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# **Czech Republic**

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**OVERVIEW**

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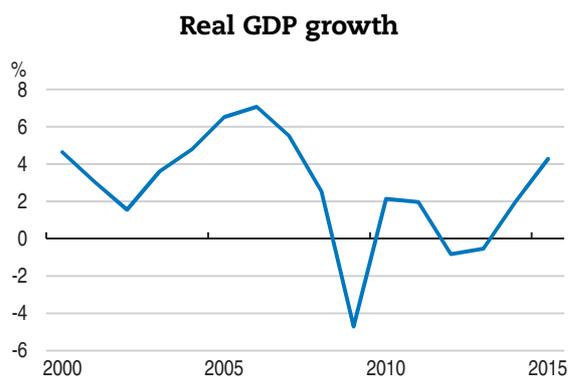
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## Executive summary

- *Growth has picked up temporarily*
- *Strengthening innovation policies and market regulations to bolster productivity*
- *Improving the effectiveness of the public sector*

## Growth has picked up temporarily



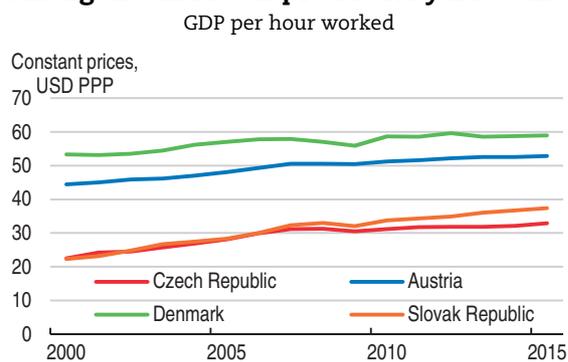
Source: OECD Economic Outlook database.

StatLink <http://dx.doi.org/10.1787/888933364854>

Growth picked up strongly in 2015 thanks to a combination of temporary effects, mostly absorption of expiring EU funds and low commodity prices, but the recovery since the global crisis has been uneven, mainly because of volatile investment. Monetary policy continues to provide economic support, and the unconventional exchange rate floor appears to have achieved its purpose. Indeed, inflation is projected to return to the target of 2% in the course of 2017, mainly driven by wage increases thanks to a strong labour market. The fiscal position is good but ageing-related spending will increase, calling for long-lasting reforms, in particular of the pension system. The Czech Republic scores well on indicators of inequality and rates of poverty are very low, although important gender equity issues need continued attention.

## Strengthening innovation policies and market regulations to bolster productivity

### Convergence in labour productivity has stalled



Source: OECD Productivity database; OECD calculations.

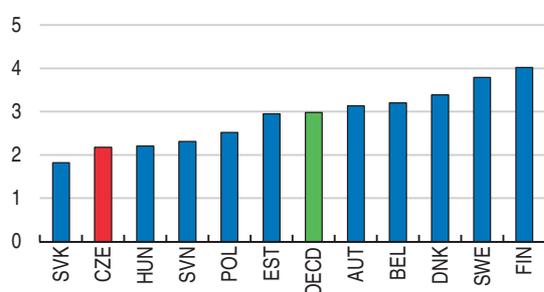
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Convergence of incomes and living standards towards the OECD average has stalled since the crisis, reflecting weak productivity growth. With the largest gains from foreign investment and the opening of the economy having been realised, productivity growth needs to stem from more competitive domestic markets, greater mobility and stronger management capacity. The expansion of successful firms and the exit of unproductive ones appear to be hindered by low mobility and cumbersome bankruptcy rules. Access to finance is reported to be difficult for SMEs. Better targeting of government R&D support and more focused innovation policies will lift Czech firms' competitiveness and productivity.

## Improving the effectiveness of the public sector

### Public administration performance indicator

Covering regulation, wastage and justice



Source: Dutu and Sicari (2016).

StatLink <http://dx.doi.org/10.1787/888933364876>

Spending on public administration is relatively low and so are indicators of its performance. Insufficient monitoring and transparency resulted in inefficient public procurement and investment. More co-ordination and oversight, better planning and evaluation, and greater focus on measuring and publishing outcomes and results will raise the effectiveness of public spending. The high share of small municipalities makes provision of high quality public services difficult. Benchmarking of service providers should become standard and joint provision of services should be increased.

