEs by: raising the tax credit to 30% (from 19%) of the invested capital in start-ups and innovative SMEs and raising the maximum eligible investment to EUR 1 million (from EUR 0.5 million); allowing companies to claim a tax credit equivalent to losses of controlled start-ups for the first four years of activity; boosting venture capital dedicated to selected industry 4.0 technologies through co-investment schemes with private sector funds.

The Industry 4.0 Plan also aims at enhancing the supply of skills relating to new technology by:

- Implementing the Digital School National Plan.
- Increasing the number of students (at university and post-secondary vocational and education training courses) and doctoral researchers in technical and scientific subjects.
- Creating competence centres and digital innovation hubs to promote cooperation and exchanges among universities, large companies and SMEs, start-ups, business associations and public sector, aiming at supporting the technological transfer and enhancing technical and managerial skills on new technologies.

The Industry 4.0 Plan is flanked by a planned increase in public investments to significantly extend the ultra-broad band network, especially in areas where private operators are unwilling to invest to extend the network.

Figure 11. **The public debt to GDP ratio has stabilised**



Note: Panel B employs the methodology of Mauro, P. and J. Zilinsky (2016), "Reducing Government Debt Ratios in an Era of Low Growth", *PIIE Policy Brief*, No. 16-10, Peterson Institute for International Economics.
Source: *OECD Economic Outlook 100 Database* and OECD calculations.

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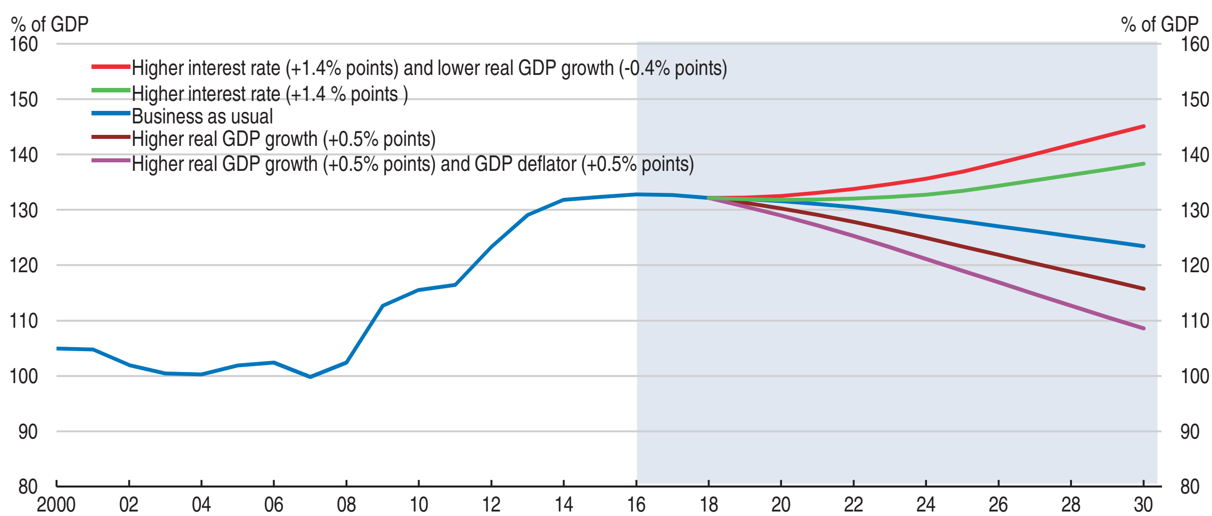
Figure 12. **The public debt path is uncertain**



Note: The business as usual scenario considers the projections for the *Economic Outlook* No. 100 until 2018 and thereafter assuming yearly real GDP growth of 1%, primary surplus of 1.5% of GDP, effective interest rate of 3.2% and inflation of GDP deflator rising progressively to 1.5% by 2024 and remaining constant after.
Source: Calculations based on *OECD Economic Outlook 100 Database*.

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debt ratio further down to 115% in 2030. On the other hand, if interest payments were to rise to levels comparable to the pre-crisis period (with effective interest rising progressively to 4.4%) the debt ratio would reach nearly 140% of GDP by 2030. In this case, to stabilise debt at its current level, the primary surplus would have to increase to 2% of GDP (from 1.5%) or real GDP growth would have to rise to nearly 1.4% (from 1%). The recent downgrade by the rating agency DBRS is a reminder that the high public debt continues to pose fiscal vulnerabilities. The government should fulfil its pledge to gradually increase the primary surplus.

The government's privatisation plan could contribute to a faster debt decline. In 2016, the government divested a 46.6% equity stake in the air traffic controller (ENAV). Other planned transactions were postponed due to market volatility. The government remains committed to continuing the privatisation process and forecasts privatisation proceeds to reach 0.5% of GDP in 2017. Given the need to adopt a durable and sustainable debt reduction strategy, privatisations should be undertaken with the aim of improving the efficiency and the value of state assets and not just of reducing the public debt.

Fighting tax evasion

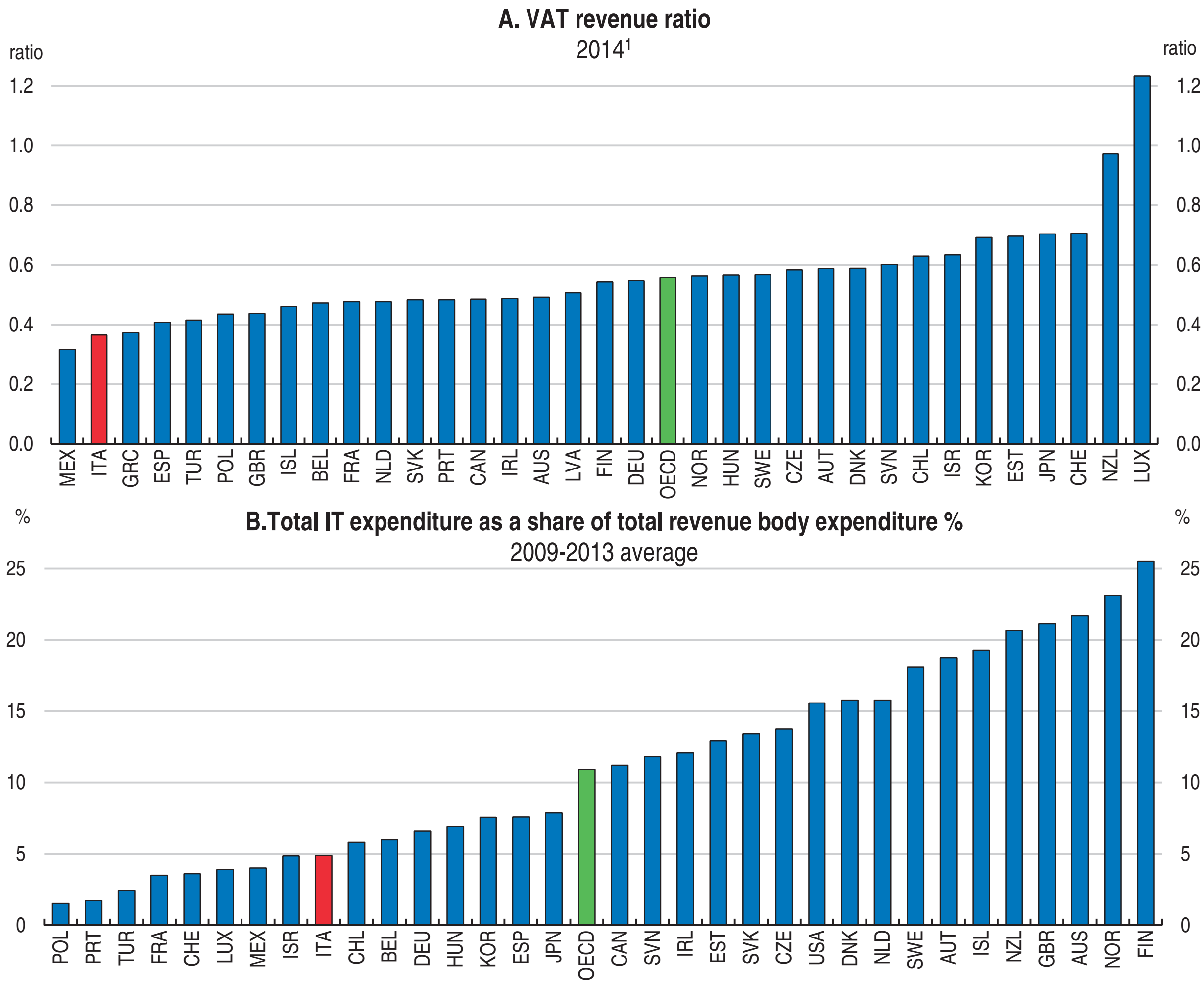
Italy's taxation system suffers from high tax evasion, numerous exemptions that reduce revenue, and excessive complexity. Indeed, according to the World Bank's "Paying Taxes" indicator (which measures the time or cost to pay taxes), Italy ranks 126 of 190 countries, one of the lowest among OECD countries. The tax-reform enabling law, which was intended to introduce broad changes, has been only partially implemented (Table 5). In 2016, the maximum limit for cash payments was increased from EUR 1 000 to EUR 3 000. On the positive side, the government has introduced measures to review the various tax breaks and exemptions in the yearly budget and to accelerate the resolution of tax litigation. Tax breaks will also be subject every five years to a thorough evaluation assessment of their effectiveness and cost in terms of lost revenue. In 2015, measures to fight tax evasion delivered about EUR 15 billion in additional tax receipts (MEF, 2016).

The amount of outstanding tax arrears is exceptionally large: as of September 2015, total tax arrears exceeded EUR 750 billion, broadly equivalent to the annual general government tax revenue, far higher than all other OECD and G20 economies (OECD, 2016c; OECD, 2015b). Ineffective tax-arrear recovery procedures exacerbate the problem of low tax compliance. For instance, VAT revenues fall well short of what they could be (Figure 13, Panel A). Tax compliance has traditionally relied on audits and control, resulting often in uncollectable assessments. Also, the recovery of tax arrears is undermined by the lack of a systematic process to write off tax arrears that are no longer due for payment, estimated at about 20% of the total tax debt (OECD, 2015d; OECD, 2016c).

Italy tax administration has ample scope to improve human resources management and use more extensively information and technology (IT) tools:

- According to the OECD (2015b) cross-country study *Tax Administration 2015*, Italy is one of the few OECD countries where the tax administration agency does not have a staff development plan and does not regularly evaluate staff. At the same time, it has flexible ways to reward good performance. This system is confusing and results in important delays; for example, in early 2016 the Revenue Agency's employees had yet to receive the reward in relation to their 2013 performance (OECD, 2016d). A large share of managing positions at the Revenue Agency is also vacant, following the annulment of previous recruiting procedures by the Constitutional Court in 2015.
- Between 2009 and 2013, IT expenditure of Italy's tax agency averaged about 5% of its total expenditure, less than half of the OECD average (Figure 13, Panel B). The OECD (2015b) cross-country study *Tax Administration 2015* underlines how higher spending on IT is associated with better performance-related indicators, such as e-filing, e-payment, lower tax collection costs and tax arrears. Information and technology is also crucial to

Figure 13. **Value-added tax (VAT) collection is low**



1. The VAT revenue ratio (VRR) is defined as the ratio between 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 estimated by the following formula: VRR = VAT revenue/([consumption – VAT revenue] × standard VAT rate). VAT rates used are standard rates applicable as at 1 January. The fact 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. The OECD aggregate is an unweighted average of data shown. Data for Canada cover federal VAT only.

Source: OECD (2016), *Consumption Tax Trends 2016: VAT/GST and Excise Rates, Trends and Policy Issues*, OECD Publishing, Paris; OECD (2015), *Tax Administration 2015 Comparative Information on OECD and Other Advanced and Emerging Economies*, OECD Publishing, Paris.

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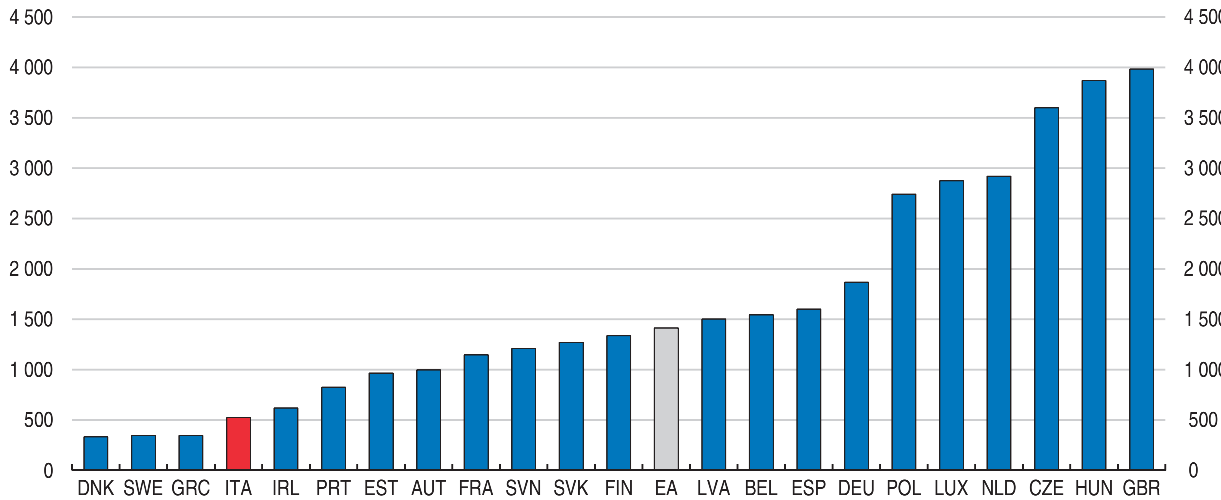
extend the use of electronic invoicing (e-invoicing) and improve VAT compliance. Italy already requires e-invoicing for sales to the public administration. E-invoices are now being extended to business-to-business transactions, but only on a voluntary basis. Moreover, in Italy non-cash means of payments are used little compared to other OECD countries, facilitating tax evasion (Figure 14). Lowering the threshold on cash payments from EUR 3 000 back to EUR 1 000 (the same level as in France) would help lowering tax evasion.

Figure 14. **Non-cash payments are low in Italy**

% of GDP, 2015



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

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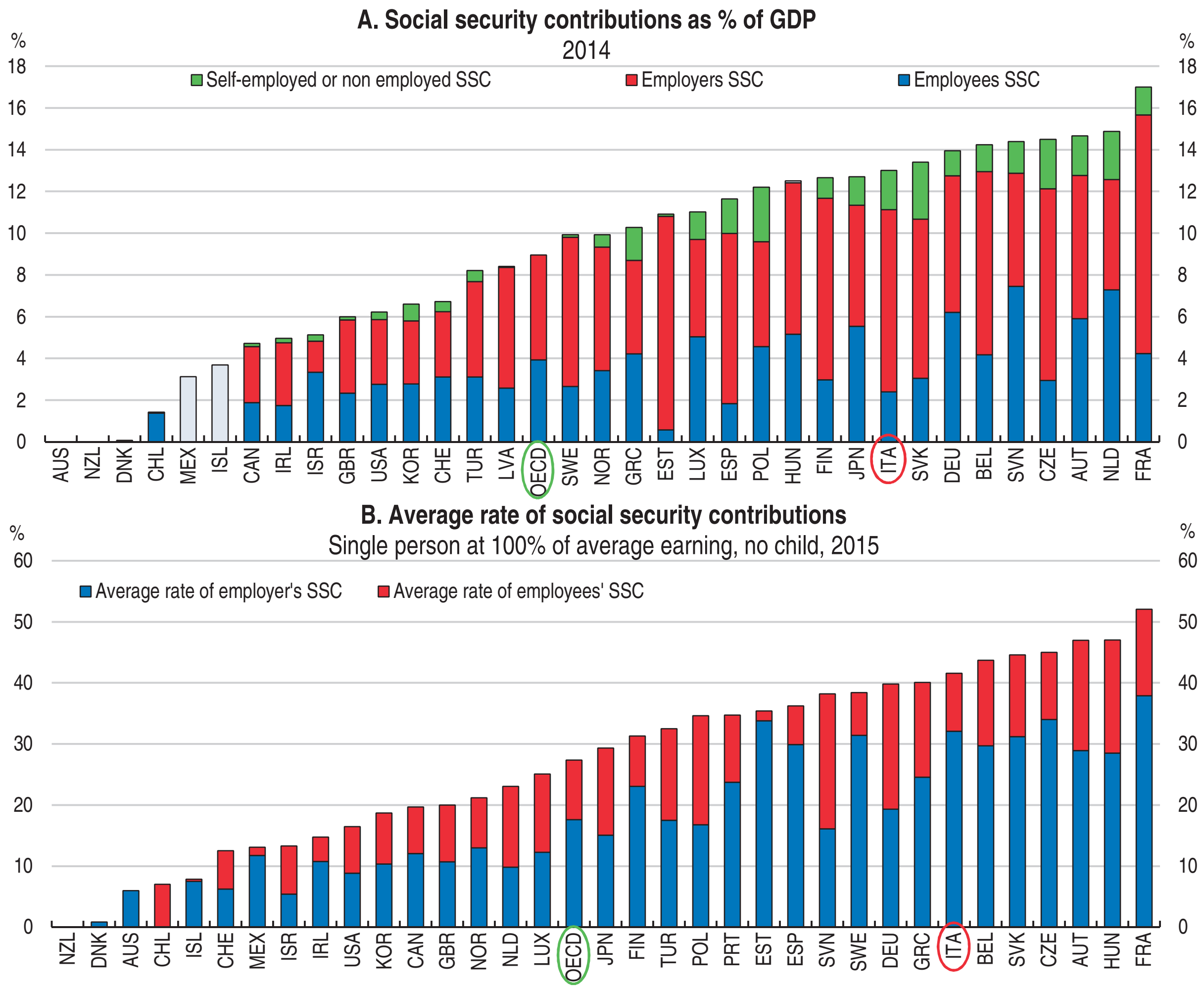
Enhancing tax collection would generate large additional revenues that would allow for a permanent reduction in social security contributions in a revenue-neutral way. Italy's social security contributions are high, accounting for about 13% of GDP and the employers' social security contributions rate is among the highest among OECD countries (Figure 15). Permanently lowering social security contributions would raise growth and employment over the medium and long term, thus accelerating the reduction in the debt ratio. Cutting employers' social security contributions by 10 percentage points would increase GDP per capita by 1.6% after five years (0.3% per year) and 2% (0.2% per year) after 10 years (Table 4). The employment rate would also increase noticeably by 1 and 1.3 percentage points after 5 and 10 years. In the absence of changes to pension payments, revenue from a more growth-friendly tax base need be used to finance pension obligations. For example, raising VAT revenues by improving collection and broadening its base – that is, raising the VAT revenue ratio (the ratio of actual collection to revenue that would be collected if VAT was applied at the standard rate to the entire potential tax base and all revenue was collected) – to the OECD average (about 56%) would increase VAT receipts by about 50% (or EUR 45 billion), assuming no change in consumption. These additional tax revenues would amount to more than 30% of employers' social security contributions in 2014. Also, they would be far above the 2015 social security contribution exemptions for new permanent contracts (only EUR 2.2 billion) (INPS, 2016). Assuming lower consumption following the increase in the VAT revenue ratio would still generate large additional revenues that could fund a large reduction in employer's social security contributions. A recent study on the VAT gap on European countries reports similar large increase in VAT revenues by raising Italy's VAT compliance to the EU average (Case, 2016).

Recurrent taxes on residential property are another growth-friendly tax and, if applied in a progressive way, can also improve the equity of the tax system (OECD, 2010; Cournède et al., 2013). Such taxes are underused in Italy and in this regard, the recent abolition of the property tax on first residences was a step backward. The government should update the

Figure 15. **Social security contributions are high**



Source: *OECD Revenue Statistics 2016*; and OECD (2016), *Taxing Wages 2016*, OECD Publishing, Paris.

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Table 4. **Impact of permanently lowering employers' social security contributions**

	Impact after five years		Impact after ten years	
	GDP per capita (in per cent)	Employment rate (percentage points)	GDP per capita (in per cent)	Employment rate (percentage points)
	A. Employers' social security contribution rate is reduced to the OECD average (assumed change in tax wedge: 10 percentage points)			
Total	**1.58**	**1.06**	**1.98**	**1.32**
Average annual growth	*0.31*		*0.20*	
	B. Employers' social security contribution rate is reduced to one third of its existing value (assumed change in tax wedge: 16.2 percentage points)			
Total	**2.56**	**1.70**	**3.20**	**2.13**
Average annual growth	*0.51*		*0.32*	

Note: Based on estimates in Egert and Gal (2017), "The Quantification of Structural Reforms: A New Framework", *OECD Economics Department Working Papers*, forthcoming.
Source: OECD calculations.

Table 5. **Past OECD recommendations on fiscal issues**

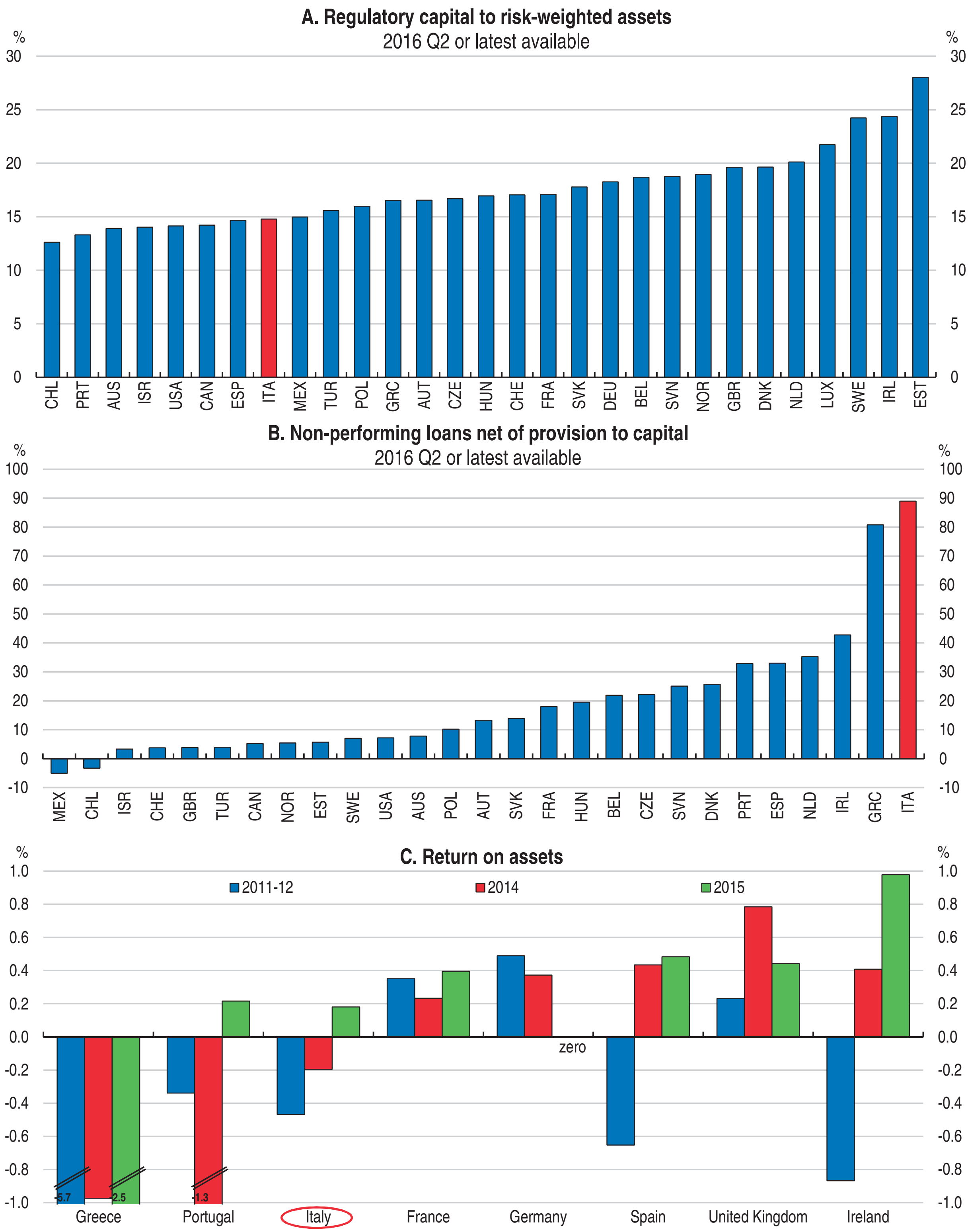
Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Continue efforts to reduce tax evasion through more effective enforcement and increase tax compliance through simplified collection procedures. Broaden tax bases, in particular by cutting the number of tax expenditures, and simplify the tax system.	Some progress. Implemented measures: VAT electronic invoicing; VAT split payment and reverse charge; implementation of BEPS counter-measures; bilateral agreements to allow tax information exchange; simplification of tax collection; improved monitoring of tax evasion. Since 2013, the government has presented a yearly report to the Parliament on tax evasion, which describes results and strategies of the implemented activities, including an estimate of the tax gap (the receipts lost because of tax evasion) of main tax items. Moreover, the Government will have to present a yearly report for the monitoring and review of tax expenditures. The first report has been presented with the Budget Law for 2017. The EU Anti-Tax Avoidance Directive ("ATAD") was approved in June 2016 to prevent cross-border tax avoidance by businesses.
Stick to the planned fiscal strategy so as to bring the debt-to-GDP ratio onto a declining path.	The debt ratio has stabilised trough prudent fiscal policy, lower interest payment and modest economic growth.
Promote greater use of centralised procurement, cost information systems and benchmarking.	The share of centrally managed purchases is gradually increasing; 33 central purchasing bodies have been established; and the government has issued a list of goods and services that will have to be purchased centrally.
Continue to assess the magnitude of budgetary contingent liabilities, including the vulnerability of public finances to risks associated with the financial sector.	Ongoing.
Make taxation more environmentally-friendly by reducing the gap between duties on diesel and petrol.	No progress.
Shift the tax burden from electricity to the energy products used to generate it, with the respective rates set to reflect the carbon emissions and other pollutants associated with each fuel.	No progress.
Implement the planned reform of the Internal Stability Pact to regulate only overall borrowing of sub-national government, with consolidation targets for indebted administrations. Replace its detailed provisions with a fiscal federalism structure that reflects the desired degree of decentralisation.	Implemented the reform that envisages the entry into force in 2016 of the balanced budget rule for all sub-national governments requiring each entity to balance the overall balance or achieve nominal surplus.

taxable value of properties on a regular basis, to ensure that relative property price changes do not induce inequities. The property tax on primary residences should be re-introduced so as to generate the fiscal space to reduce taxes on productive activity. The government has postponed comprehensive reform of cadastral value until 2017-18 to study its revenue and distributional effects.

Returning the banking sector to health

The capital ratios of Italy's banks exceed regulatory standards (Figure 16, Panel A), but banks in many respects remain weak relative to those in other jurisdictions. Banks have poor returns on assets, which have recently started to improve, and large stocks of non-performing loans (NPLs) (Figure 16, Panels B and C). NPLs net of provisions amounted to about 90% of banks' capital at end-2015, the most severe situation among European countries. The gross value of non-performing loans was about EUR 350 billion at end-2015, representing 18% of all outstanding loans (Figure 17, Panel D). Bad loans ("sofferenze"), the most problematic type of NPLs, accounted for about 60% of NPLs. The rise in bad loans during the post-crisis period is mostly attributable to the non-financial corporation sector (Figure 17). In recent years, banks increased their loan-loss provisions substantially, reaching 100% of operating profits in 2013-14; as a result, the net realisable value of bad loans (i.e. the gross value of bad loans minus provisions) dropped from more than 50% to just above 40% (about EUR 80 billion) of book value (Figure 17).

Figure 16. **Capital ratios exceed thresholds whereas return on assets is low**



Source: IMF Financial Soundness Indicators.

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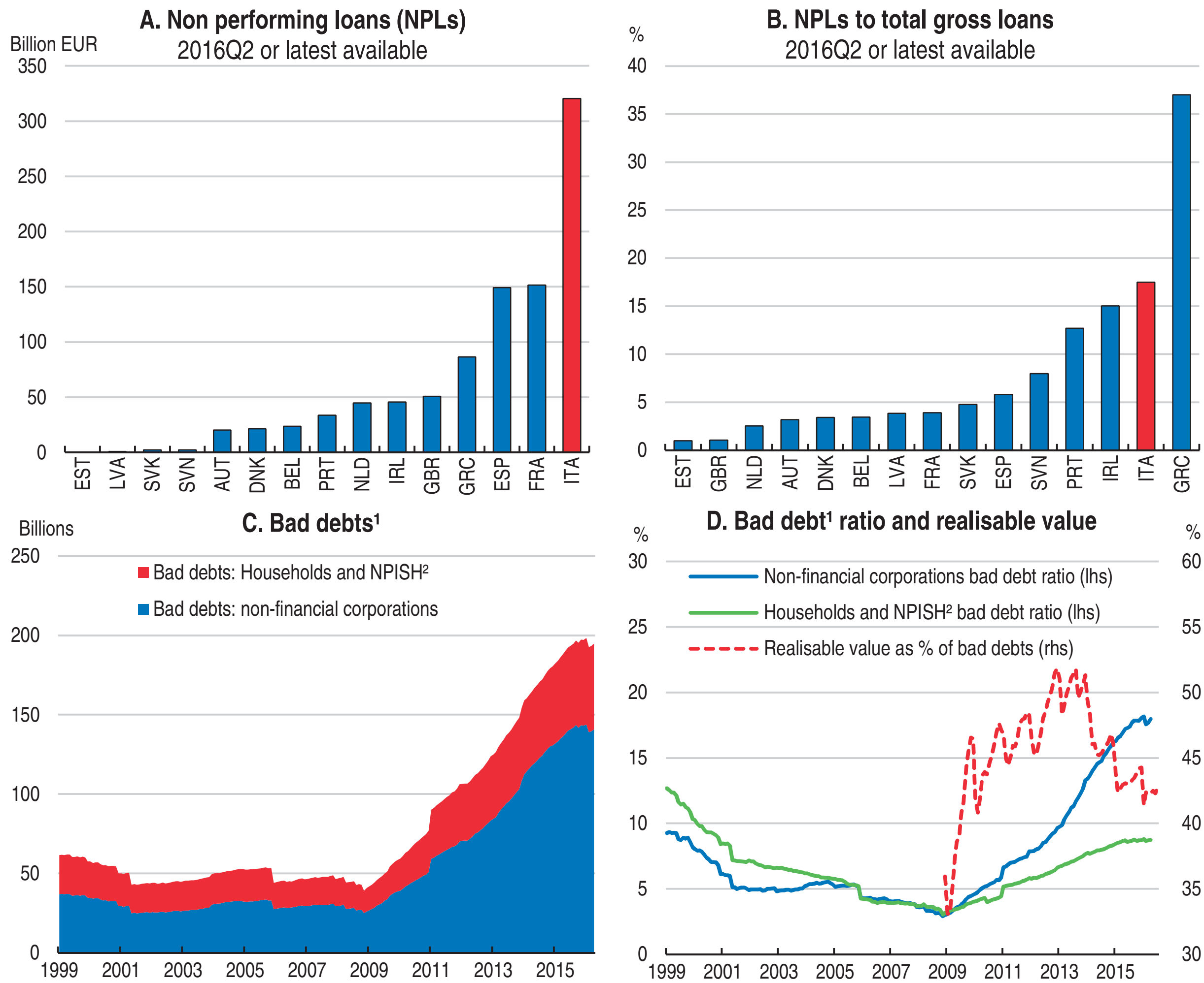
Figure 17. **The stock of non-performing loans is large**



1. Bad debts ("sofferenze") comprise the most risky non-performing loans. The realisable value of bad debt is the gross value of bad debts less provisions already made.
2. Non-Profit Institutions Serving Households.

Source: Thomson Reuters; IMF Financial Soundness Indicators; and Bank of Italy.

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The unfavourable macroeconomic developments explain much of the rise of NPLs in recent years. However, Italy's NPL ratios have been historically higher than in other European countries as the banking sector has long faced structural challenges due to poor governance, especially among many cooperative banks, high fragmentation and operating costs. In Italy, the number of banking sector's employees per 1 000 people is close to the EU average. However, Italy has the fourth largest number of bank branches per 1 000 people, 65% above the EU average. Moreover, bank branches are small, employing less than 10 people on average – 63% below the EU average. This suggests there is ample scope to increase efficiency by reducing the number of bank branches. The cooperative form of many banks has limited their capacity to access capital markets. Subordinated bonds sold to retail clients play a larger role in Italy than in other EU countries as a source of funds in addition to bank deposits. In Italy, households hold about 20% of bank bonds, far above other EU countries (Caribboni et al., 2016).

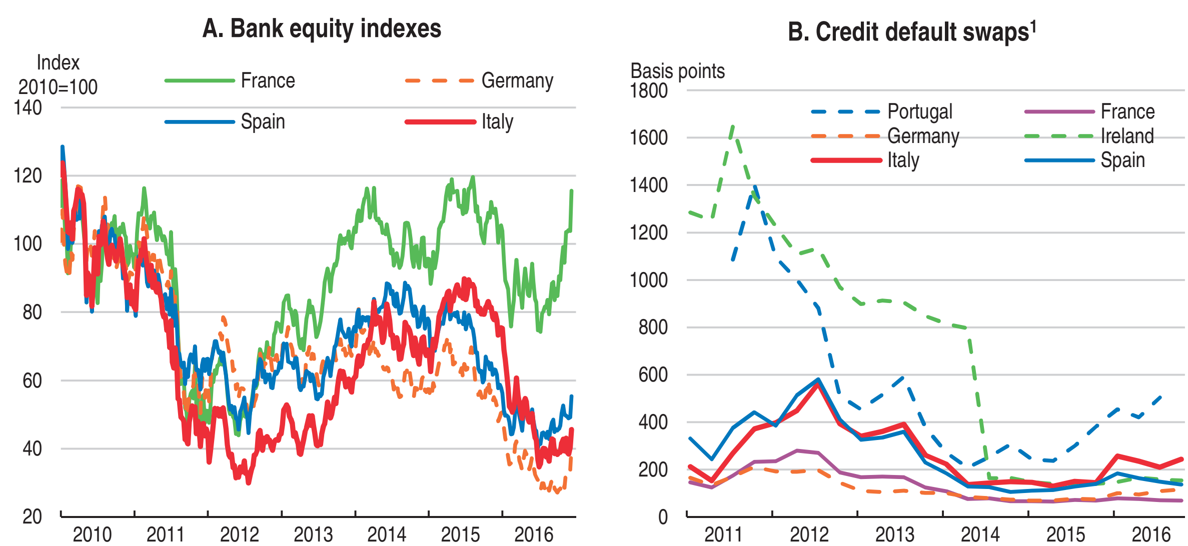
Italian and European bank equity valuations have come under pressure since late 2015 (Figure 18). Italy's banks credit default swaps have also increased, though they remained well below the 2012 peak and have been gradually falling. The introduction of the new EU Bank Recovery and Resolution Directive (BRRD) in January 2016 may have contributed to modifying the risk profile of European and Italian banks as it introduced bail-in rules. The risk posed by individual banks to the stability of the Italian banking system has also increased over time (Figure 19), as banks, like in other countries, have become more interconnected.

Bank consolidation and better governance would enhance efficiency and lay the foundation for higher profitability. The government has taken important steps in this area by promoting a new voluntary code of conduct for banking foundations and mandating for mutual banks to consolidate or become joint-stock companies while for large cooperative banks to turn into joint-stock companies. Improving the conduct of banking foundations and lowering their influence over single banks, by diversifying their portfolios, is key to improving bank performance: foundations often provide a link between banks and local governments, distorting lending and bank management's decisions (e.g. Boeri, 2013).

Recapitalisation of some banks, when needed, could prove difficult in current market conditions. Following the failure of the private-sector recapitalisation of Monte dei Paschi di Siena (MPS) in December 2016, the government, in consultation with EU authorities, has raised the public debt target for 2017 by EUR 20 billion (1.2% GDP). These resources will be used to recapitalise banks and fund other measures to protect savers. In addition, it has approved a decree ("Urgent measures to protect savings and the credit system") outlining how such recapitalisation and support measures will take place.

The government considers that the budgetary funds are more than sufficient to confront the current problems of Italy's banking sector. MPS' failed recapitalisation plan amounted to about EUR 5 billion (including a voluntary bond-equity swap), although recent

Figure 18. **Italian banks' share price has suffered**



1. Five-year senior debt, mid-rate spreads between the entity and the relevant benchmark curve; end of quarter data. For Italy the series shown is an average of four banks – Monte dei Paschi di Siena, Intesa Sanpaolo, Mediobanca and Unicredit; for other countries the number of banks used in the calculation depend on data available.

Source: Thomson Reuters.

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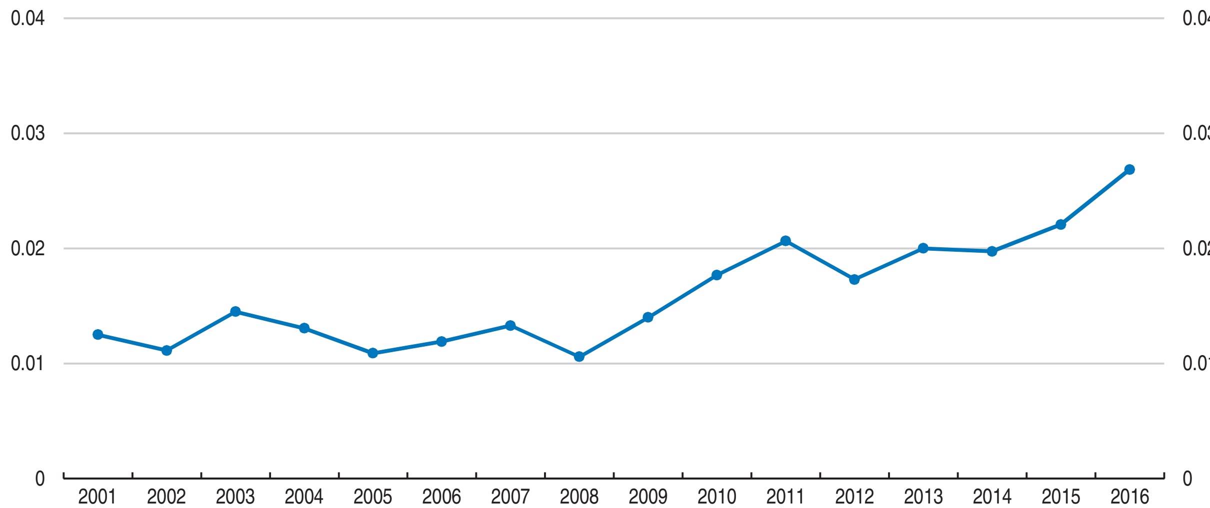
Figure 19. **Financial system risk has increased over time**



Note: The graph shows the median of the distribution of the systemic financial risk posed by banks. The systemic risk is computed through the conditional value at risk (CoVaR) approach developed by Adrian and Brunnermeier (2016). It is based on the difference between the value at risk of the whole financial system conditional on an institution being in distress and the value at risk of the whole financial system conditional on the institution not being in distress. The measure is applied to a sample of the 18 largest financial institutions in Italy on weekly data from 1990 to May 2016.
Source: OECD calculations based on *Thomson Reuters* database.

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estimates by the ECB have raised MPS' total capital need to EUR 8.8 billion. Meanwhile, the largest Italian bank (Unicredit) has recently announced a large private-sector recapitalisation for about EUR 13 billion, accompanied by a comprehensive restructuring plan. Markets have reacted positively to the plan with rising equity valuations following the announcement. Recapitalisation may be needed for other smaller banks but for significantly lower amounts. Given the limited (or no) systemic risks these banks pose, it is doubtful state intervention will be needed.

The decree, "Urgent measures to protect savings and the credit system", provides the legal tools for the state to participate in recapitalisation plans and implement other measures to protect savers. They include a state liquidity guarantee and capital strengthening measures. The state liquidity guarantee is fully consistent with EU state-aid rules as the bank requesting it will have to pay a market fee. The capital strengthening measures are in compliance with Bank Recovery and Resolution Directive (BRRD) and follow precautionary state recapitalisation rules. Precautionary recapitalisation is an exception to the bail-in process, which can be used to remedy a serious disturbance in a EU member's economy and preserve financial stability. The precautionary recapitalisation plan will involve burden sharing by equity and subordinated bondholders (sparing senior bondholders and depositors) and will have to be approved by European authorities.

These actions indicate that the government is ready to take full advantage of the degree of flexibility allowed by the BRRD to safeguard the banking system's stability, participate in bank recapitalisation and allow for adequate burden sharing of equity and subordinated bond holders. In case of mis-selling of banks' bonds to retail clients, these could be fully compensated for the losses they will incur.

The government has also taken initiatives to deal with the problems of non-performing loans and to create a liquid market for them (Table 6). Nonetheless, there remains a large gap between the realisable value of bad loans in banks' accounting books and market-based valuations. This gap stems from the high discount rate investors use for valuing non-performing loans compared to banks and the costly, long and uncertain loan-foreclosure and collateral-recovery procedures. A survey by the Bank of Italy covering the 2011-14 period (Carpinelli et al., 2016) reveals that the average length of loan recoveries was 3.5 years with an average recovery rate of about 40% and this rate is declining. Some of the reforms the government has undertaken directly tackle some of these issues, such as introducing faster loan foreclosing procedures (Table 6).

Table 6. **Past OECD recommendations on financial issues**

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Urgently take action to achieve a lower level of non-performing loans in the banking sector, including through enhancing the insolvency regime applied to distressed borrowers.	Shortening the period for tax deductibility of loan losses from 5 years to 1 year, in line with other EU countries. Establishing a government guarantee scheme to encourage banks to securitise non-performing loans and issue asset-backed securities. The scheme is compliant with EU state-aid rule as it will be offered at market price (based on the average price of a basket of credit default swap covering investment grade Italian companies and with the same duration of the asset-backed security) and will apply only to the senior tranches (i.e. high quality) of asset-backed securities. Before the government guarantee becomes effective, at least half of the junior tranches will have to be sold in the market. Coordinating the creation of the private-sector fund (Atlante) by a large set of Italian financial institutions to support banks' recapitalisation and invest in securitised non-performing loans. Reforming loan foreclosing procedures, which according to the government should cut the length of foreclosing procedures from 3 and half years to about 7-8 months; new procedures apply only to new loans but borrowers and lenders can renegotiate existing loans to apply new procedures to them also.
If progress in reducing nonperforming loans remains slow, consider setting up a public specialised asset management company ("bad bank") to accelerate the process, with due regard for state aid rules.	Banks are allowed to set up bad banks on a voluntary basis and to use a government guarantee on senior tranches of securitised bad debts.

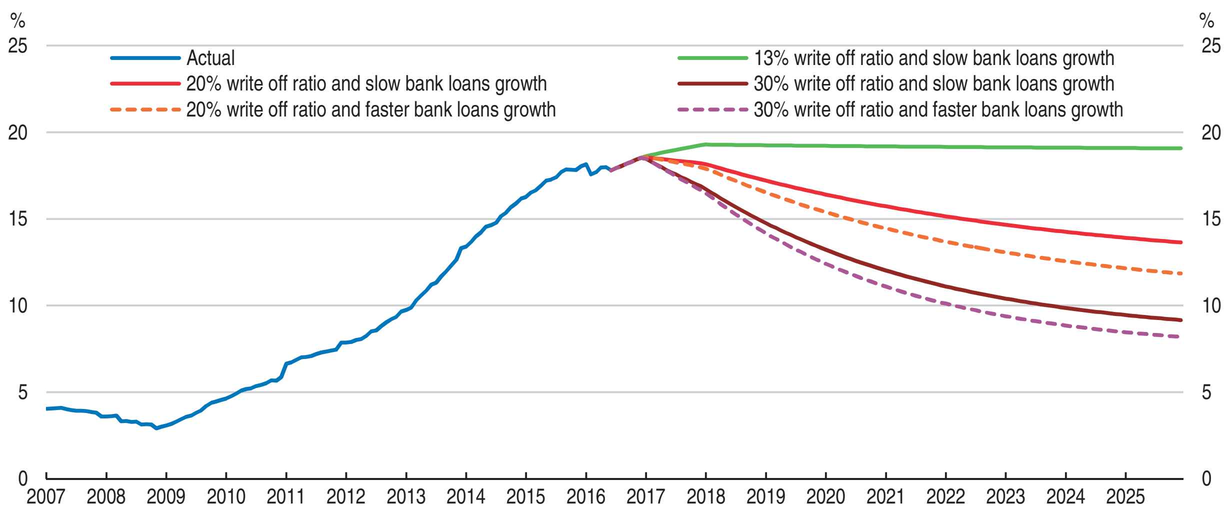
Disposing all bad loans based on recent market valuations of only 20% of their gross values would generate bank losses amounting to about EUR 40 billion, nearly 3% of GDP. This is likely an upper-bound estimates as it would require all banks (including those that are profitable and have a sound capital position) to dispose all their NPLs at the current low market prices. Market based valuation of 30% would reduce bank losses to EUR 25 billion. These figures are non-negligible but lower than the average net fiscal costs of other advanced countries' banking crisis, which have been estimated at about 4.2% of GDP (Laeven and Valencia, 2013).

To accelerate the reduction of banks' NPLs and promote the development of a liquid and deep market, the supervisors – could set gradual and bank-specific, credible and time-bound quantitative targets to write off legacy NPLs. This is consistent with the recently published Draft Guidance to Banks on Non-Performing Loans (ECB, 2016), for which banks, especially those with a large stock of NPLs, should develop a NPLs' reduction strategy, including short-term (1 year) and medium-term (3 years) quantitative targets.

Setting targets was the approach followed in Ireland, after the crisis, and Japan in the late 1990s and early 2000s, which proved successful in reducing the stock of NPLs and creating a distressed debt market. Targets to dispose of NPLs should be bank specific to tailor them to their characteristics. Banks with high NPLs should report their strategy and operational plan to the supervisor on a quarterly basis and explain any deviations from them. Non-compliance should trigger supervisory measures such as imposing sales of assets, suspending dividend payments and reducing operating costs. Incentives to accelerate the reduction of NPLs could consist of tax incentives linked to NPLs workout rates. It is urgent to act sooner rather than later as the decline in bad debts to levels comparable to the pre-crisis will be gradual and take several years even if banks markedly increase the write-off ratio of bad-debts and loan growth accelerates (Figure 20).

Figure 20. **The decline in bad debts will be gradual**

Bad debts as % of total loan outstanding



Note: The figure depicts bad debts ("sofferenze") as share of outstanding loans of the non-financial corporation sector for different write-off ratios of bad debts. The write-off ratio of bad debts is computed as the ratio between the value of bad debts written off in a given year and the average stock of bad debts in the same year. The value of bad debts written off is calculated as the value of new write-offs (sourced from ABI-Cerved (2016) for 2015) minus the net change in bad debts. The write-off ratio of bad-debts was 12.6% in 2015. The scenario of slow bank loan growth assumes 1% loans growth in 2016, 2% in 2017 and 3% in 2018 and thereafter. The scenario of faster bank loan growth assumes 1% loan growth in 2016, rising progressively to 4% in 2017 and 6% in 2018 and thereafter. All scenarios assume a yearly default rate of 3.5% in 2016, 3% in 2017 and 2.5% in 2018 and thereafter.
Source: Bank of Italy and OECD calculations.

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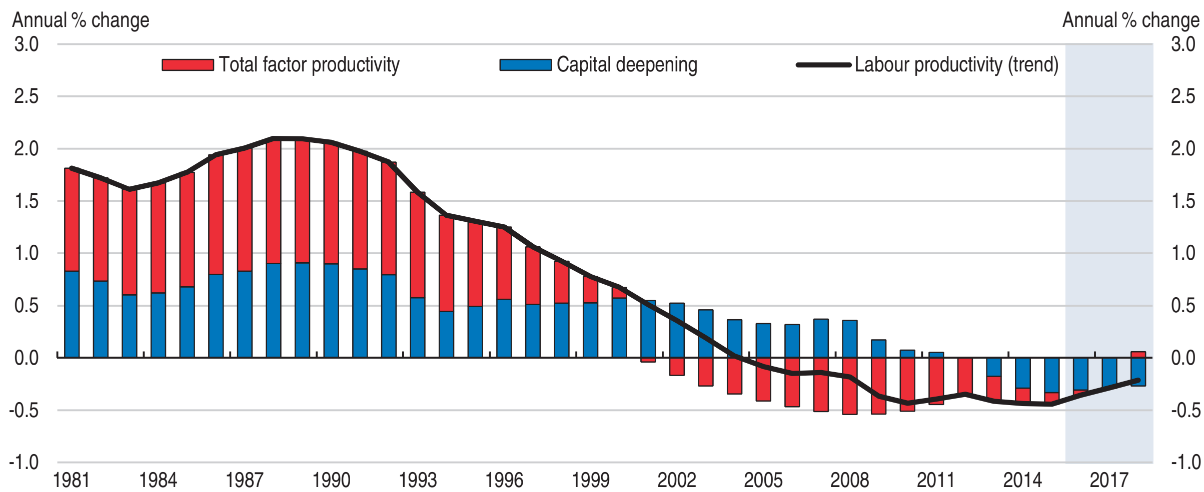
Reforms to improve the business environment and increase productivity

Italy's long-term economic stagnation reflects its low labour productivity growth. Faltering total factor productivity growth (i.e. technical progress) dates back to the mid-1990s and, along with the more recent slow-down in investment, is at the root of disappointing labour productivity growth (Figure 21).

Low productivity is mostly attributable to sluggish productivity growth within industry rather than to a shift towards industries with low productivity growth (Table 7). Italy's economic activity has been progressively shifting towards low productivity-growth industries, but no more than in other euro area countries, while within-industry

Figure 21. **Labour productivity growth is declining**



Source: *OECD Economic Outlook 100 Database*, projections revised as of 20 January 2017.

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Table 7. **Within industry productivity growth is low**

2000-13 (yearly averages contributions, %)

Sector or industry	Italy			Euro area 19		
	Within	Shift	Total	Within	Shift	Total
Total economy	***0.09***	***0.10***	***0.14***	***0.97***	***0.10***	***1.04***
Agriculture, forestry and fishing	0.02	-0.06	-0.04	0.05	-0.07	-0.03
Mining and quarrying	0.00	-0.01	-0.01	0.01	0.00	0.01
Manufacturing	0.17	-0.48	-0.30	0.42	-0.48	-0.07
Electricity, gas, steam and air conditioning supply	0.03	0.00	0.02	0.03	0.02	0.04
Water supply, sewerage, waste management and remediation activities	-0.01	0.03	0.02	-0.01	0.02	0.02
Construction	-0.07	0.11	0.03	0.00	0.01	0.01
Wholesale and retail trade, repair of motor vehicles and motorcycles	0.01	-0.13	-0.13	0.12	-0.05	0.06
Transportation and storage	0.01	0.00	0.02	0.07	0.00	0.06
Accommodation and food service activities	-0.06	0.07	0.01	-0.03	0.06	0.03
Information and communication	0.11	-0.12	-0.02	0.15	-0.09	0.05
Financial and insurance activities	0.10	-0.04	0.06	0.06	0.01	0.06
Real estate activities	-0.07	0.38	0.30	0.10	0.14	0.24
Professional, scientific and technical activities	-0.17	0.13	-0.04	-0.06	0.14	0.08
Administrative and support service activities	-0.05	0.11	0.05	-0.05	0.12	0.08
Public administration and defence, compulsory social security	0.09	-0.02	0.06	0.09	0.00	0.08
Education	0.04	-0.05	-0.01	-0.01	0.08	0.07
Human health and social work activities	-0.03	0.12	0.08	0.03	0.15	0.18
Arts, entertainment and recreation	0.00	0.02	0.01	0.00	0.03	0.03
Other service activities	-0.02	0.02	0.00	-0.01	0.02	0.01

Note: This table shows the decomposition of the total economy productivity growth (computed as value added per hour) by sector into within and shift components. The within component denotes average contributions from productivity growth within the sector; the shift component denotes average contributions from labour reallocation and relative price changes across sectors. For some sectors, the within and shift components may not sum to the total contribution because of changes in productivity that cannot directly be attributed to one of the two components (covariance effect) and rounding. The industry-level contributions may not sum to the total economy because of rounding. The decomposition is based on the methodology by Diewert (2014) and cannot be used to analyse the underlying causes of productivity changes at aggregate or industry level.

Source: ISTAT, *OECD National Accounts Database* and OECD calculations.

productivity growth has been substantially lower. The largest differences in within-industry productivity growth with respect to the euro area are in manufacturing, real estate activities and professional, scientific and technical services.

Factors explaining Italy's low within-industry and firm-level productivity growth include resource misallocation across firms, low innovation, scant use of information and communications technologies, inadequate management practices (especially among family-run firms), public-administration inefficiency and tax evasion (Calligaris et al., 2016; Giordano et al., 2015; Hassan and Ottaviano, 2013; Bloom et al., 2008; Cucculelli et al., 2014; Bobbio, 2016).

In manufacturing, contrary to the experience of most OECD countries, productivity among the most efficient firms is declining even faster than among the least productive ones (Figure 22). Labour productivity in Italy's manufacturing sector would be around 20% higher if national frontier firms were as productive and large as global frontier benchmark (Andrews et al., forthcoming). Approximately three-quarters of the productivity gap between global and national frontier firms is attributable to the small size of the latter (Andrews and Cingano, 2014). Recent evidence suggests that perhaps one-quarter of the collapse in aggregate business investment in Italy is attributable to the survival of firms having persistent problems meeting interest payments. This reduces aggregate labour productivity as such firms crowd out investment opportunities for more productive firms and discourages the entry of innovative firms (Adalet McGowan et al., 2017).

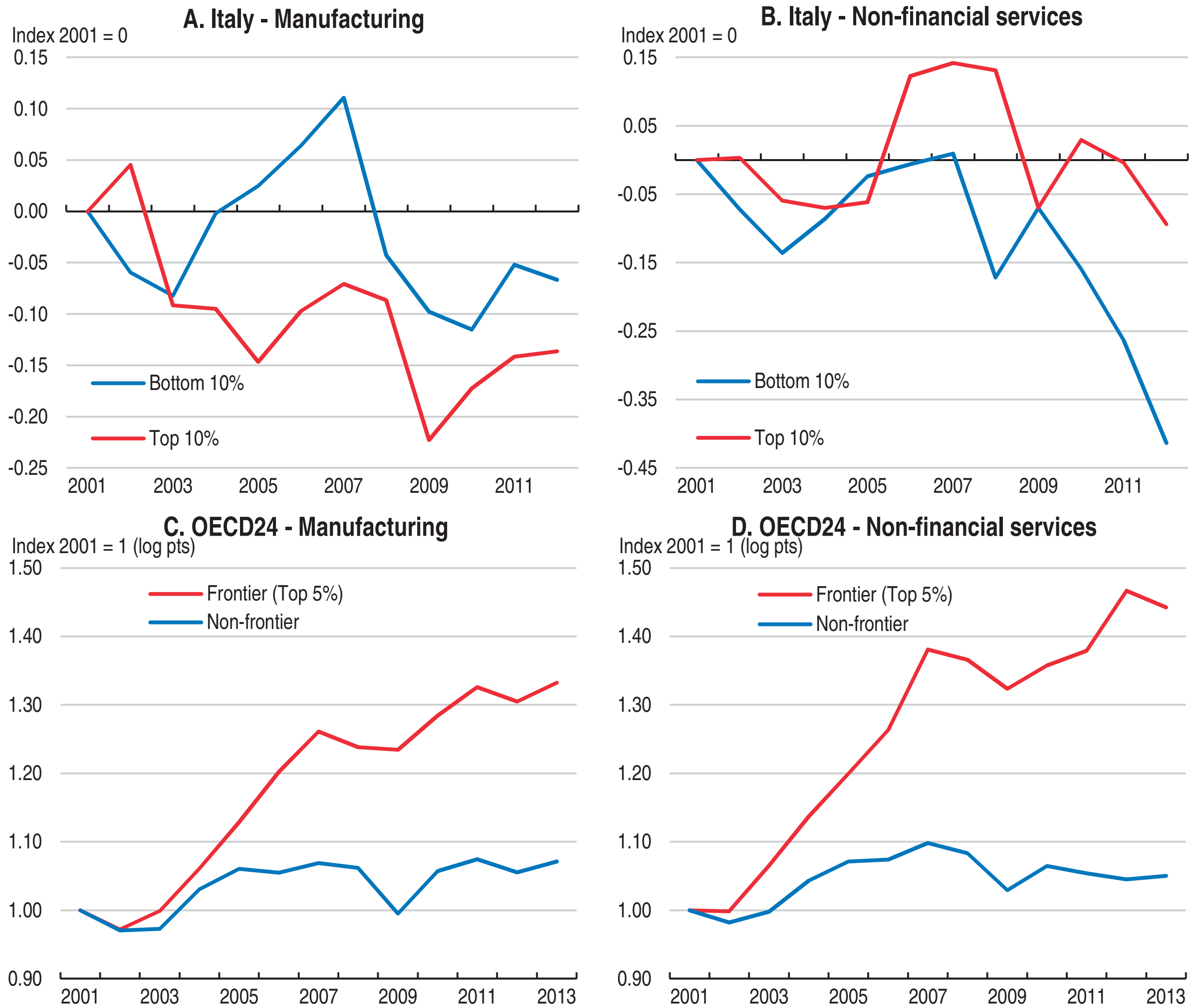
The degree of Italy's resource misallocation is reflected in the weak association between firms' market share and productivity. The aggregate labour productivity of Italy's manufacturing sector is only 15% higher than what it would be if market shares were allocated randomly; this is smaller than in Spain and France (25%) and Germany (more than 50%). However, there is evidence that the degree of misallocation is declining especially in industries more exposed to import competition from developing countries (Calligaris et al., 2016; Linarello and Petrella, 2016).

Different factors can explain the large share of small firms in Italy, even if highly productive. For instance, firms' controlling stakes are exempt from inheritance taxes, discouraging equity-share sales to outside investors and entrenching family ownership (which is often averse to hiring professional managers or adopting modern management practices). Other factors concern difficult access to finance and size-based thresholds of the tax regime and other regulations giving businesses incentives to remain small (Bobbio, 2016; OECD, 2015c). The fact that many highly productive SMEs do not grow is at the root of resource misallocation, hindering aggregate productivity growth.

Improving public administration efficiency is crucial to boost productivity

The previous government initiated far reaching constitutional and institutional reforms. The constitutional reform was rejected in a referendum in December 2016. This calls for renewed efforts to deal with the fundamental issues that the proposed constitutional reform intended to address. These issues concern an overly complex and lengthy legislative process – which leads to an excessive use of decrees as pointed out in previous *Surveys* (OECD, 2015d) – and overlapping responsibilities between central and local governments, especially over areas of national importance such as infrastructure and the labour market. Progress on these issues will lead to better laws and policies.

Figure 22. **The productivity of firms at the technological frontier has been declining, contrary to other OECD countries**



Note: Panels A and B report the unweighted average of real labour productivity (defined as real value added per employee) expressed in 2005 US dollars for firms in the bottom decile and in the top decile of the labour productivity distribution in any given year. The values are normalised at their initial values in 2001 for Italy. Panels C and D notes: 2001 = 1 (log points), average across 24 OECD countries and 22 manufacturing and 27 market services industries. Frontier is defined as the 5% most productive firms within each industry, by each year.
Source: Panels A and B, data from the OECD Multiprod Project 2016. See: *www.oecd.org/sti/ind/multiprod.htm*; and Berlingieri, Blanchenay and Criscuolo (2017), "The Great Divergence(s)", *OECD Science, Technology and Industry Policy Paper*, OECD Publishing, Paris, forthcoming. Panels C and D: OECD preliminary results based on Andrews, D., C. Criscuolo and P. Gal (2017), "Mind the Gap: Productivity Divergence between the Global Frontier and Laggard Firms", *OECD Productivity Working Papers*, OECD Publishing, Paris, forthcoming; *ORBIS Database* of Bureau van Dijk.

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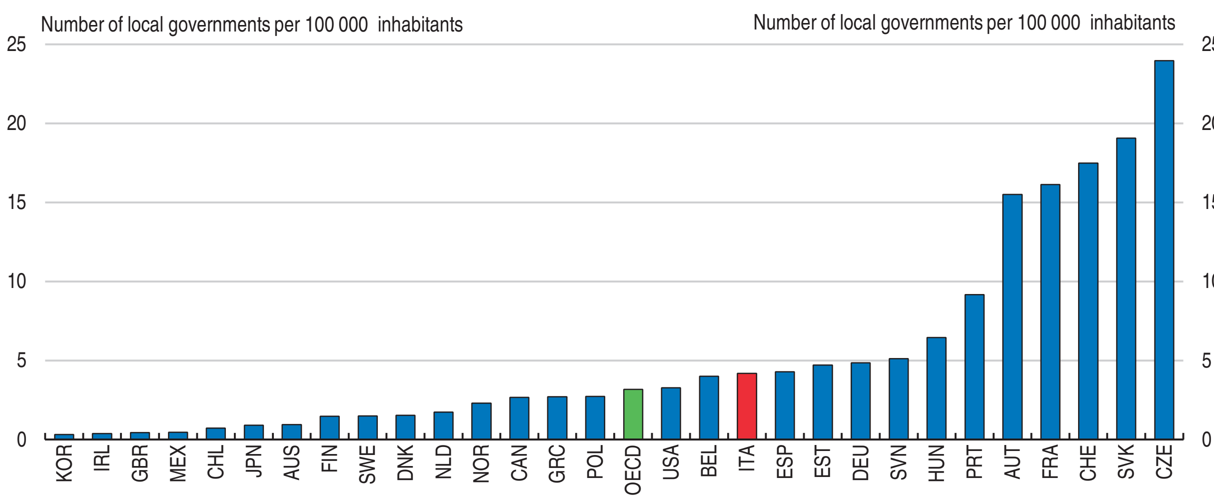
The government also started a broad public administration reform through an enabling law approved in 2015. This covers a wide range of issues including: the introduction of a Freedom of Information Act, human resource management, rationalisation of local utilities, the delivery of public services through digital platforms (e-services), the governance of ports, accounting litigations and the complex decision-making process involving different agencies and levels of government. The government has already approved several legislative decrees to implement the reform. However, some parts of the enabling law, involving the role of local governments in the reform process, have been struck down by the Constitutional Court. As a consequence the implementing decrees covering human resources management in the public administration and the rationalisation of local utilities are ineffective. Efforts to improve the functioning of the public administration need to continue as they are key to raising productivity, providing better services to the population and increasing trust in the public administration. Also, as underscored in the previous *Survey* (OECD, 2015d), an inefficient public administration, slow judicial procedures and unclear legislation affect negatively the effective and uniform implementation of reforms and regulations. To make progress on these issues, the government should fully implement the public administration reform, amend those parts declared unconstitutional and implement them swiftly.

The constitutional reform would have abolished provinces, complementing the creation of metropolitan governing bodies in 2015. The creation of metropolitan areas is long overdue and consistent with the experience of most OECD countries (Ahrend et al., 2014). A recent OECD study (OECD, 2015e) highlights that a fragmented governance structure is associated with lower productivity as municipalities' boundaries often reflect old patterns of economic activity that are no longer relevant. Also, insufficient cooperation can lead to an undersupply of public goods such as transport infrastructure. In 2014, Italy's fragmentation of metropolitan areas was slightly higher than the OECD average (Figure 23).

Figure 23. **There is scope to reduce fragmentation in metropolitan areas**



Note: The OECD-EU definition of functional urban areas (FUA) has not been applied to Iceland, Israel, New Zealand and Turkey. The FUA of Luxembourg does not appear in the figures since it has a population below 500 000. The number of local governments refers to around 2011. Metropolitan population figures are estimates based on municipal figures for the last two censuses available for each country.

Source: OECD, *OECD Metropolitan Areas Database 2015*.

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Extending and enhancing the use of regulatory impact assessment (RIA) could result in better laws and regulations. As underlined in the *OECD Regulatory Policy Outlook* (OECD, 2015f), RIA is already a requirement for all legislation initiated by the executive. *Ex ante* and *ex post* assessment are linked through an evaluation of *ex ante* progress indicators two years after the entry into force of laws or regulations. An extensive measurement of administrative regulations to repeal those redundant was undertaken between 2008 and 2012, and in 2014 a

Table 8. **Past OECD recommendations on public administration reforms**

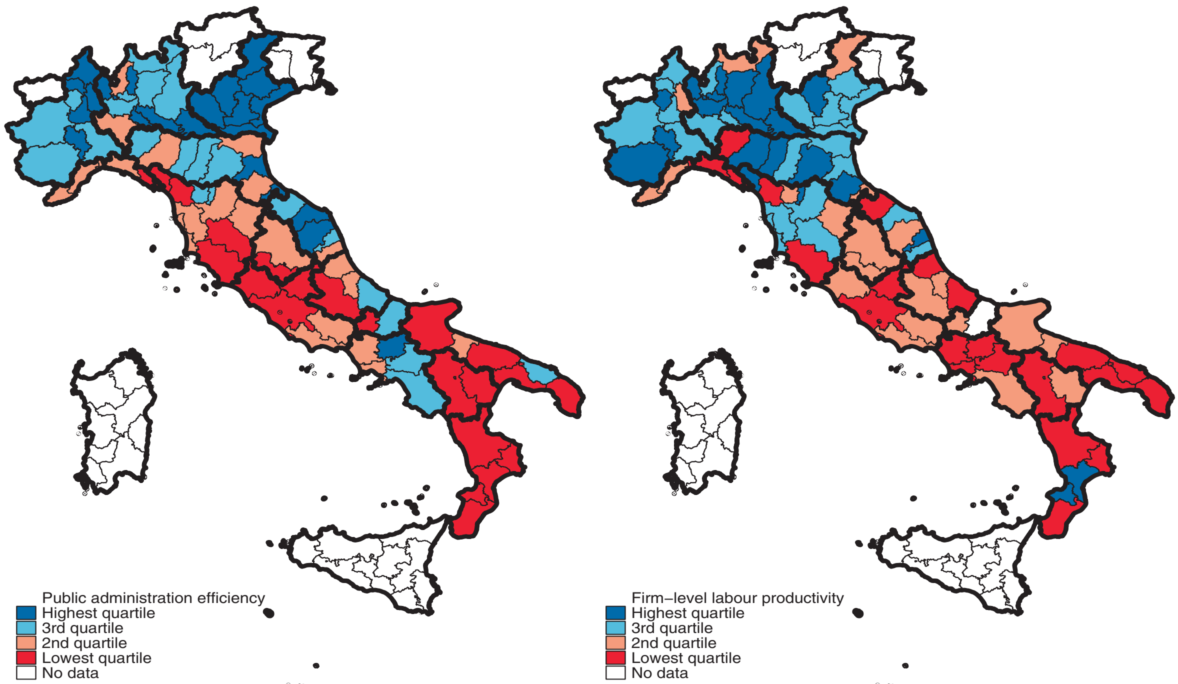
Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Follow through the reform of parliament and the re-assignment and clarification of competences between the central and sub-national governments. Ensure that legislation is clear, unambiguous and supported by improved public administration, including through reduced use of emergency decrees.	Far-reaching constitutional reforms were approved by Parliament in early 2016 but rejected in a referendum in December 2016. The ongoing reform of the Public Administration aims to simplify the system. Among the decrees adopted until November 2016, there is the repealing of obsolete and out of date secondary legislation and implementing decrees. A key aspect of the reform has been declared unconstitutional.
Further streamline the court system, with more specialisation where appropriate; increase the use of mediation; enhance monitoring of court performance.	The reform of the civil and justice system is ongoing; it also includes the collection of data about court performance and their dissemination.
Consider establishing a Productivity Commission with the mandate to provide advice to the government on matters related to productivity, promote public understanding of reforms, and engage in a dialogue with stakeholders.	No progress.
Reducing corruption and improving trust must remain a priority. For this, the new anti-corruption agency ANAC needs stability and continuity as well as support at all political levels.	ANAC has gained prestige and powers and is well-funded. In January 2016, the Chamber of Deputies approved a law protecting whistle-blowers for public and private-sector employees reporting suspicions of corruption and other illegal cases in their place of work. The new Public Procurement Code went into effect in April 2016, aiming at enhancing efficiency and promoting transparency.

new burden reduction programme was adopted. The government should pursue these initiatives. Making RIA and *ex post* evaluations public as well as improving *ex ante* consultation could strengthen the quality of the legislation and enhance transparency.

Public administration inefficiency makes it more difficult to do business, hindering investment and productivity growth. Italy's public sector employs about one in seven workers, and its effectiveness is key for private-sector efficiency. Across Italian provinces there are large variations in public sector efficiency. Provinces that have higher public sector efficiency tend to have higher firm-level labour productivity (Figure 24). Firm-level evidence (Pisu et al., forthcoming) also suggests that raising public sector efficiency from the level of Catanzaro in Calabria (which is the 25th percentile of the province-level distribution of public administration efficiency) to the level of Monza in Lombardia (which is the 75th percentile) would increase firm-level labour productivity growth by 2.4 percentage points (Figure 25). The impact is larger for small than large firms, suggesting that public sector inefficiencies may be particularly costly for smaller firms (Figure 26). This evidence is consistent with Giacomelli and Menon (2013) and Amici et al. (2015), showing that shortening civil proceedings and streamlining local regulation have a positive effect on firms' performance.

The firm-level analysis also reveals that tax collection and transport are the local public administration services with the largest impact on firm-level labour productivity growth. Improving the effectiveness and efficiency of the tax administration through better use of IT system, as highlighted above, would therefore generate not only additional revenue but also contribute to raise firm-level productivity. Opening up local transport services to competition – as the public administration reform envisages – will enhance their efficiency but also help increase productivity in the business sector. Overall, setting the size of transfers to local governments based on their needs rather than historical costs (what the government is doing with standard costs) will provide strong incentives to improve the efficiency of local administrations, with positive effect on firm-level productivity. Other important areas of public administration likely to have large effects on firm-level productivity include insolvency procedures and business regulation.

Figure 24. **Average firm level labour productivity is higher in areas with more efficient public administration**



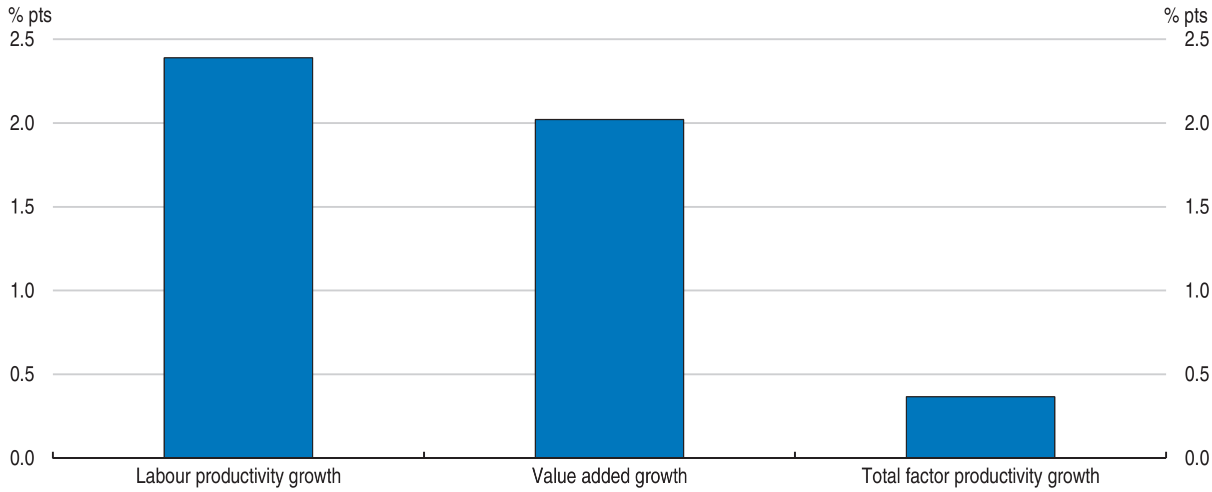
Note: The analysis uses firm-level data for the years 2005-13 from the ORBIS dataset and public administration efficiency indicators at the provincial level obtained from Open Civitas. The public administration efficiency indicator varies from 1 to 10 and reflects the ability of the municipality to meet the need of its residents. It compares spending and standard of services offered. The indicator is available at municipal level but it is then aggregated at provincial level for the year 2013. Productivity is measured as the logarithm of the value added per worker at firm level and averaged within provinces. Colours in the maps represent quartiles of the public administration efficiency and productivity-level distributions, red being the lowest quartile and dark being blue the highest quartile.
Source: OECD calculations using *ORBIS Database* of Bureau van Dijk and Open Civitas data.

Italy is amongst the largest recipient of EU Structural and Cohesion Funds. However, it has faced problems and delays in spending the fund. At the end of the previous funding period (2009-13), Italy ranked only after Poland, in terms of the highest amount of unused funds (Figure 27). Outstanding commitments declined to nearly zero only in 2016, as the new Territorial Cohesion Agency became fully operational.

The government should effectively coordinate local administrative agencies involved in applying and managing EU structural funds, identify and disseminate best practices and generally put in place the right conditions to improve management of EU funds. The government is moving in the right direction. To accelerate the absorbtion of EU funds for the 2014-20 funding programme, the Territorial Cohesion Agency has signed more than 15 agreements with southern regions and metropolitan cities granting it a stronger coordinating role. The government has also recently created Invitalia – an agency within the Ministry of Finance – with responsibility, among other things, to support the public administration for the effective management of EU structural funds. The government should ensure that Invitalia has the necessary power, instruments and resources to fulfil its role effectively and that the EU funds are not used to cut back public investment and other growth-enhancing policies.

Figure 25. **Public administration efficiency raises firm's performance**

Effect of raising the local public administration efficiency from the 25th percentile of the province-level distribution to the 75th percentile



Note: The bar shows the estimated effect on firm's performance of an increase in public administration efficiency from the 25th percentile of the province-level distribution – as in Catanzaro (Calabria) – to the 75th percentile – as in Monza (Lombardia). Estimates are obtained through a regression discontinuity design approach exploiting provincial boundaries within the same region. Regressions control for firm size, firm age, provincial GDP per capita (2-digit), industry and regional effects.

Source: OECD calculations based on *ORBIS Database* of Bureau van Dijk and OPEN CIVITAS data.

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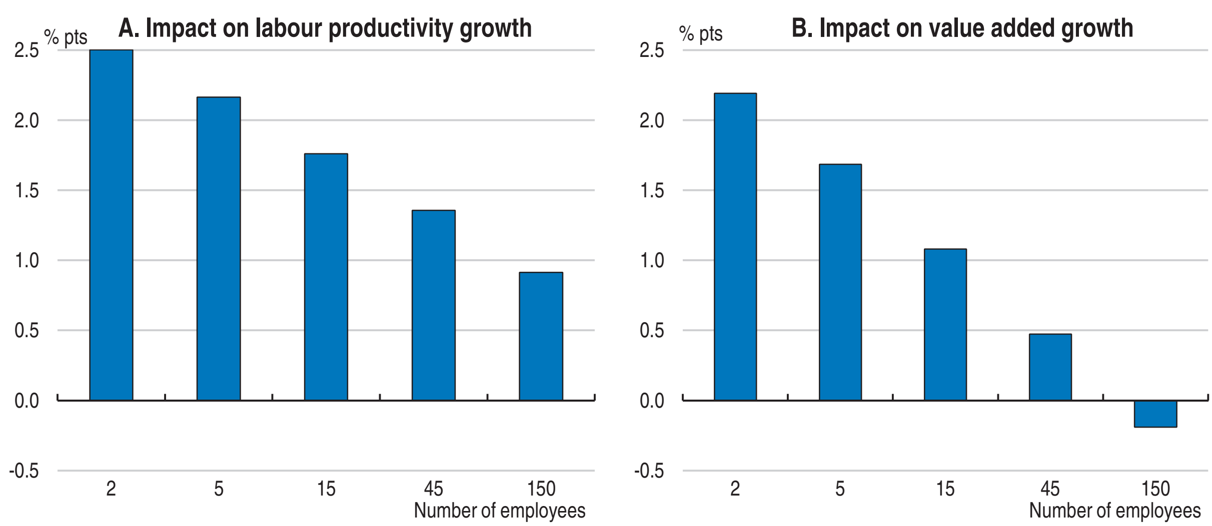
Figure 26. **The impact of increasing public administration efficiency is larger for small firms**

Effect of raising the local public administration efficiency from the 25th percentile of the province-level distribution to the 75th percentile



Note: The bar shows the estimated effect of an increase in public administration efficiency from 25th percentile of the province-level distribution – as in Catanzaro (Calabria) – to the 75th percentile – as in Monza (Lombardia) – by the size of the firm; see also note of Figures 24 and 25.

Source: OECD calculations based on *ORBIS Database* of Bureau van Dijk and OPEN CIVITAS data.

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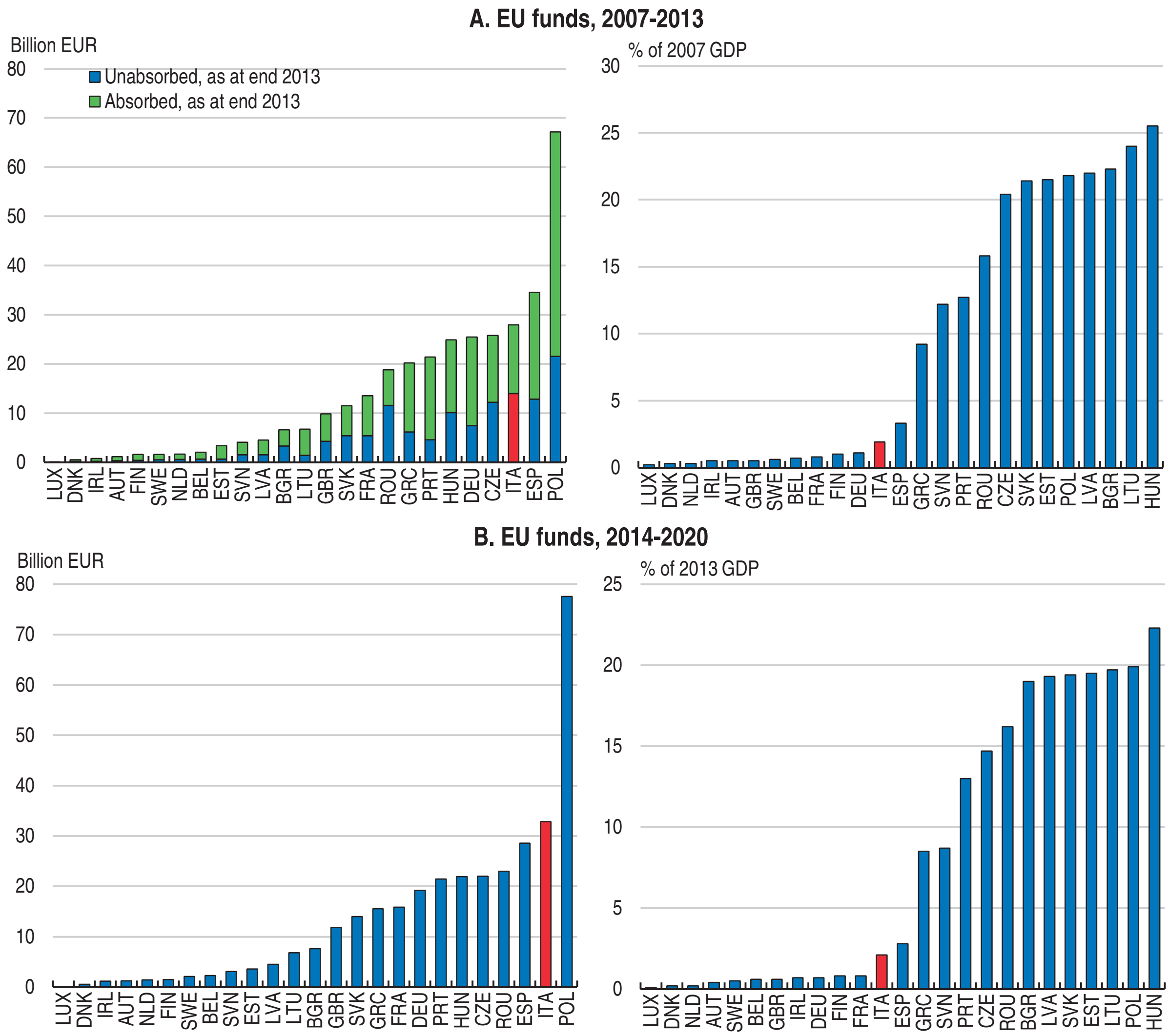
Figure 27. **EU structural and cohesion funds**



Source: European Commission (2014), "Summary of the Partnership Agreement for Italy, 2014-2020"; European Commission (2013), "Analysis of the Budgetary Implementation of the Structural and Cohesion Funds in 2012".

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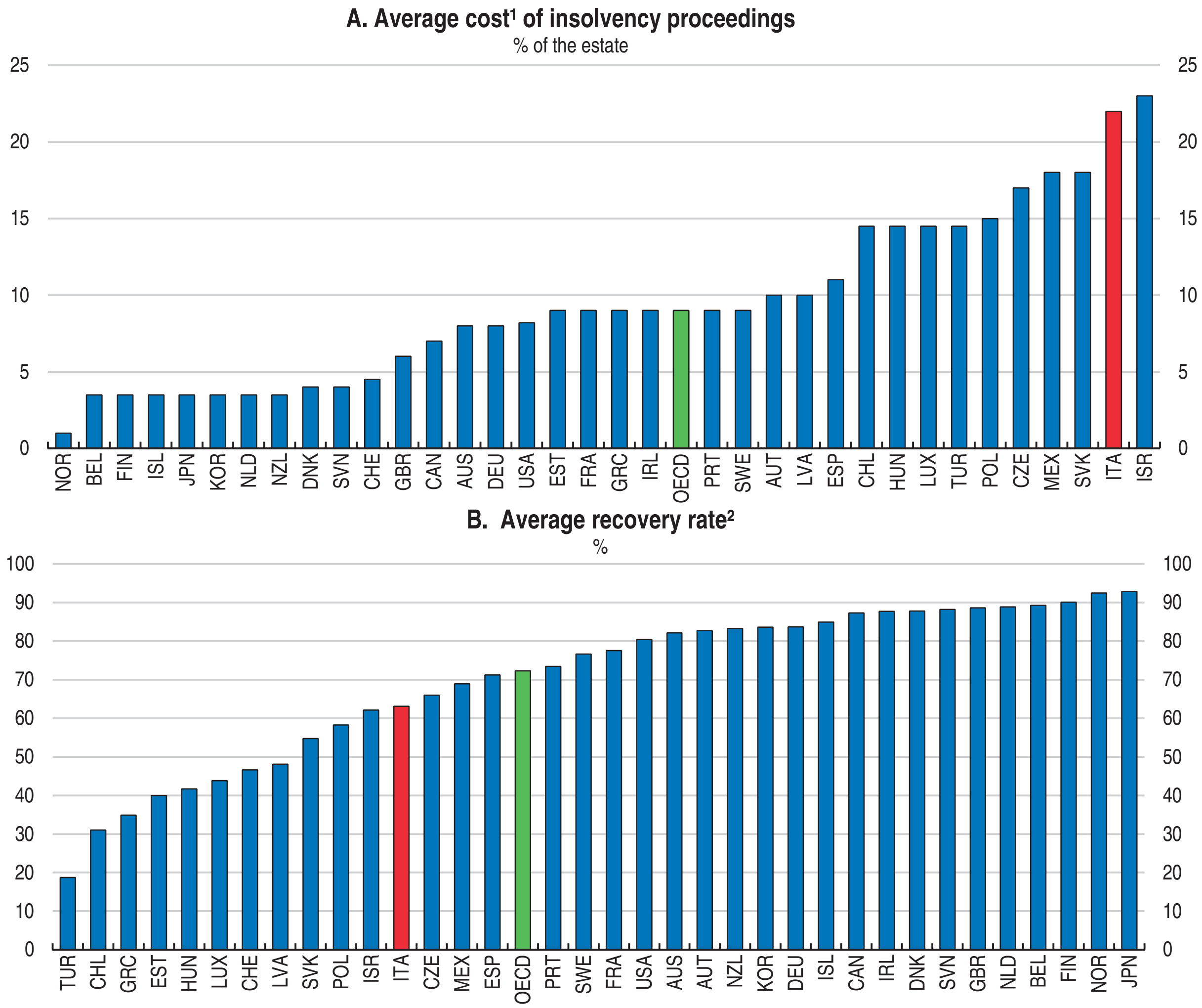
Speeding up insolvency procedures

Accelerating insolvency procedures would speed up company restructuring, help reduce the problem of NPLs, increase investment and diminish resource misallocation. Since the mid-2000s, the insolvency law has been undergoing a reform process to accelerate and streamline reorganisation procedures. However, the transaction costs of insolvency procedures remain high (Figure 28). In 2015, a reform introduced a new out-of-court restructuring agreement for firms whose debts with financial intermediaries exceed 50% of total liabilities. The reform also simplified and shortened court proceedings for forced collateral sales. These measures are expected to shorten insolvency proceedings to 3-5 years and judicial foreclosures from 4 to 3 years.

Procedures to allow a firm to emerge from insolvency are underutilised. There is ample room to make more extensive use of debt-equity swaps. Those are an important instrument in corporate restructuring (Hart, 2006); however, in the Italian legal insolvency

Figure 28. **Efficiency of insolvency procedures is low**



1. The cost of the proceedings is recorded as % 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.
2. The recovery rate is calculated based on the time, cost and outcome of insolvency proceedings involving domestic legal entities and is recorded as % of the amount recovered by secured creditors. The calculation takes into account the outcome: whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. Then the costs of the proceedings are deducted. Finally, the value lost as a result of the time the money remains tied up in insolvency proceedings is taken into account. The recovery rate is the present value of the remaining proceeds, based on end-2015 lending rates.

Source: World Bank, *Doing Business 2017 Database*.

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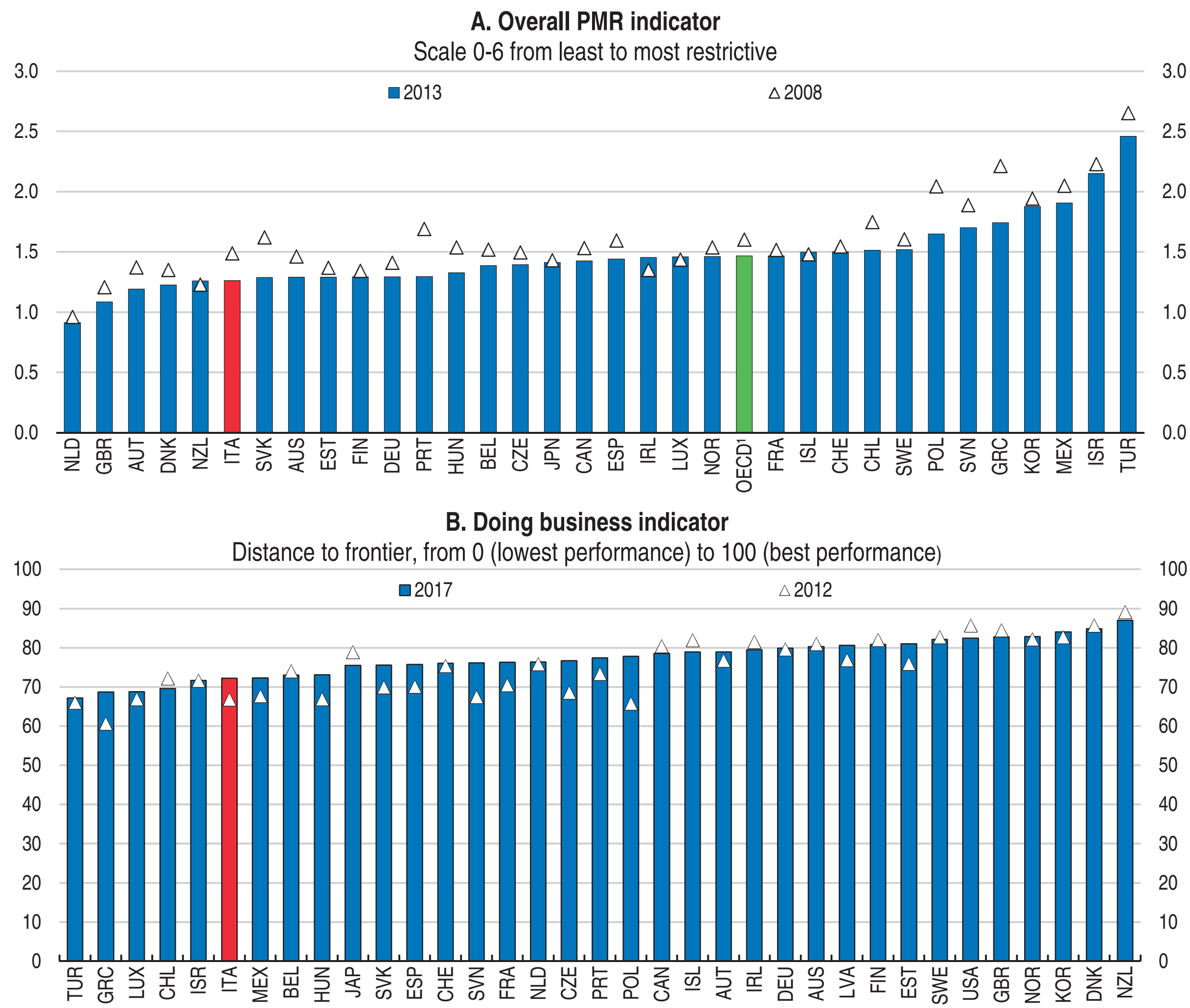
framework debt-equity swaps are limited to the case of composition with creditors, which allows for forcing dissenting creditors to share the burden of the restructuring process. Yet, most of compositions with creditors end up into liquidation, suggesting debt-equity swaps are hardly useful to make firms emerge as going concerns. In out-of-court procedures debt-equity swaps are possible but creditors can dissent and so are rarely used. Applying debt-equity swaps in out-of-court debt restructuring procedures to dissenting creditors (similarly to what the 2015 introduced for financial creditors only) would facilitate the use of debt equity swaps and increase the likelihood at which insolvent firms emerge quickly as ongoing concerns.

Competition and regulation

Over the last years, Italy has made progress on opening up markets to competition as evidenced by the improvement in OECD Product Market Regulation (PMR) (Figure 29). There is still room to lower barriers relating to state controls and public ownership, which is still close to the OECD average. The recent privatisation programme – involving sales of minority stakes in the airport traffic controller (ENAV) in 2016 and the post in 2015 – are not yet captured by the index. Also, barriers to entrepreneurship can be lowered further by easing barriers to start up, especially in the service sector.

Figure 29. **Restrictions to product market competition have eased**



1. Average of all OECD countries excluding the United States and Latvia.

Source: *OECD Product Market Regulation Database*; and World Bank, *Doing Business 2017 Database*.

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Easing product market regulation has not had any visible effect on productivity or investment. Problems with implementation and enforcement attributable to inefficiencies in the public administration and judiciary have created a wedge between *de jure* and *de facto* standards (OECD, 2015; Allio and Rangone, 2016). The World Bank's Doing Business Indicator captures more closely *de facto* standards and it is based on the actual obstacles businesses face. In this respect, Italy scores poorly compared with the PMR indicator. The Competition Authority (AGCM, 2015) has highlighted that the proliferation of regulations, administrative complexity and a widespread distrust towards competition have abetted incumbents and hampered competitive pressures by fostering legal uncertainty. In many cases, sub-national governments have also resisted efforts to increase competition in sectors dominated by municipal enterprises, such as transport and other locally provided services. The part of the public administration reform dealing with the rationalisation of local utilities and opening up to competition could contribute to address these issues.

Approving the annual competition law currently being discussed by Parliament would be a step forward to enhance competition in the services sector and professions. Also, as highlighted above, making more extensive use of regulatory impact assessment would help improve the quality of regulation and close the gap between *de jure* and *de facto* standards.

Table 9. **Past OECD recommendations on product markets**

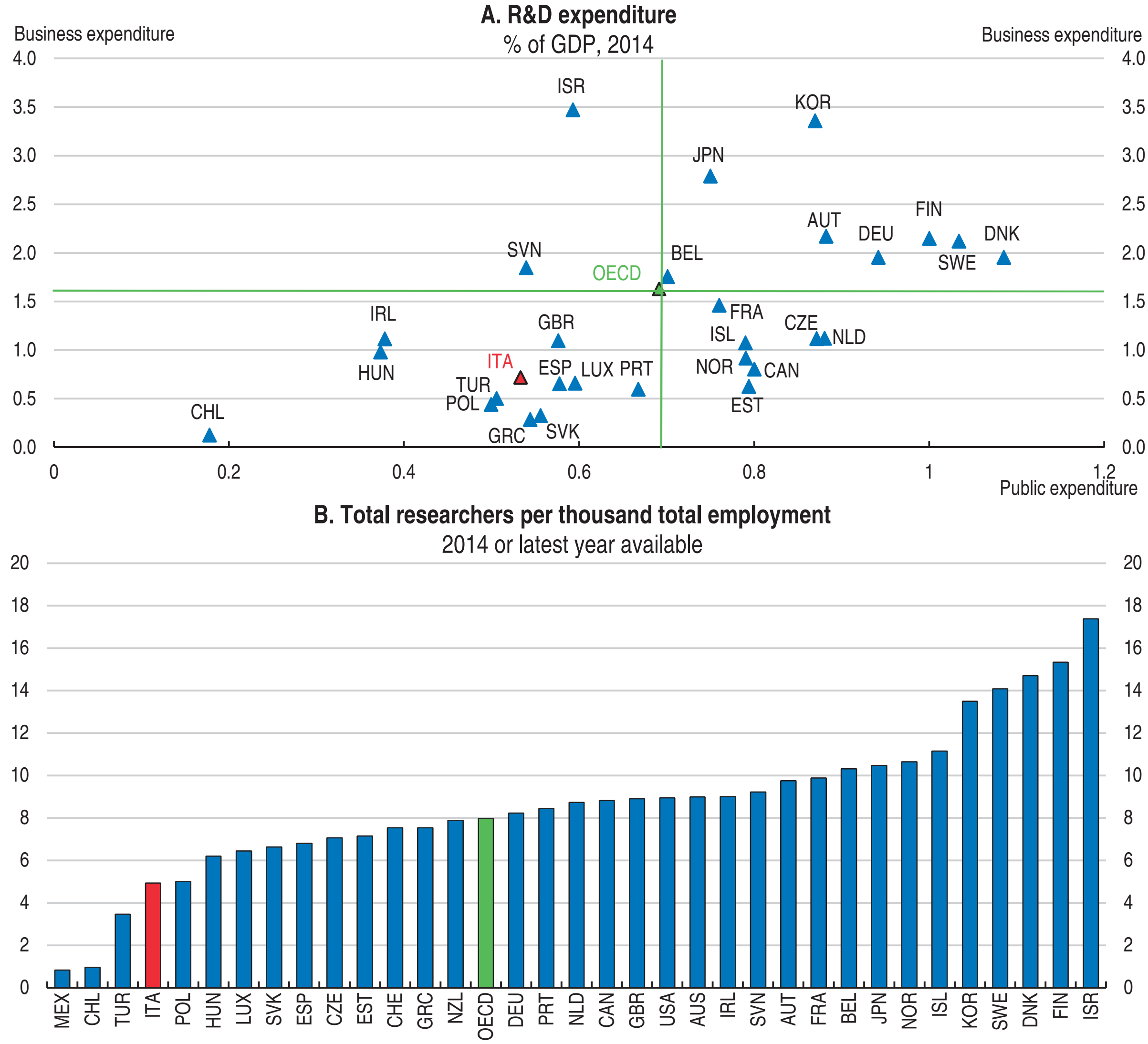
Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Ensure Competition Authority uses increased power effectively.	In 2015, the government for the first time submitted to Parliament a law to enhance competition following the recommendations of the Competition Authority as prescribed by Law 99/2009, Article 47.
Remove unnecessary licensing in professional services. Remove quantitative restrictions on supply in services.	Some of these issues are dealt by competition laws under Parliamentary discussion. The National Professional Services Reform Programme was submitted to the European Commission in March 2016. In compliance with Directive 2005/36, the Programme contains the screening of national regulations regarding professional services, to ensure that they are non-discriminatory, objectively justified and proportionate.
Reduce public ownership, especially in TV media, transport and energy utilities, and local public services.	Public administration reforms include the rationalisation of local public utilities
Privatise and liberalise in energy and transport sectors. Get transport regulator into effective operation quickly; complete framework for regulation of water and other local public services, ensuring regulatory independence Introduce national oversight of regional regulatory competences (e.g. retailing, land-use planning).	The transport sector regulator is operational.

Encouraging innovation and investment in knowledge-based assets

Italy's research and innovation policy has historically been fragmented. This was due to a plethora of agencies and bodies at national and sub-national levels with responsibilities in policy development and execution and by an equally fragmented financing system. Italy has at least 5 national research funds. Attempts to simplify the financing system have yielded no results (MIUR, 2015; Filocamo, n.d.). Frequent and unclear changes in the legislation have also resulted in programmes and initiatives disconnected from national priorities and lacking unity. This has hindered the development of an efficient national innovation system by limiting knowledge spillovers among innovation actors. It also hampers monitoring and evaluation.

Italy is a moderate innovator by EU standards (EU, 2016). Public and private R&D spending and the number of researchers are low by OECD standards (Figure 30). Business investment in fixed and knowledge-based capital (KBC) is below par (Figure 31). Weak research and innovation activities have resulted in a low number of patents per million of inhabitants (Figure 32). However, Italy performs considerably better when considering the number of patents per number of researchers, suggesting that research productivity is high (Figure 33) and that low innovation is mostly due to low levels of research spending.

Figure 30. **R&D spending and the number of researchers are low**



Note: Panel A, for Mexico and Switzerland the split is not available.
Source: *OECD Main Science and Technology Indicators Database 2016.*

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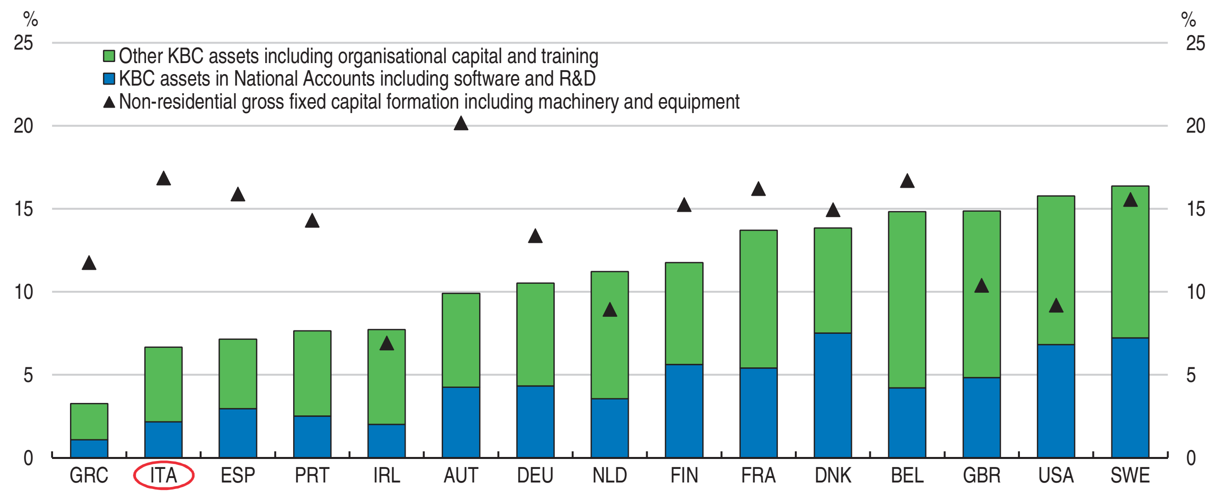
In 2016, the Ministry of Education, University and Research published the National Research Programme (*Programma Nazionale per la Ricerca*, PNR). The overarching goal of the Programme is to establish a national governance system to guide research and innovation policies so as to improve policy coherence and reduce fragmentation. This is welcome as it will provide a needed framework to develop and execute a coherent long-term national research and innovation strategy. The Ministry's commitment to allocate a larger share of funds for public research institutes on meritocratic principles and go beyond the historical cost principle is also commendable (MIUR, 2015). The role of the National Agency for the Assessment of Universities and Research (ANVUR), which assesses the quality of teaching and research of universities and public research institutes, will be key in this respect.

Figure 31. **Business investment in fixed and knowledge-based capital (KBC) is low**

As % of business sectors' gross value added, 2013



Source: *OECD Science, Technology and Industry Scoreboard 2015*; OECD calculations based on INTAN-Invest data, *www.intan-invest.net*; and OECD, *Structural Analysis (STAN) Database*, *http://oe.cd/stan*, June 2015.

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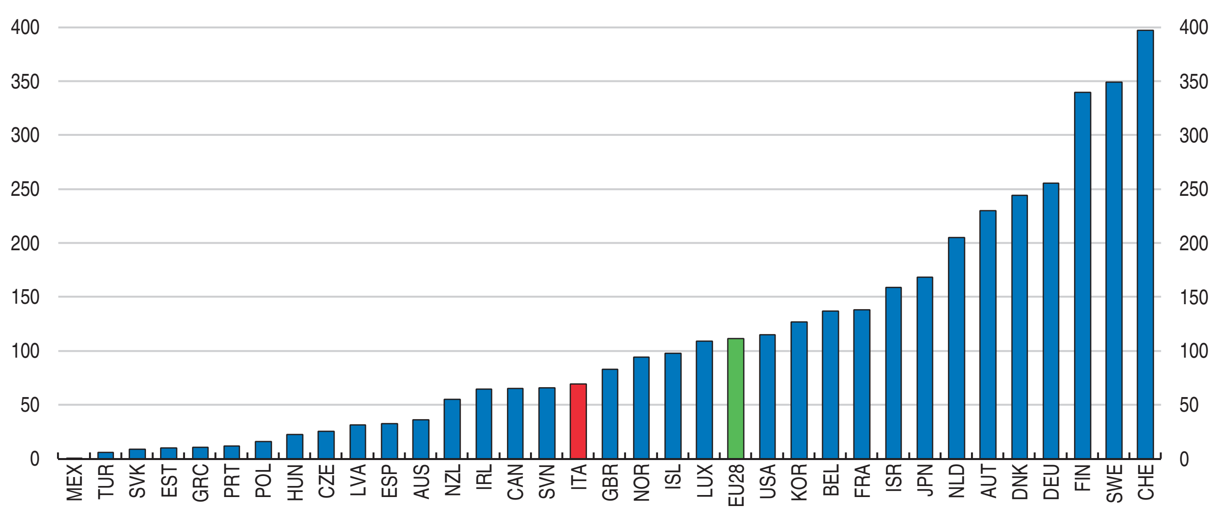
Figure 32. **The number of patents is low**[1]



1. Applications to the European Patent Office (EPO).

Source: Eurostat.

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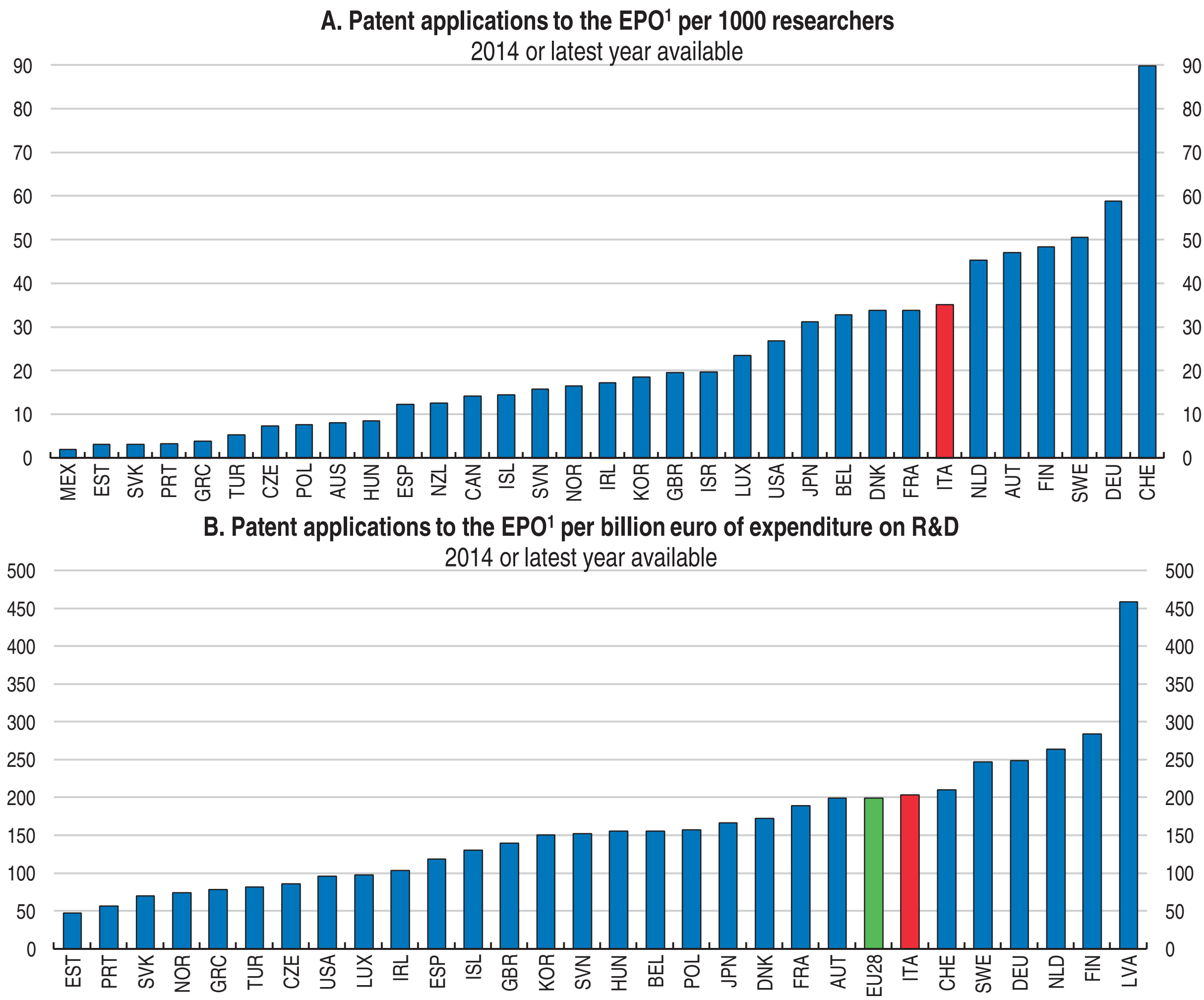
Italy has also recently introduced a wide range of incentives to boost innovation under the Industry 4.0 Plan over 2017-20 (Box 1). Unlike other European countries, Italy has lacked for a long time a comprehensive innovation strategy. The initiatives recently undertaken contribute to align Italy's innovation policies to those of other European countries. These include:

- R&D tax credits introduced in 2015 were reinforced in the 2017 budget law (Table 10). The R&D tax credit can be used to offset corporate income, regional taxes and social security contributions. This is an important step to boost Italy's innovative capacity. However, tax advantages for R&D spending in Italy are still modest compared to most OECD countries

Figure 33. **Research productivity is high**



1. European Patent Office (EPO)

Source: *OECD Main Science and Technology Indicators Database 2016*; and Eurostat.

StatLink http://dx.doi.org/10.1787/888933454124

(Figure 34). Countries with the most generous R&D tax credit have volumetric or hybrid systems whereas Italy has introduced an incremental system (meaning that tax credit applies only to the increase in the eligible R&D spending compared to the base period). Also, the size of the tax incentive is the same for large and SMEs, in contrast with other countries, such as France, the United Kingdom and Canada (Figure 34).

- Hyper- and super-depreciation scheme to promote the digitalisation and innovation of economic activities (Table 10).
- A patent box introduced in 2015, a lower tax regime applying to income generated by intellectual property (IP) rights (such as patents, but also trademarks) developed in Italy. There are various reasons why patent boxes might not be the most effective tool to stimulate innovation, especially among innovative start-ups and SMEs. For instance, there is a long time lag between the R&D expenditure and the tax relief. Also, by design, only successful innovation will benefit from the tax relief. Evidence on the effectiveness of patent boxes is indeed mixed (IMF, 2016). Patent box regimes have come under

Table 10. **Past OECD recommendations on innovation**

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Make science, technology and innovation policy more business-oriented and receptive to the varied needs across the whole spectrum of firms, including SMEs. Simplify and rationalise public support for business R&D and innovation, by achieving an appropriate mix of direct and indirect measures. Improve linkages between the business sector, universities and the public research system, including through mobility of researchers, and appropriate intellectual property rights. Foster the creation and growth of start-up firms, by lowering regulatory barriers, simplifying bureaucracy, and supporting the collateralisation and securitisation of innovation-related assets (e.g. through adhesion to the European Unitary Patent).	The new national research plan addresses some of these issues. R&D tax credits have been introduced along with the patent box, although their impacts on SMEs have yet to be estimated. Linkages between firms and research centres will benefit from tax incentives. R&D tax incentives are equivalent to 55% of the yearly increment in R&D spending taking the 2012-14 average as a base. The same rate is applied to R&D spending relating to highly qualified personnel, contracts with university or public research institutes or with innovative start-ups. Although the tax credit is incremental, the fixed base (2012-14 average) implies that for start-ups or any other firm with no R&D spending during the reference period the tax incentive is volumetric. Tax incentives on the repatriation of researchers have been made permanent. Hyper-depreciation scheme (introduced with the budget law of 2017) equivalent to 250% of the value of investments in industry 4.0 technologies which are instrumental to the digitalisation and innovation of their industrial processes. Super-depreciation (introduced in 2016 and enhanced in 2017) equivalent to 140% of the original cost of eligible equipment, machineries, software (if connected to investments in industry 4.0 technologies) and other eligible equipment. Incentives for innovative start-ups and SMEs. Investors in innovative start-ups and SMEs are granted tax and regulatory incentives. The 2017 budget law increased the tax credit/deduction from 19% to 30% and the maximum credit limit from EUR 0.5 to EUR 1 million. Tax losses of start-ups companies can be transferred to listed companies having a participation of at least 20% in the capital of the start-up. To reduce the gap between North and South, incentives for research and innovation for SMEs and professionals in the South are operational. Promotion of innovative PhDs with strong industrial vocation, for the attraction of researchers of excellence and to support measures for Italians researchers who intend to participate in European tenders for the European Research Council (ERC).

scrutiny as they can be a way for companies to engage in profit shifting. Italy's patent box regime largely complies with the OECD recommendations to prevent base erosion and profit shifting (BEPS). However, Italy's patent box regime applies the reduced tax rate also to income from marketing intangibles, which is against OECD recommendations included in the BEPS Action 5. Countries have until June 2021 to make their regime fully compliant with OECD recommendations.

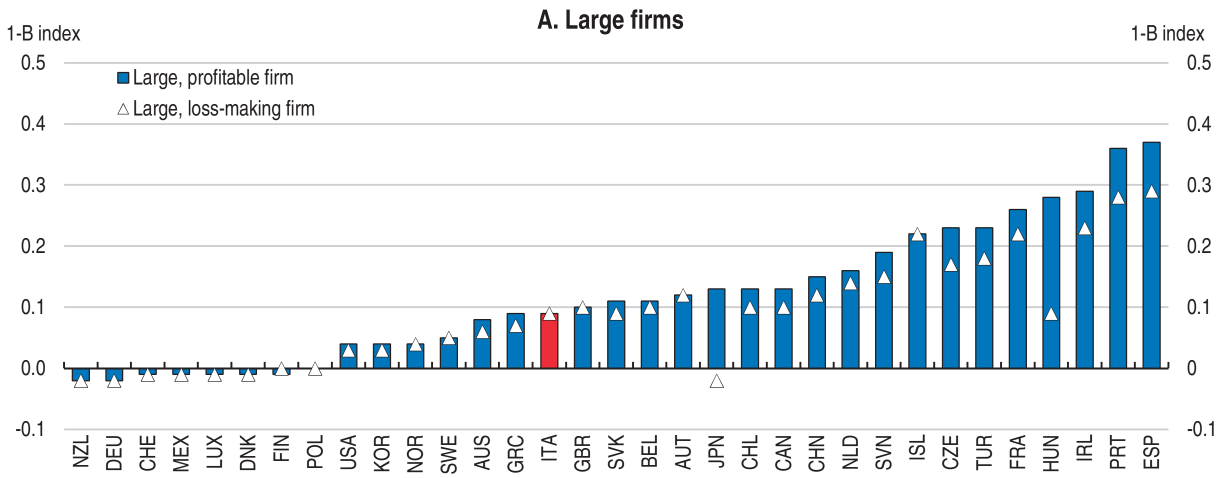
Overall, there is scope to make R&D and innovation incentives more efficient by targeting them to start-ups and innovative SMEs. These firms are likely to suffer from severe financial constraints hampering their R&D efforts. OECD's broad policy recommendations stress the need to design R&D incentives taking into account differences between large and small firms (OECD, 2015a). A recent study on the United Kingdom system indicates that, if well targeted, R&D tax credits increase R&D and patenting among financially constrained young and SMEs (Dechezlepretre et al., 2016). Guceri and Liu (2015) also report positive effects of R&D-tax credits on innovation activities by SMEs in the United Kingdom. Going forward, the government should carefully evaluate the effect of the new R&D tax credit system and patent box regime on foregone tax receipts and innovation rates and fully align the design of its patent box with OECD recommendations.

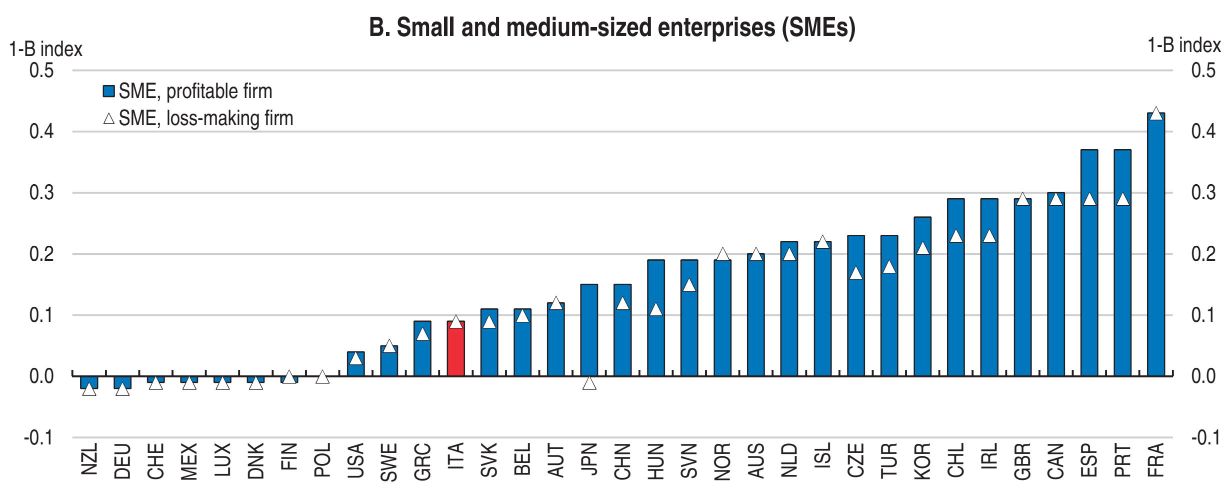
Scaling up additional sources of finance

In Italy, bank loans account for about 62% of firms' financial debt. Non-bank sources of finance are still underdeveloped and this is a challenge for SMEs as they face more difficulties in accessing bank credit than large companies. Italy also offers few opportunities for equity investment as the stock exchange is underdeveloped compared to the size of the economy, and the private equity and venture capital industries are small. Because of these factors, the debt-to-equity ratio of Italian non-financial corporations has

Figure 34. **Tax subsidy rates on R&D expenditures**

2015





Note: The tax advantage is calculated as 1 minus the B index, which is a measure of the before-tax income needed to break even on an additional unit of R&D outlay. The index is calculated for a representative firm according to whether it can claim tax benefits against their tax liability in the reporting period. This is an experimental indicator and international comparability may be limited. See also OECD (2015a), *OECD Science, Technology and Industry Scoreboard 2015*. Data for Italy refers to 2017 to take into account the most recent legislative changes.

Source: *OECD Science, Technology and Industry Scoreboard 2015.*

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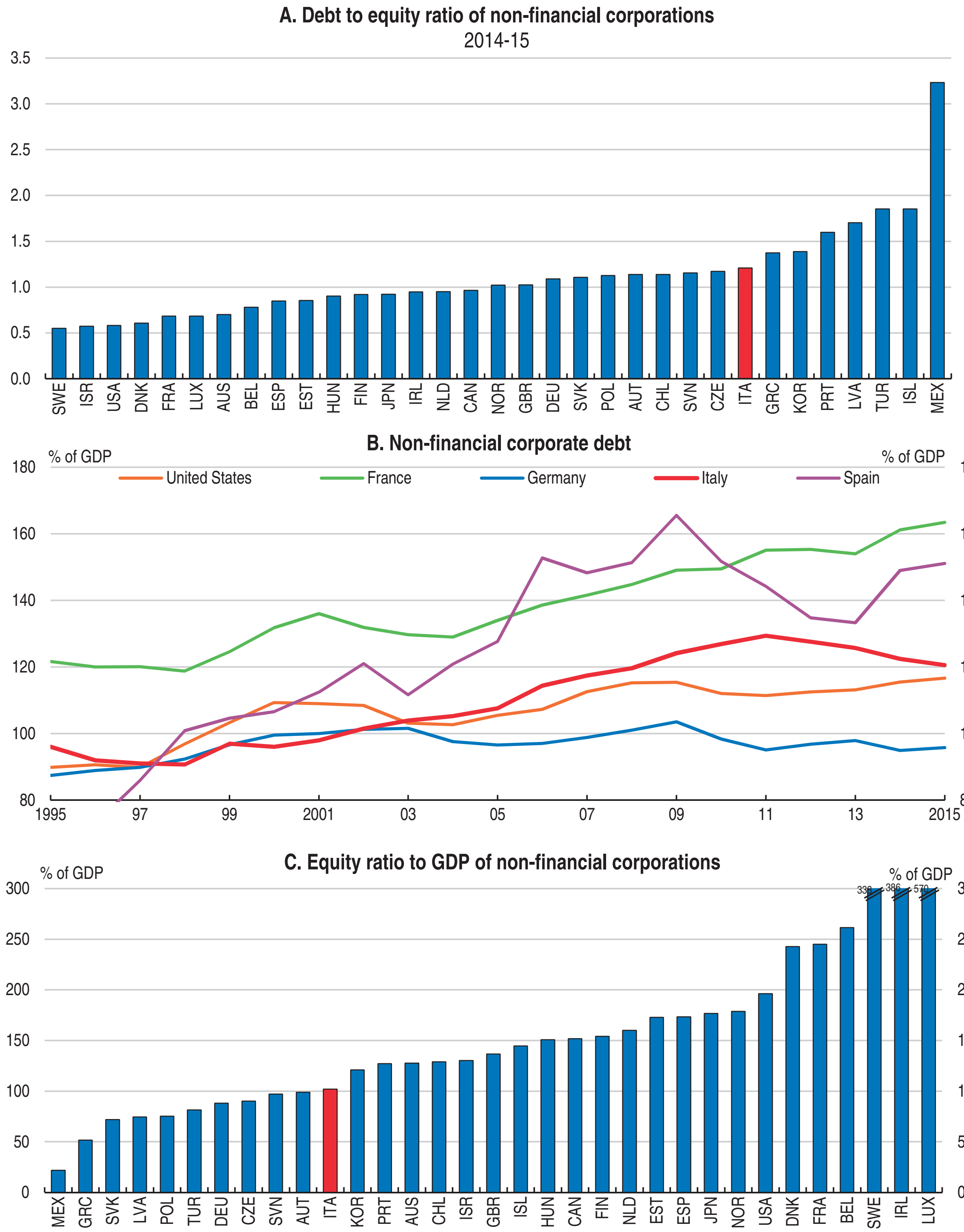
historically been higher than in most OECD countries – and increased during the post-crisis period – suggesting Italian companies are undercapitalised (Figure 35). Relying excessively on debt can blunt management's incentives to invest and innovate as a larger share of the return on investment will accrue to creditors through interest payments. Evidence across OECD suggests that during the post-crisis period companies with rising debt-to-equity ratio had lower productivity growth (OECD, 2016a).

In the past years, the government has taken actions to diversify the source of corporate finance (Table 11). For instance, a stock market for SMEs has been established (Alternative Investment Market) with simplified rules. As of March 2016, it consisted of 73 listed companies worth EUR 2.8 billion. Also, the ELITE programme has been created to make easier for SMEs to raise capital before stock market listing.

Figure 35. **Debt equity ratio of non-financial corporations is high because of low equity**



Note: The debt to equity ratio measures the extent to which firms finance their activities out of their own funds. The higher (lower) the ratio, the higher (lower) the leverage and the greater is the risk for firms' creditors.
Source: *OECD Financial Statistics Database*; and *OECD National Accounts Database*.

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Table 11. **Government measures to promote alternative sources of finance**

Most important policy measures	Objective of the measure	Years of intervention
Allowance for Corporate Equity (ACE)	The process for SMEs' listing in the stock exchange (Alternative Investment Market) has been simplified and the ELITE programme launched to introduce SMEs to capital markets. The notional interest rate applied to the injections of new equity (allowance for corporate equity, ACE) was increased progressively from 3% to 4.75% in 2016. Italy's ACE has reduced the debt-to-equity ratio of Italian firms (Panteghini et al., 2012). The 2017 Draft Budgetary Plan lowers this rate to 2.3% (2.7 from 2018) in line with market interest rates.	2011-14
Tax advantages and streamlined procedures to issue bonds by unlisted SMEs (minibonds)	The tax advantage and streamlined procedures introduced for bonds issued by non-listed companies (minibonds) is working. Thus far 190 minibonds have been issued for a face value close to EUR 8 billion and a number of specialised investment funds have started to trade them.	2012-14
Developing a venture capital industry	To develop a venture capital industry, the government has recently established a fund (Invitalia Venture) to co-invest with national and international private investors in highly innovative start-ups and SMEs. As at May 2015 the fund had a capital of EUR 65 million (EUR 50 million provided by state). Tax exemption for revenue deriving from venture capital funds which respect some requisite (at least 75% of fund's capital must be invested in not-listed SMEs respecting some requisites). This is a positive development as the literature has underlined the important role that direct public investment in innovative start-ups and SMEs, if managed on strict selection investment criteria and in partnerships with private investors, can play in the development of a private-sector venture capital industry (Jeng and Wells, 2000; Lerner, 1999; Cumming 2007) as the experience of Israel with the Yozma fund shows (OECD, 2016, SME and Entrepreneurship Policy in Israel).	2015
Sponsoring of start-ups	Listed firms have the opportunity to sponsor start-ups (up to 5 year-old firms) by buying their fiscal losses. This requires the listed firm to own at least 20% of the start-up. The measure aims at both helping young firms in finding external founds and in boosting the development of equity and capital markets.	2017
Individual Saving Plan (Piani Individuali di Risparmio)	Similar to Individual Savings Accounts (ISAs), they involve tax exemption for retail investors on capital gains of funds investing 70% of their funds in instruments issued by EU companies having a stable organisation in Italy.	2017
Other policy measures		
Sabatini Ter		2015
Simplification of procedures for SMEs' listing in the stock exchange		2014
Direct lending by credit funds, insurance companies and securitisation companies		2014
Government's venture capital fund (with private investors)		2016
Strengthening equity crowdfunding		2016

Source: Ministry of Finance (2016), National Reform Programme.

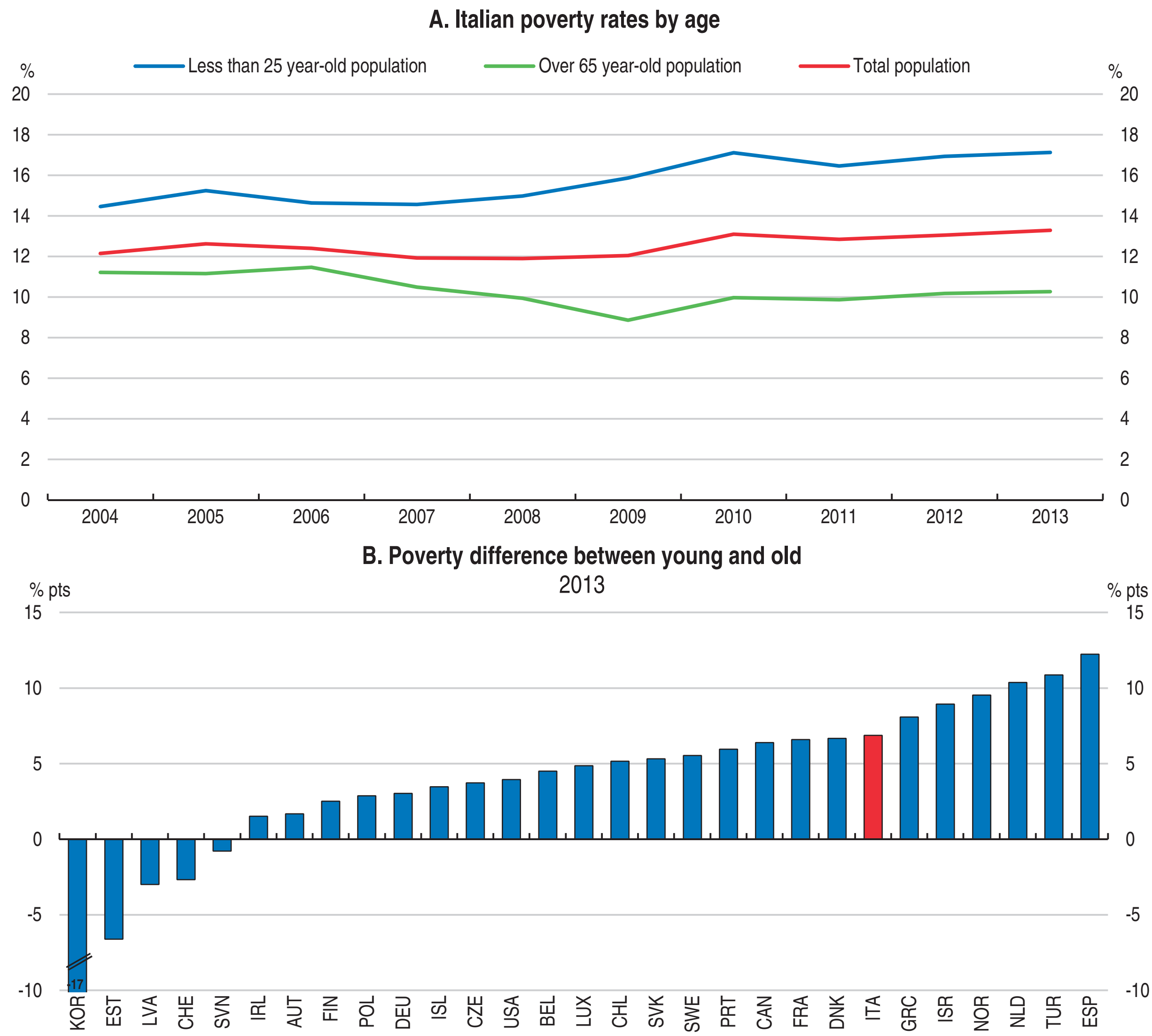
Results have been encouraging, although insufficient to revive investment and innovation. To produce long-lasting results and contribute to change the financial structure of the Italian economy, the government should ensure the continuity of these measures over the medium to long term. Also, the government should avoid targeting measures to specific geographic areas; these policies need to address specific market failures and therefore should specifically target start-ups and innovative SMEs irrespective of their location.

Reforms to boost inclusive and sustainable growth

Fighting poverty

Slow economic growth and high unemployment rates have led to rising poverty. The poverty rate, measured by the share of those living on less than 50% of the median household disposable income (adjusted for family size), appears, to have stabilised but remains high (Figure 36, Panel A). Between 2007 and 2013 the poverty rate among the young (below 25 years) increased by more than 3 percentage points while it decreased for the old (Figure 36, Panel B). In addition, the absolute poverty rate of families with 1 or 2 children rose from 1.1 and 2.3% in 2006 to 4.9 and 8.6% in 2015. Over the same period, the absolute poverty rate among old people remained broadly stable. The sharp increase in

Figure 36. **The poverty rate has increased and remains high, especially for the young**



Note: Income poverty measured using relative poverty rate based on 50% of the median equivalised disposable income. Young people: less than 25 year-old, old people: over 65 year-old.
Source: OECD Income Distribution Database 2016.

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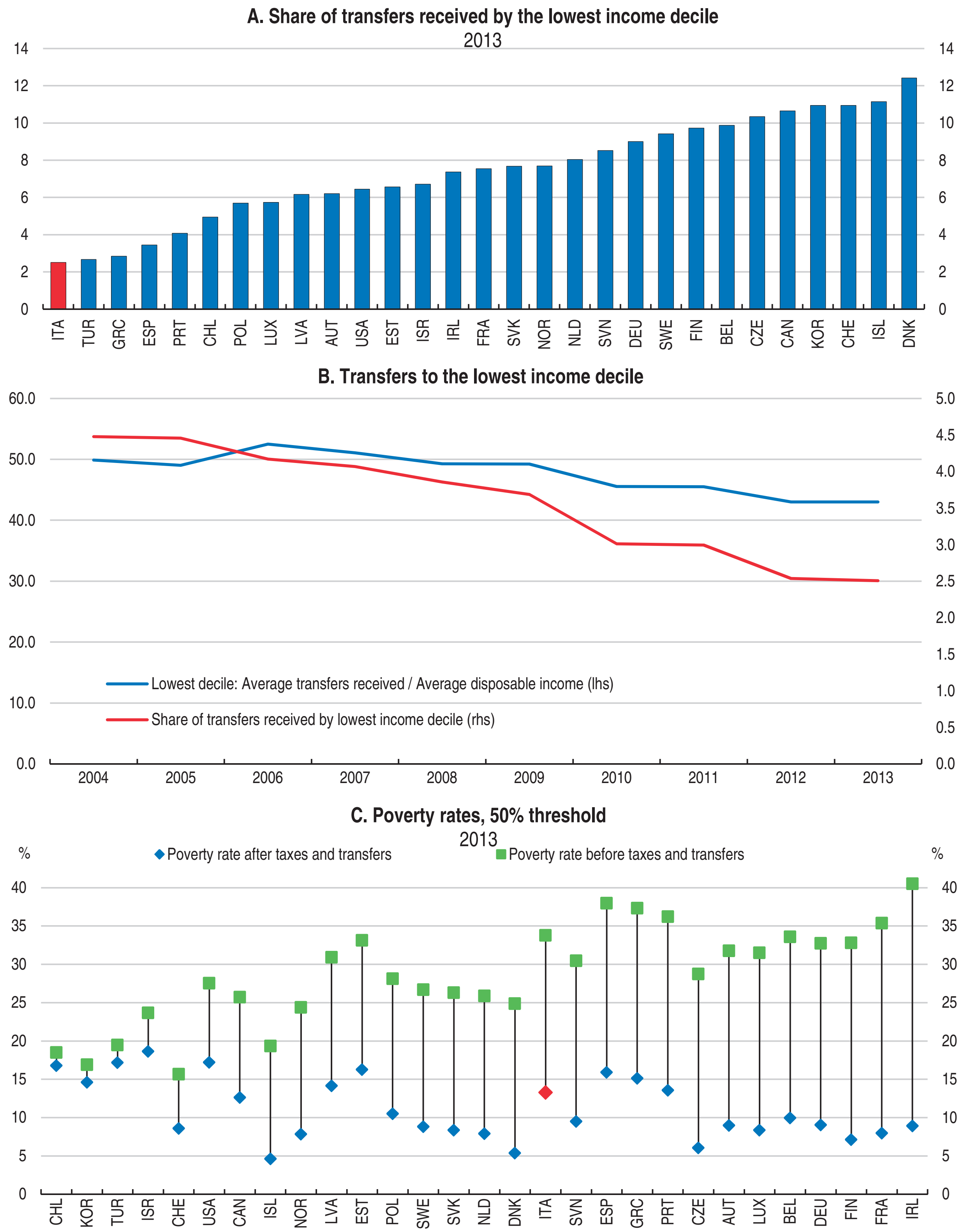
poverty rates among the young is attributable to the fragmentation and ineffectiveness of many locally-managed antipoverty programmes and a social safety system relying excessively on pensions.

Cash transfers are poorly targeted and low by international standards (Figure 37, Panel A). In addition, they have become less generous over time and even less well targeted (Figure 37, Panel B). Targeting transfers more effectively could yield a larger reduction in poverty (Figure 37, Panel C). Italy has recently introduced a national antipoverty programme (Box 2). Past programmes were highly fragmented and poorly coordinated with the resulting level of services varying greatly among cities. Means tests often do not consider individual wealth and total family income, and they are based on highly and sometimes arbitrary access criteria (such as the previous occupation). The nation-wide

Figure 37. **The transfer system is poorly targeted and can do more to reduce poverty**



Source: OECD Income Distribution Database 2016.

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Box 2. **Fighting poverty**

Local government has been responsible for policies to reduce poverty. Nationwide programmes have focused only on old and people with disabilities, leaving a large share of the population, especially young and children unprotected. In 2008 the government introduced a social card to fight poverty. This card was an emergency measure to provide limited economic support to a narrow segment of low income families – less than 1.2% of Italian families (Madama et al., 2014). In 2011, the Government re-designed the social card (the New Social Card 2.0) making it universal in scope, providing a mix of cash transfers and social services.

In 2013, the government launched the Support for Active Inclusion Programme (Sostegno per l'Inclusione Attiva, SIA) targeting families with children and in cities with more than 250 000 people. In 2016 the SIA has been extended to the whole country.

With the 2016 Stability Law, Italy introduced a triennial National Plan against Poverty by setting up the Fund for Combating Poverty and Social Exclusion. It will have an initial endowment of EUR 600 million, with the allocation rising to 1 billion annually in 2017 and 1.5 billion in 2018. These new resources are in addition to those already available and equivalent to EUR 1.4 billion for 2016, which are being used to extend SIA to the whole country (as from September 2016) and pilot the ASDI (extended unemployment benefits for low income workers near retirement). SIA is configured as a "bridge measure" that anticipates the single minimum income scheme (Reddito di Inclusione) that will be implemented in 2017 after parliamentary approval and merge also ASDI and SIA.

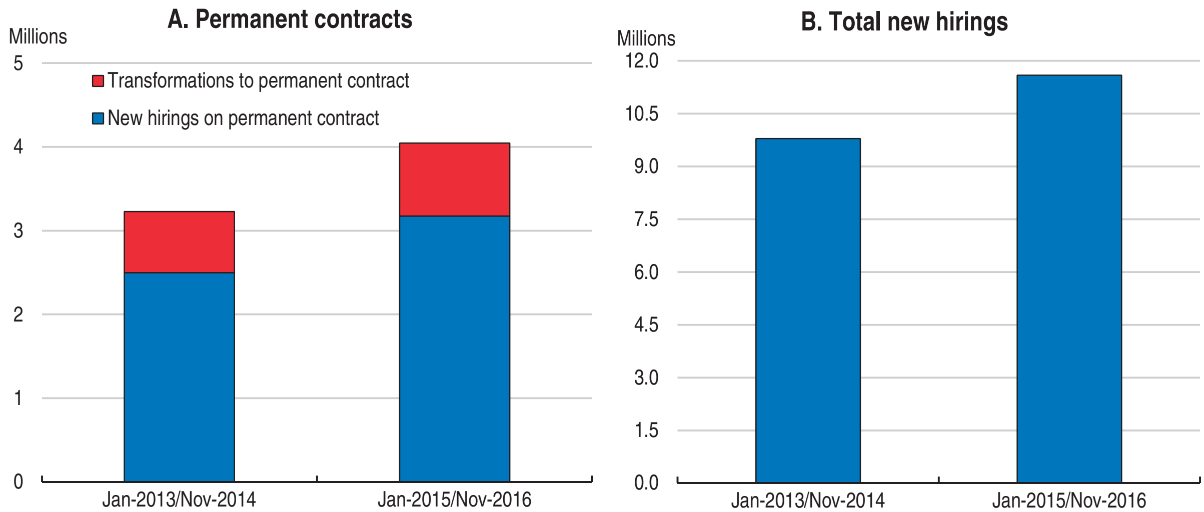
benchmark envisaged by the Constitution to ensure homogeneous minimum levels of social services across the country – *Livelli Essenziali nelle Prestazioni* – has never been set (Sestito, 2016).

The government has started to rationalise anti-poverty programmes. In 2016, it launched the National Plan against Poverty (Box 2) with the aim of establishing a nation-wide antipoverty programme (Reddito di Inclusione, REI). The government plans to allocate EUR 1 billion annually to REI, which will initially target families with children. This is welcome as ample evidence has shown the large negative effects poverty experienced at young age has on adult lives (Evans and Schamberg, 2009; Heckman and Masterov, 2007; Heckman, 2006). The allocated funds are still limited but are an improvement compared with the currently available resources. The government should ensure that the new programme is sufficiently funded to substantially reduce poverty, especially among children. The cost of a programme reaching all people in absolute poverty has been estimated to EUR 7-8 billions (MLPS, 2013).

Towards an inclusive job market

Improving the functioning of the labour market and the education system is required to make growth more inclusive and raise well-being. The Jobs Act has been a milestone in reforming Italy's labour market. It has implemented a new single open-ended contract with increasing levels of protection with job tenure, aiming principally at tackling labour market duality. At the same time, new permanent contracts have been temporarily exempted from social security contributions. Illustrative evidence shows that the reduction in social security contributions and dismissals' costs has contributed to boost employment and reduce labour market duality, by increasing new permanent contracts (Figure 38).

Figure 38. **The Jobs Act together with the reduction is social security contributions have tackled labour market duality**



Source: Istituto nazionale della previdenza sociale (INPS), Osservatorio sul Precariato.

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The employment gender gap in Italy is among the highest in the OECD (18%, compared to 12% in the OECD), although it has been nearly halved since the 1990s. The lack of childcare and services for the elderly combined with rigid work arrangements make it hard to reconcile work and family life. Only 24% of Italian children up to three years old are enrolled in formal childcare, against the OECD average of 33%. The government has recently taken steps to boost employment among women (Table 12). These measures are useful but small in scope. Increasing services for the elderly and making the tax system more second-earner friendly are necessary to meaningfully raise female employment rates in the short term.

Table 12. **Past OECD recommendations on increasing female participation in the labour market**

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*	
Encourage female labour force participation with more flexible working-hours arrangements, and promote wider provision of good quality care of children and the elderly.	March 2015 Decree	Ensures adequate support to local authorities that, starting from a particular disadvantage in offering kindergartens, realise new structures or increase places or hours of service.
	September 2015 Decree	Measures to foster female entrepreneurship.
	2015 Stability Law	Sets up a fund for interventions in favour of the family and – to the launch of a plan for developing the territorial system of social and educational services for early childhood. Maternity-support tax measures (the "baby bonus") targeted to low income families.
	Jobs Act	Measures to support paternal care and maternity protection. Incentives for employers are foreseen if telework is used to meet parental needs of workers.
	2016 Stability Law	A EUR 600 monthly subsidy available to female workers at the end of maternity leave that can be used for baby-sitting service or for paying the cost of infant day-care. Extension of the baby bonus (2015-17).
	2017 Budget Law	Extension of the baby bonus; refinancing the nursery voucher; fund to promote credit access for families with one or more children (Fondo di sostegno alla natalità); extension and increase of compulsory leave for working fathers.

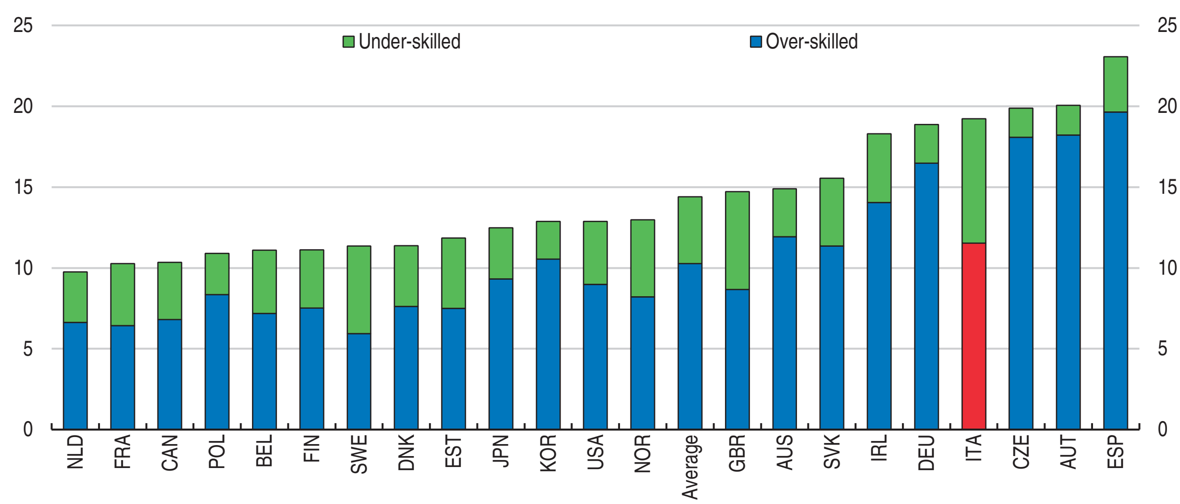
Better matching the supply and demand of skills

Workers' skills in Italy often do not match employers' needs. The Survey of Adult Skills (PIAAC) shows that 12% of Italian workers are over-skilled in literacy as they are not able to fully utilise their skills and abilities in the job; while 8% are under-skilled as they lack the skills normally needed for their job (Figure 39). Both measures are above OECD averages which are 10% and 4%, respectively. Under-skilling is especially high in Italy, reflecting the low levels of skills (Figure 40). Reducing skill mismatches is crucial to raising productivity, job satisfaction and well-being. Illustrative evidence suggests that Italy could boost its level of labour productivity by 10% if it were to reduce its level of mismatch within each industry to that corresponding to OECD best practices (Adalet McGowan and Andrews, 2015).

Overcoming skill mismatches, under or over-skilling, requires policies to foster labour mobility and make the education and training system more responsive to labour market needs. Policies to tackle under-skilling require educational reforms aiming at raising skills levels that match employer's demands. Tackling over-skilling calls for demand-side policies to encourage businesses move into higher value added products, such as innovation incentives and knowledge-based economic development strategies, to increase the demand for high-skilled jobs. Enhancing the working environment and making wages more flexible would also allow a better match of supply and demand of skills by better rewarding highly skilled workers. All these policies could help reduce the high share of highly educated young Italians who choose to emigrate (EC, 2016).

Figure 39. **The level of skill mismatch is high**

% of over- and under-skilled workers in literacy, 2012



Note: Data for United Kingdom corresponds to England and Northern Ireland. Data for Belgium corresponds to Flemish Community. Over-skilled workers are those whose proficiency score is higher than that corresponding to the defined maximum threshold of self-reported well-matched workers – i.e. workers who neither feel they have the skills to perform a more demanding job nor feel the need of further training in order to be able to perform their current jobs satisfactorily – in their occupation. Under-skilled workers are those whose proficiency score is lower than that corresponding to the defined minimum threshold of self-reported well-matched workers in their country and occupation. Ten different thresholds are used to define the maximum and minimum thresholds. The maximum thresholds are defined from the 90th to the 99th percentile. The minimum thresholds are defined from the 1st to the 10th percentile. The share of mismatched workers is then the average of the share of mismatched workers across the 10 different thresholds. Countries are ranked in ascending order of the percentage of workers over-skilled in literacy.

Source: OECD calculations using Survey of Adults Skills (PIAAC) 2012.

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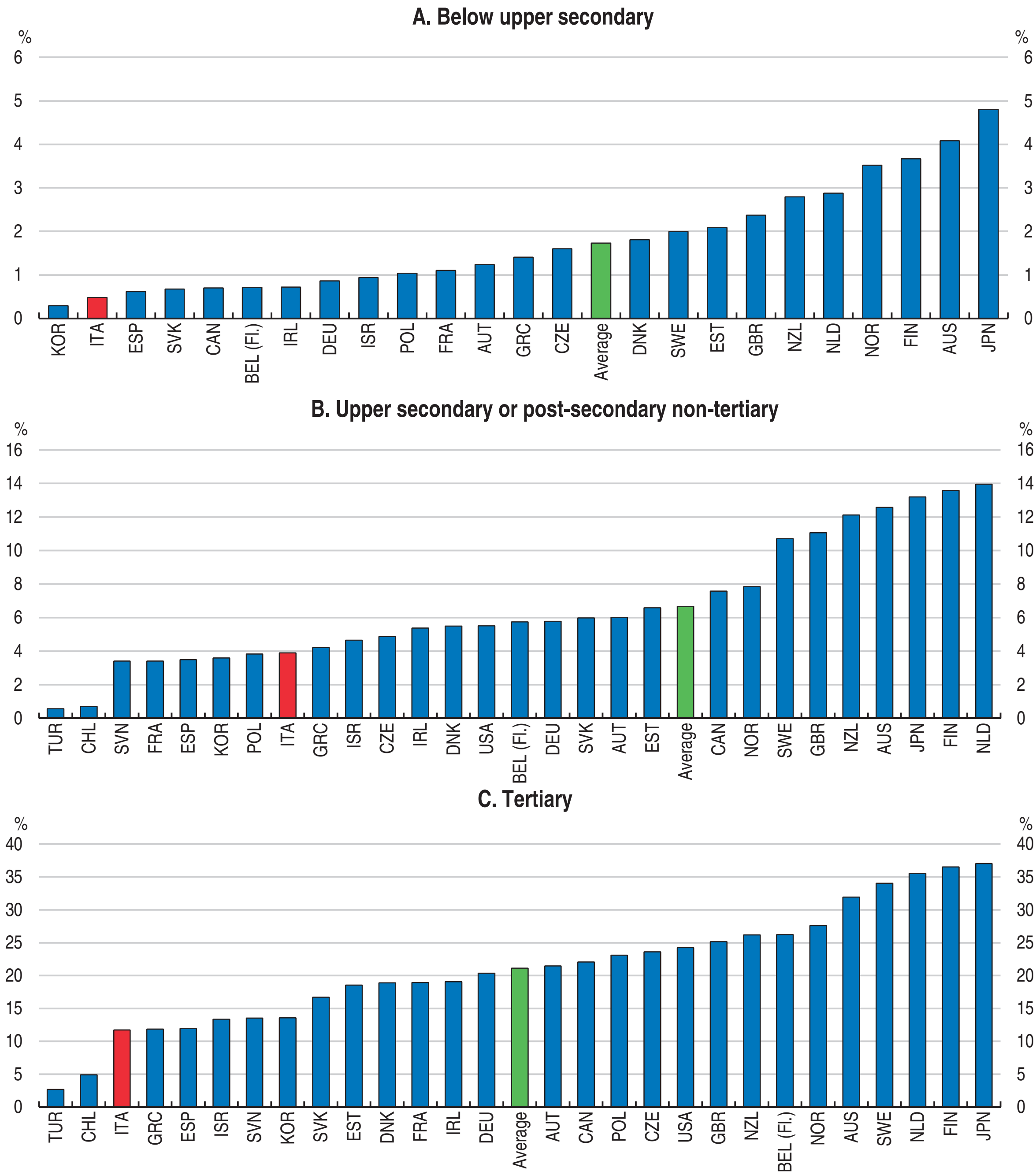
Figure 40. **Skills of Italians are low across all levels of education**

% of adults scoring at the highest literacy proficiency by educational attainment, 2012



Note: The highest proficiency level refers to level 4 and 5 on PIAAC's literacy proficiency score.
Source: OECD (2016), *Education at a Glance 2016*, OECD Publishing, Paris.

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Job search and training policies can play an important role in reducing skill mismatches and enhancing skills. The Jobs Act mandates the creation of the National Agency for Active Labour Market Policies (ANPAL) with responsibilities over job-search and training policies and a new system of unemployment benefits conditional on participating in activation measures.

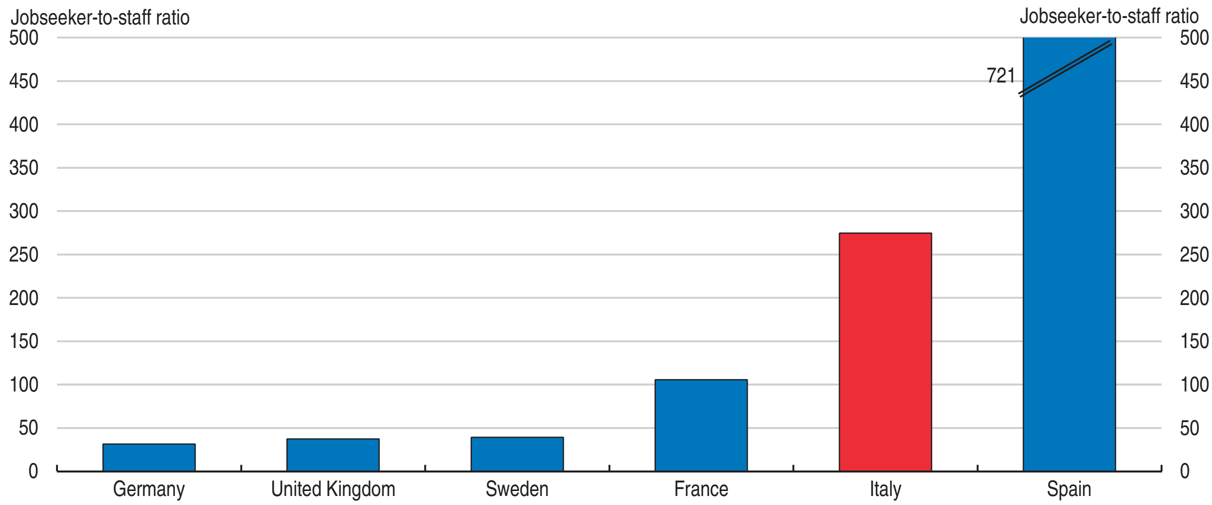
ANPAL has been created and since December 2016 is fully operational (Table 13). ANPAL could be key to improving the effectiveness of job search and training policies by enhancing coordination and setting standards for regional offices responsible for executing policies. Moreover, decreasing the high jobseeker-to-staff ratio (Figure 41), to manage effectively the large numbers of jobseekers together with well-trained operators will be key to increasing effectiveness of Public Employment Services (PES). Given limited fiscal space, a reduction in the jobseeker-to-staff ratio can be achieved by a reallocation of staff within the public administration making sure they receive the necessary training to become qualified counsellors.

Implementation of unemployment benefits conditional on activation measures, as foreseen by the Jobs Act, will require strong coordination among PES' local offices and other public and private agencies. Such coordinating efforts have already started with the implementation of the Youth Guarantee and the use of profiling methods. These methods should be extended to all unemployed or registered within PES to re-skill the unemployed and help them find a good match. This should be based on a nationwide information system to facilitate data exchange among regions, which ANPAL is establishing, to ensure compliance with the eligibility conditions and monitor the services provided.

Table 13. **Past OECD recommendations on the labour market**

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Fully roll-out the new standard contract for new hires, with employment protection rising with job tenure, while grandfathering existing contracts.	The Jobs Acts has introduced a permanent contract with increasing employment protection with job tenure to new hires, while grandfathering existing contracts. For unfair dismissals the monetary compensation is 2 gross monthly salaries per year of tenure (a minimum of 4 months and a maximum of 24 monthly wages). Reinstatement only remains for discriminatory dismissals and for non-existing breaches of conduct. Additionally, a fast-track settlement has been introduced by-passing courts upon agreement between the two parties where the monetary compensation is 1 monthly salary per year of work (minimum 2 and maximum 18). At the same time, new permanent contracts were exempted from social security contributions (capped at EUR 8 060 annually) for the first 3 years; exemptions were reduced in 2016 to EUR 3 250 for 2 years only. In 2017 social security exemptions were restricted to employers who hire students who completed an apprenticeship or traineeship with the same employer (up to EUR 3 250). Furthermore, social security exemptions for firms located in southern regions were introduced to hire unemployed young workers with permanent or apprenticeship contracts (up to EUR 8 060).
Change the composition of spending on active labour-market policy: limit training programmes to those who need them most; tailor assistance to job seekers according to their specific situation.	In implementation process. The Jobs Act has streamlined and re-organised Active Labour Market Policies. The National Agency for Active Labour Market Policies (ANPAL) is fully operational: ALMPs instruments can be activated through its website. ANPAL coordinates activation measures, although the regional governments continue to have jurisdiction in this sphere, the essential service levels will be set by ANPAL. ANPAL is in charge of establishing programmes for active policies and supervising the national network. It is also establishing a new and unique information system of employment services to collect the personal files of the unemployed and help them to get re-employed and keep a register of private employment agencies. The Youth Guarantee programme has been refinanced. A Young Bonus has been introduced; it gives incentives for employers to who hire – in 2017 – young NEET (Not in Education, Employment or Training).
Fully implement the unified unemployment benefit system. Require recipients to actively seek work, and to accept employment or training when offered.	The Jobs Act fully implemented a universal unemployment insurance system (NASPI). It is based on employees' social contributions accrued in at least 13 weeks of contributions over the last 4 years of employment and at least 30 effective days of work in the previous 12 months. It has a maximum duration of 24 months and the benefit's amount decreases progressively (3% per month) starting from the fifth month of payment. Furthermore, the link between active and passive labour market policies has been strengthened by conditionality on activation measures to receive income support allowances. Those who receive the unemployment benefit after the fourth month will be entitled to a voucher – "assegno di ricollocazione", the amount of which depends on the employability profile and can be spent at public or private employment services.
Encourage social partners to allow modification of national wage agreements at the firm level, through agreement with representatives of a majority of the firm's employees.	Comprehensive reforms on collective wage bargaining have been delayed. Confindustria and the unions recently established a negotiating table for a broad set of topics, including labour contracts. The 2016 Budget Law has introduced incentives for second-level bargaining through lower taxation on firm-level negotiated productivity premium. The 2017 budget law strengthened these incentives. The reduced tax rate of 10% is applicable to workers with a salary salary up to EUR 80 000 and a maximum of EUR 3 000.

Figure 41. **Reducing the jobseeker-to-staff ratio[1] would increase the effectiveness of PES**



1. Year 2012.

Source: Mandrone (2014), "Youth Guarantee and the Italian PES: insights from ISFOL PLUS Survey data", *CIMR Research Working Paper Series, Working Paper*, No. 21.

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Furthermore, a systematic and regular assessment of the effectiveness and the labour market impact of activation programmes should be implemented. The Youth Guarantee has developed evaluation practices that need to be extended to all active labour market programmes.

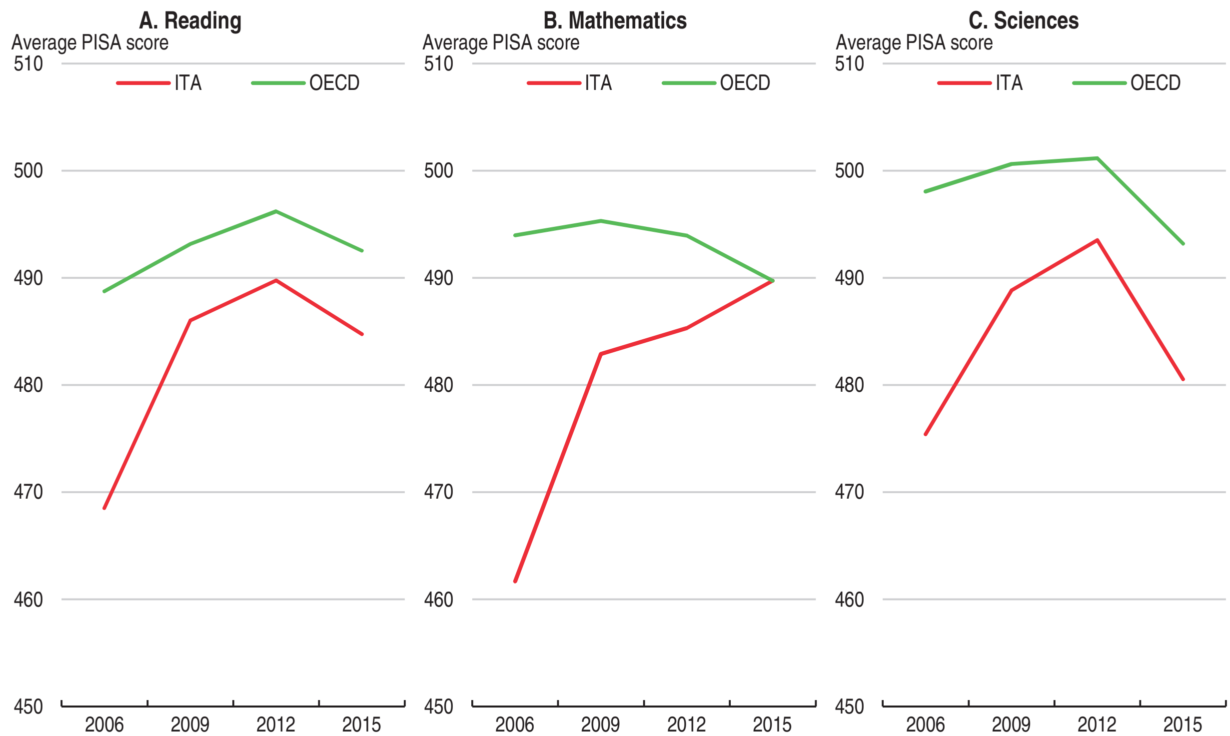
Flexibility in the wage setting mechanism needs to increase to better reflect firm-specific conditions, such as productivity. Wage-setting in Italy takes places in a centralised collective bargaining at sectoral level; sectoral wage agreements are then applied across the country. The Government is making efforts to make the wage setting mechanism more flexible by enhancing firm-level bargaining (Table 13). Social partners have recently started negotiations to review the wage-setting mechanism. A higher degree of flexibility in the wage-setting mechanism would result in a reduction of skill mismatch in the workplace (Adalet McGowan and Andrews, 2015). More flexible wage-setting would also help firms find good matches by letting wages increase in those occupations and sectors with skill shortages. Evidence shows that the Italian centralised system of collective bargaining hinders the adjustment of salaries and working conditions to attract more and better candidates (Monti and Pellizzarini, 2016).

Enhancing skills

The Good School ("Buona Scuola") reform can drastically improve Italy's education system

There have been consistent signs of improvement in the quality of education. Scores in reading, math and sciences among 15-year olds have increased substantially and faster than the OECD average. However, average levels of proficiency are still low (Figure 42). The early school leaving rate remains high (14.7% in 2015 compared with the EU average of 11%), although it is falling, and has already fulfilled the Agenda 2020 target of 16%. Nevertheless, the rate varies wildly across the country (exceeding 20% in southern regions). There is also a big gender gap, as the difference between drop-out rates for boys and girls is 5.7 percentage points.

Figure 42. **There are clear improvements in school results but they are still below the OECD average**



Source: OECD, *PISA 2006, 2009, 2012, 2015 Databases*.

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The government passed a comprehensive school reform, Good School ("Buona Scuola"), in 2015, which is being implemented. The reform gives more autonomy to schools and introduces merit-based bonuses for teachers while introducing stronger accountability of school principals and teacher evaluations. Measures related to teachers contracts and career development will potentially provide incentives to improve teaching methods with positive effects on educational outcomes. However, a teacher career system needs to be introduced to attract the best-qualified graduates into the teaching profession.

The Good School reform also aims at strengthening links between school and the labour market by mandating school-to-work experiences for all students in the last three years of secondary school (Table 14). Intensive involvement of the business sector and other stakeholders will be key to ensuring the creation of quality school-to-work schemes that will help the development of relevant skills for the labour market. An assessment system aimed at verifying the quality of training carried out in the work placement will need to be implemented.

The Good School reform also includes a plan to strengthen digital competences among teachers and students and a modern learning environment relying on the Internet and digital platforms. These are positive steps as they contribute to close Italian schools' deficit in digital infrastructure and digital skills. If fully implemented, it could improve the quality and effectiveness of the Italian school system and significantly contribute to enhance digital skills of the future workforce.

Table 14. **Past OECD recommendations on education**

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Avoid job mismatch taking into account occupational demands and orienting students accordingly. Strengthen VET to provide more professional experience and to be coordinated with industry needs (*Survey 2015*). Ensure the development of a comprehensive evaluation and assessment framework. Strengthen teacher quality. Promote early access to care of good quality. Prevent school failure and reduce dropouts. Improve the performance of vocational education and training system and provision of post-secondary vocational education. Improve business-academic research links, designing intellectual property rights in line with the incentives of researchers and business. Increase student contribution to the cost of tertiary education; provide income-contingent-repayment loans. Reduce dropout rates with more widespread selection at entry. Ensure merit-based recruitment to universities and accountability of recruitment panels. Give universities autonomy on strategic direction, recruitment and performance incentives. Build capacity and legitimacy in ANVUR, whose quality assurance reports should focus on student and research outcomes and be widely disseminated. Support innovation in education.	The main elements of the Buona Scuola reform (approved in 2015) include: • Introduction of performance-based bonus for teacher salaries: The reform also introduced mandatory on-the-training for teachers. • Teacher recruitment: In two years, the government has added almost 120 000 teachers to the official school register. From 2016 onwards, access to the profession is made only via open competitions. • School autonomy: School principals will have greater autonomy in managing human, technological and financial resources and will be subject to external evaluation every three years. • Curriculum: Some subjects may be introduced or strengthened. Upper secondary schools will have some flexibility to set their own curriculum by introducing optional subjects. • Digital and language skills: the reform includes: i) a national three-year plan ("Piano Nazionale Scuola Digitale") to strengthen digital competences among teachers and students, improve Internet connections and innovative learning environments in schools; and ii) opportunities for introducing the "content and language integrated learning" (CLIL) methodology from primary level onwards. • Work-based learning: Compulsory for students in the last three years of secondary education (at least 400 hours for students in vocational education and 200 hours for students in general education). They can take place either in the private sector or in the public administration. A three-year plan was implemented in 2016 for the development of the university system to give more flexibility and independence in defining the training offer, to better respond to student needs. The 2017 Budget law introduced several measures to increase the quality of the research system: additional funding of EUR 1.5 million yearly for 5 year for the best departments; the best 60% of researchers (with temporary or open-ended contracts) as well as the best 20% of associated professors receive EUR 3 000 yearly to manage autonomously; the annual endowment for ANVUR (the National Agency for Evaluation of the University and Research) is raised to EUR 7 million yearly; the tax break to repatriate brains has been extended. A fund to support university students has been created (right to study) financing tax exemptions and grants for students in need, defined according to their family income. To the best 400 students of secondary schools who enrol in a state university, a grant of EUR 15 000 net a year is given, together with the tax exemption.

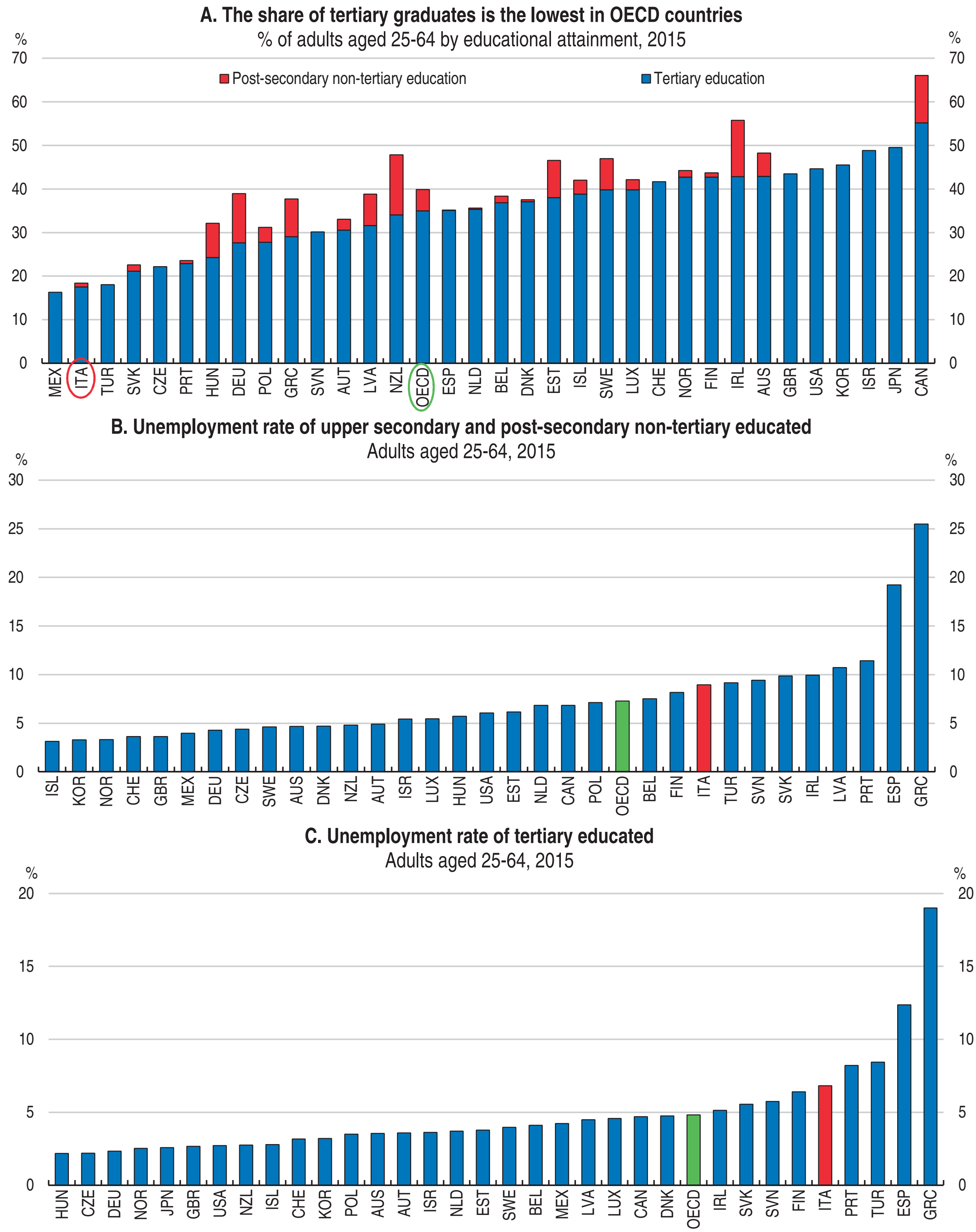
Tertiary education and apprenticeships should meet labour market needs

Italy has a small share of students in higher education. At the same time, the difference between the earnings of tertiary-educated graduates relative to those of adults with only upper secondary education is low in Italy (143%) compared to the OECD average (160%). Furthermore, the unemployment rate among tertiary educated adults is among the highest in OECD countries (Figure 43). Hence, labour market outcomes of tertiary educated make the investment in tertiary education unattractive.

The government has taken measures to increase the quality of higher education. Under the 2010 reform, an increasing proportion of public funding for universities should be allocated on the basis of research and teaching performance. However, these reforms were not implemented until 2013, because of major cuts to overall public funding for higher education between 2009 and 2013. In 2015, the share of performance-related funding rose to 20% of total funding, from 13.5% in 2013, and the National Reform Programme confirmed the government's intention to gradually increase this to 30% (MEF, 2015). Additionally, the 2017 Budget Law introduced new measures to increase quality related funding to the best university departments and researchers (Table 14).

Education expenditure is low, particularly in tertiary education, both relative to GDP (1.0% of GDP, compared to the OECD average of 1.6%) and to the number of students (expenditure per student was 71% of the OECD average). More funding will be key to improving the quality of education. Given limited fiscal room, one alternative could be to increase tuition fees, which are low compared to other OECD countries (OECD, 2016b)

Figure 43. **Tertiary education participation and incentives to invest in high education are low**



Source: OECD (2016), *Education at a Glance* (database), *http://stats.oecd.org/Index.aspx?datasetcode=EAG_NEAC*. See Annex 3 for notes (*www.oecd.org/education/education-at-a-glance-19991487.htm*).

StatLink *http://dx.doi.org/10.1787/888933454221* provided that scholarships for poor students are strengthened and a system of income-contingent loans is introduced to ensure fair access to universities for all. Very recently, a system of grants for students in need was introduced to help increase the enrolment in tertiary education (Table 14).

Apprenticeships are a key instrument to help young people to gain useful work-relevant skills. However, they are underutilised. The main challenge for apprenticeships in Italy is the weak link between work and education. The most common apprenticeship, used in more than 90% of hirings, is only weakly connected to formal education and under this type of contract less than one third of apprentices were enrolled in formal education in 2013. In other type of contracts, access to training – as required by law – depends on the initiative of enterprises. Furthermore, there is no national system to control and monitor the training provided by firms. Specific quality criteria need to be set and enforced for companies offering apprenticeships.

Participation in vocationally-oriented tertiary programmes is low in Italy. Less than 1% of those entering tertiary education choose such programmes compared with 18% in OECD countries on average. In recent years, Italy has taken several steps to create tertiary education programmes preparing students for a rapid entry into the labour market with the creation of high technical institutes (Istituti Tecnici Superiori – ITS). The experience of ITS has been positive as graduating students have high level of employability, 73% of the graduates are employed in a job that matches their studies 12 months after graduation (INDIRE, 2016). The success of ITS is attributable to its responsiveness to labour market needs, as they benefit from strong involvement of the business sector, universities and higher secondary education. The full potential of ITS remains untapped as they are concentrated in the most industrialised regions of Italy and female participation is low.

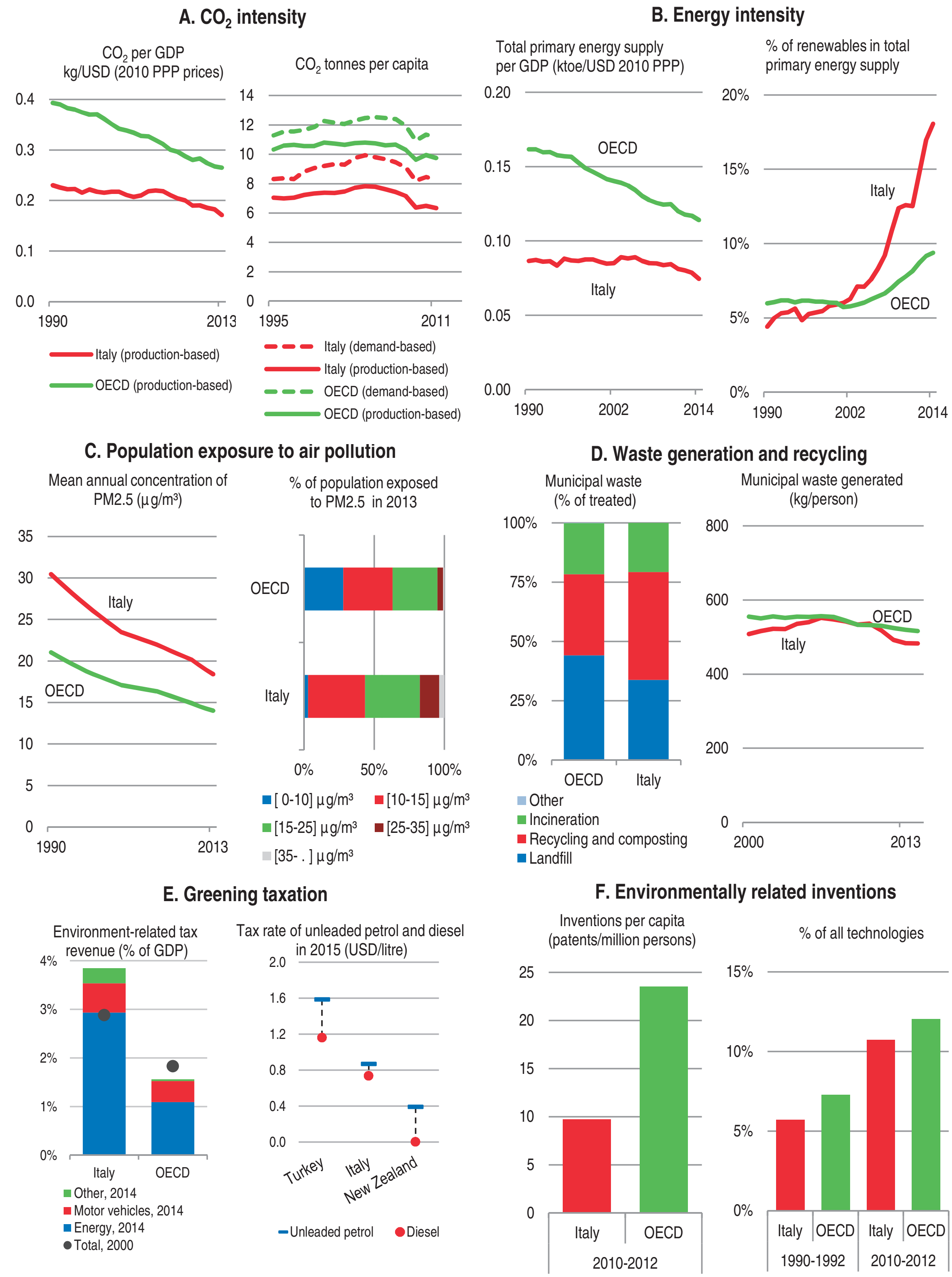
Italy must build on the positive experience of ITS and establish a VET system at tertiary level based on apprenticeships. This would help match the trend of rising demand for medium- and higher-level qualifications, which are projected to reach 82.5% of the labour force in 2025, against less than 80% today (CEDEFOP, 2015). Establishing a national body involving the business sector and other key stakeholders would improve strategic planning and coordination, and ensure the education-working experience mix reflects not only student preferences but also local labour market needs.

Greening Italy

Italy's economy has long been significantly less energy intensive than the OECD average. It also has lower greenhouse gas (GHG) emissions (Figure 44). Italy's net imports embody more GHG emissions than domestic production so its contribution to climate change measure through demand is greater than domestic emissions. The share of renewables in total energy supply has increased rapidly in the last years, with total renewables reaching around 18% of total primary energy in 2014. Hydroelectric power was for a long time the major supplier of carbon neutral energy but recently wind and solar power has increased, supported by very large subsidies.

Air quality is quite poor in a number of Italian cities, although national per capita emissions of key pollutants such as nitrogen and sulphur oxides are relatively low. People's average exposure to particle pollution is also well above the OECD average. In 2015 the estimated cost based on mortalities of outdoor air pollution was about 5.7% of GDP, 2 percentage points above the OECD average (Roy and Braathen, forthcoming). As

Figure 44. **Green growth indicators for Italy**



Source: OECD (2016), *OECD Environment Statistics Database* (Green Growth Indicators, Patents: Technology Development, Municipal Waste); *OECD National Accounts Database*; IEA (2016), *IEA World Energy Statistics and Balances Database*; *IEA Energy Prices and Taxes Database*; OECD calculations based on data from M. Brauer et al. (2016), "Ambient Air Pollution Exposure Estimation for the Global Burden of Disease 2013", *Environmental Science & Technology*, Vol. 50(1), pp. 79-88.

StatLink http://dx.doi.org/10.1787/888933454238

highlighted in previous *Surveys* (e.g. OECD, 2015d) reducing the gap between diesel and petrol taxes will make the tax system more environmental friendly and contribute to lower pollution generated by diesel vehicles. Also, shifting the tax burden from electricity to the energy products used to generate it – with the respective rates based on the pollution of each electricity source – will accelerate the deployment of renewable energy sources.

Household waste generation in Italy is similar to the OECD average. A higher than average proportion of household waste is sent to landfill, and illegal dumping of toxic and other waste has been a problem in some regions. Waste charges/taxes have been introduced but their structure has changed, and it has not been easy to pass these taxes on to households, limiting their incentive effect.

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ANNEX

Progress in structural reforms

The objective of this Annex is to review action taken since the previous Survey *(February 2015) on the main recommendations from previous* Surveys.

Fiscal issues

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Continue efforts to reduce tax evasion through more effective enforcement and increase tax compliance through simplified collection procedures. Broaden tax bases, in particular by cutting the number of tax expenditures, and simplify the tax system.	Some progress. Implemented measures: VAT electronic invoicing; VAT split payment and reverse charge; implementation of BEPS counter-measures; bilateral agreements to allow tax information exchange; simplification of tax collection; improved monitoring of tax evasion. Since 2013, the government has presented a yearly report to the Parliament on tax evasion, which describes results and strategies of the implemented activities, including an estimate of the tax gap (the receipts lost because of tax evasion) of main tax items. Moreover, the Government will have to present a yearly report for the monitoring and review of tax expenditures. The first report has been presented with the Budget Law for 2017. The EU Anti-Tax Avoidance Directive ("ATAD") was approved in June 2016 to prevent cross-border tax avoidance by businesses.
Stick to the planned fiscal strategy so as to bring the debt-to-GDP ratio onto a declining path.	The debt ratio has stabilised trough prudent fiscal policy, lower interest payment and modest economic growth.
Promote greater use of centralised procurement, cost information systems and benchmarking.	The share of centrally managed purchases is gradually increasing; 33 central purchasing bodies have been established; and the government has issued a list goods and services that will have to be purchased centrally.
Continue to assess the magnitude of budgetary contingent liabilities, including the vulnerability of public finances to risks associated with the financial sector.	Ongoing.
Make taxation more environmentally-friendly by reducing the gap between duties on diesel and petrol.	No progress.
Shift the tax burden from electricity to the energy products used to generate it, with the respective rates set to reflect the carbon emissions and other pollutants associated with each fuel.	No progress.
Implement the planned reform of the Internal Stability Pact to regulate only overall borrowing of sub-national government, with consolidation targets for indebted administrations. Replace its detailed provisions with a fiscal federalism structure that reflects the desired degree of decentralisation.	Implemented the reform that envisages the entry into force in 2016 of the balanced budget rule for all sub-national governments requiring each entity to balance the overall balance or achieve nominal surplus.

Financial issues

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Urgently take action to achieve a lower level of non-performing loans in the banking sector, including through enhancing the insolvency regime applied to distressed borrowers.	Shortening the period for tax deductibility of loan losses from 5 years to 1 year, in line with other EU countries. Establishing a government guarantee scheme to encourage banks to securitise non-performing loans and issue asset-backed securities. The scheme is compliant with EU state-aid rule as it will be offered at market price (based on the average price of a basket of credit default swap covering investment grade Italian companies and with the same duration of the asset-backed security) and will apply only to the senior tranches of (i.e. high quality) of asset-backed securities. Before the government guarantee becomes effective, at least half of the junior tranches will have to be sold in the market. Coordinating the creation of the private-sector fund (Atlante) by a large set of Italian financial institutions to support banks' recapitalisation and invest in securitised non-performing loans. Reforming loan foreclosing procedures, which according to the government should cut the length of foreclosing procedures from 3 and half years to about 7-8 months; new procedures apply only to new loans but borrowers and lenders can renegotiate existing loans to apply new procedures to them also.
If progress in reducing nonperforming loans remains slow, consider setting up a public specialised asset management company ("bad bank") to accelerate the process, with due regard for state aid rules.	Banks are allowed to set up bad banks on a voluntary basis and to use a government guarantee on senior tranches of securitised bad debts.

Public sector efficiency

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Follow through the reform of parliament and the re-assignment and clarification of competences between the central and sub-national governments. Ensure that legislation is clear, unambiguous and supported by improved public administration, including through reduced use of emergency decrees.	Far-reaching constitutional reforms were approved by Parliament in early 2016 but rejected in a referendum in December 2016. The ongoing reform of the Public Administration aims to simplify the system. Among the decrees adopted until November 2016, there is the repealing of obsolete and out of date secondary legislation and implementing decrees. A key aspect of the reform has been declared unconstitutional.
Further streamline the court system, with more specialisation where appropriate; increase the use of mediation; enhance monitoring of court performance.	The reform of the civil and justice system is ongoing; it also includes the collection of data about court performance and their dissemination.
Consider establishing a Productivity Commission with the mandate to provide advice to the government on matters related to productivity, promote public understanding of reforms, and engage in a dialogue with stakeholders.	No progress.
Reducing corruption and improving trust must remain a priority. For this, the new anti-corruption agency ANAC needs stability and continuity as well as support at all political levels.	ANAC has gained prestige and powers and is well-funded. In January 2016, the Chamber of Deputies approved a law protecting whistle-blowers for public and private-sector employees reporting suspicions of corruption and other illegal cases in their place of work. The new Public Procurement Code went into effect in April 2016, aiming at enhancing efficiency and promoting transparency.

Product markets

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Ensure Competition Authority uses increased power effectively.	In 2015, the government for the first time submitted to Parliament a law to enhance competition following the recommendations of the Competition Authority as prescribed by Law 99/2009, Article 47.
Remove unnecessary licensing in professional services. Remove quantitative restrictions on supply in services.	Some of these issues are dealt by competition laws under Parliamentary discussion. The National Professional Services Reform Programme was submitted to the European Commission in March 2016. In compliance with Directive 2005/36, the Programme contains the screening of national regulations regarding professional services, to ensure that they are non-discriminatory, objectively justified and proportionate.
Reduce public ownership, especially in TV media, transport and energy utilities, and local public services.	Public administration reforms include the rationalisation of local public utilities
Privatise and liberalise in energy and transport sectors. Get transport regulator into effective operation quickly; complete framework for regulation of water and other local public services, ensuring regulatory independence Introduce national oversight of regional regulatory competences (e.g. retailing, land-use planning).	The transport sector regulator is operational.

Boosting innovation

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Make science, technology and innovation policy more business-oriented and receptive to the varied needs across the whole spectrum of firms, including SMEs. Simplify and rationalise public support for business R&D and innovation, by achieving an appropriate mix of direct and indirect measures. Improve linkages between the business sector, universities and the public research system, including through mobility of researchers, and appropriate intellectual property rights. Foster the creation and growth of start-up firms, by lowering regulatory barriers, simplifying bureaucracy, and supporting the collateralisation and securitisation of innovation-related assets (e.g. through adhesion to the European Unitary Patent).	The new national research plan addresses some of these issues. R&D tax credits have been introduced along with the patent box, although their impacts on SMEs have yet to be estimated. Linkages between firms and research centres will benefit from tax incentives. R&D tax incentives are equivalent to 55% of the yearly increment in R&D spending taking the 2012-14 average as a base. The same rate is applied to R&D spending relating to highly qualified personnel, contracts with university or public research institutes or with innovative start-ups. Although the tax credit is incremental, the fixed base (2012-14 average) implies that for start-ups or any other firm with no R&D spending during the reference period the tax incentive is volumetric. Tax incentives on the repatriation of researchers have been made permanent. Hyper depreciation scheme (introduced with the budget law of 2017) equivalent to 250% of the value of investments in industry 4.0 technologies which are instrumental to the digitalisation and innovation of their industrial processes. Super-depreciation (introduced in 2016 and enhanced in 2017) equivalent to 140% of the original cost of eligible equipment, machineries, software (if connected to investments in industry 4.0 technologies) and other eligible equipment. Incentives for innovative start-ups and SMEs. Investors in innovative startups and SMEs are granted tax and regulatory incentives. The 2017 budget law increased the tax credit/deduction from 19% to 30% and the maximum credit limit from EUR 0.5 to EUR 1 million. Tax losses of start-ups companies can be transferred to listed companies having a participation of at least 20% in the capital of the start-up. To reduce the gap between North and South, incentives for research and innovation for SMEs and professionals in the South are operational. Promotion of innovative PhDs with strong industrial vocation, for the attraction of researchers of excellence and to support measures for Italians researchers who intend to participate in European tenders for the European Research Council (ERC).

Labour market

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Fully roll-out the new standard contract for new hires, with employment protection rising with job tenure, while grandfathering existing contracts.	The Jobs Acts has introduced a permanent contract with increasing employment protection with job tenure to new hires, while grandfathering existing contracts. For unfair dismissals the monetary compensation is 2 gross monthly salaries per year of tenure (a minimum of 4 months and a maximum of 24 monthly wages). Reinstatement only remains for discriminatory dismissals and for non-existing breaches of conduct. Additionally, a fast-track settlement has been introduced by-passing courts upon agreement between the two parties where the monetary compensation is 1 monthly salary per year of work (minimum 2 and maximum 18). At the same time, new permanent contracts were exempted from social security contributions (capped at EUR 8 060 annually) for the first 3 years; exemptions were reduced in 2016 to EUR 3 250 for 2 years only. In 2017 social security exemptions were restricted to employers who hire students who completed an apprenticeship or traineeship with the same employer (up to EUR 3 250). Furthermore, social security exemptions for firms located in southern regions were introduced to hire unemployed young workers with permanent or apprenticeship contracts (up to EUR 8 060).
Change the composition of spending on active labour-market policy: limit training programmes to those who need them most; tailor assistance to job seekers according to their specific situation.	In implementation process. The Jobs Act has streamlined and re-organised Active Labour Market Policies. The National Agency for Active Labour Market Policies (ANPAL) is fully operational: ALMPs instruments can be activated through its website. ANPAL coordinates activation measures, although the regional governments continue to have jurisdiction in this sphere, the essential service levels will be set by ANPAL. ANPAL is in charge of establishing programmes for active policies and supervising the national network. It is also establishing a new and unique information system of employment services to collect the personal files of the unemployed and help them to get re-employed and keep a register of private employment agencies. The Youth Guarantee programme has been refinanced. A Young Bonus has been introduced; it gives incentives for employers to who hire – in 2017 – young NEET (Not in Education, Employment or Training).
Fully implement the unified unemployment benefit system. Require recipients to actively seek work, and to accept employment or training when offered.	The Jobs Act fully implemented a universal unemployment insurance system (NASPI). It is based on employees' social contributions accrued in at least 13 weeks of contributions over the last 4 years of employment and at least 30 effective days of work in the previous 12 months. It has a maximum duration of 24 months and the benefit's amount decreases progressively (3% per month) starting from the fifth month of payment. Furthermore, the link between active and passive labour market policies has been strengthened by conditionality on activation measures to receive income support allowances. Those who receive the unemployment benefit after the fourth month will be entitled to a voucher – "assegno di ricollocazione", the amount of which depends on the employability profile and can be spent at public or private employment services.
Encourage social partners to allow modification of national wage agreements at the firm level, through agreement with representatives of a majority of the firm's employees	Comprehensive reforms on collective wage bargaining have been delayed. Confindustria and the unions recently established a negotiating table for a broad set of topics, including labour contracts. The 2016 Budget Law has introduced incentives for second-level bargaining through lower taxation on firm-level negotiated productivity premium. The 2017 budget law strengthened these incentives. The reduced tax rate of 10% is applicable to workers with a salary salary up to EUR 80 000 and a maximum of EUR 3 000.

Increasing female employment

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*	
Encourage female labour force participation with more flexible working-hours arrangements, and promote wider provision of good quality care of children and the elderly.	March 2015 Decree	Ensures adequate support to local authorities that, starting from a particular disadvantage in offering kindergartens, realise new structures or increase places or hours of service.
	September 2015 Decree	Measures to foster female entrepreneurship.
	2015 Stability Law	Sets up a fund for interventions in favour of the family and – to the launch of a plan for developing the territorial system of social and educational services for early childhood. Maternity-support tax measures (the "baby bonus") targeted to low income families.
	Jobs Act	Measures to support paternal care and maternity protection. Incentives for employers are foreseen if telework is used to meet parental needs of workers.
	2016 Stability Law	A EUR 600 monthly subsidy available to female workers at the end of maternity leave that can be used for baby-sitting service or for paying the cost of infant day-care. Extension of the baby bonus (2015-17).
	2017 Budget Law	Extension of the baby bonus; refinancing the nursery voucher; fund to promote credit access for families with one or more children (Fondo di sostegno alla natalità); extension and increase of compulsory leave for working fathers.

Education

Recommendations in previous *Surveys*	Actions taken since the 2015 *Survey*
Avoid job mismatch taking into account occupational demands and orienting students accordingly. Strengthen VET to provide more professional experience and to be coordinated with industry needs (*Survey 2015*). Ensure the development of a comprehensive evaluation and assessment framework. Strengthen teacher quality. Promote early access to care of good quality. Prevent school failure and reduce dropouts. Improve the performance of vocational education and training system and provision of post-secondary vocational education. Improve business-academic research links, designing intellectual property rights in line with the incentives of researchers and business. Increase student contribution to the cost of tertiary education; provide income-contingent-repayment loans. Reduce dropout rates with more widespread selection at entry. Ensure merit-based recruitment to universities and accountability of recruitment panels. Give universities autonomy on strategic direction, recruitment and performance incentives. Build capacity and legitimacy in ANVUR, whose quality assurance reports should focus on student and research outcomes and be widely disseminated. Support innovation in education.	The main elements of the Buona Scuola reform (approved in 2015) include: ● Introduction of performance-based bonus for teacher salaries: The reform also introduced mandatory on-the-training for teachers. ● Teacher recruitment: In two years, the government has added almost 120 000 teachers to the official school register. From 2016 onwards, access to the profession is made only via open competitions. ● School autonomy: School principals will have greater autonomy in managing human, technological and financial resources and will be subject to external evaluation every three years. ● Curriculum: Some subjects may be introduced or strengthened. Upper secondary schools will have some flexibility to set their own curriculum by introducing optional subjects. ● Digital and language skills: the reform includes: i) a national three-year plan ("Piano Nazionale Scuola Digitale") to strengthen digital competences among teachers and students, improve Internet connections and innovative learning environments in schools; and ii) opportunities for introducing the "content and language integrated learning" (CLIL) methodology from primary level onwards. ● Work-based learning: Compulsory for students in the last three years of secondary education (at least 400 hours for students in vocational education and 200 hours for students in general education). They can take place either in the private sector or in the public administration. A three-year plan was implemented in 2016 for the development of the university system to give more flexibility and independence in defining the training offer, to better respond to student needs. The 2017 Budget law introduced several measures to increase the quality of the research system: additional funding of EUR 1.5 million yearly for 5 year for the best departments; the best 60% of researchers (with temporary or open-ended contracts) as well as the best 20% of associated professors receive EUR 3 000 yearly to manage autonomously; the annual endowment for ANVUR (the National Agency for Evaluation of the University and Research) is raised to EUR 7million yearly; the tax break to repatriate brains has been extended. A fund to support university students has been created (right to study) financing tax exemptions and grants for students in need, defined according to their family income. To the best 400 students of secondary schools who enrol in a state university, a grant of EUR 15 000 net a year is given, together with the tax exemption.