MAIN FINDINGS	KEY RECOMMENDATIONS
<b>Monetary and fiscal policies</b>	
The threat of deflation appears to be falling.	Exit the exchange rate floor when deflation risk recedes.
The fiscal stance is adequate and fiscal outlook is sustainable subject to population-ageing related reform implementation.	Implement the new fiscal framework and the fiscal council.
<b>Fostering productivity</b>	
Business R&D spending is low relative to other OECD countries.	Develop government co-financing schemes to complement grants and increase fiscal incentives for business R&D spending.
Organisation and administration of R&D and innovation policies are too complex.	Step up efforts to unify the design, assessment and coordination of research and development and innovation policies in a single institution. Specifically, research institutions should be under the responsibility of the same institution.
Exit and entry barriers in markets are still high, especially for SMEs.	Limit the possibilities to delay bankruptcy procedures and eventually allow for the write-off of debts.
Access to finance for SMEs, in particular for start-ups, is difficult.	Accelerate the creation of funds and guarantee programmes to support SMEs and innovation.
The tax system is not neutral with respect to the size of firms.	Reconsider the appropriateness of tax advantages and reduced social security contributions for the self-employed. Align social security coverage of the self-employed with that of employees.
<b>Promoting a more effective public sector</b>	
Too much public procurement spending is wasted.	Further improve tools and rules to increase use of joint procurement by public entities. Increase auditing throughout the process.
Choices of public investment projects lack coordination across different parts of the government and between levels of government.	Designate responsibility for the coordination and prioritisation of investments on the basis of the highest social return. Evaluate investment needs in a standardised way across sectors.
Insufficient information is available about policy outcomes, making broad priorities like gender equity or environmental sustainability more difficult to achieve.	Use and publish standardised performance indicators for publicly funded activities at all levels of government.
The system of territorial administration fragments capacity and hampers delivery of high quality public services.	Establish framework conditions which help municipalities to reap the benefits from joint service provision, while building support for mergers. Reduce the share of grants and transfers that are earmarked and ensure adequate service standards are maintained by monitoring performance.



## Assessment and recommendations

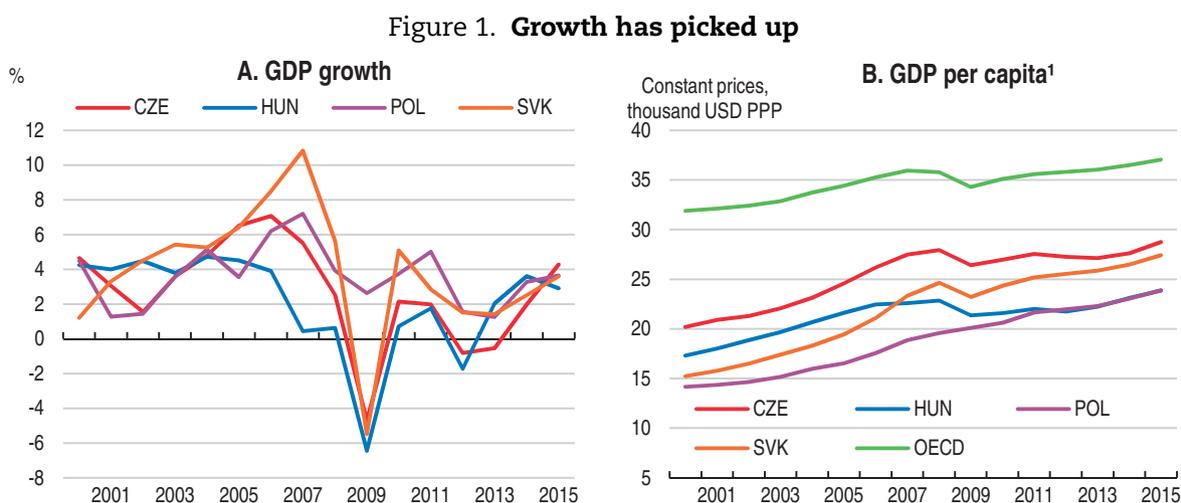
- *Turning to long-term challenges while the economy is growing*
- *Structural challenges*
- *Fostering productivity for better living standards*
- *Enhancing the effectiveness of the public sector*

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## Turning to long-term challenges while the economy is growing

### Key challenges for stronger and inclusive growth

During twenty years of OECD membership the Czech Republic successfully adopted many best practice policies. Since the early 1990s growth has been strong, though volatile, driven by opening markets, inflows of foreign investment supported by a competitive industrial base, a favourable geographical location and good initial conditions. Until the mid-2000s income per head also grew relatively strongly, catching up toward the OECD average (Figure 1). However, in the aftermath of the crisis, growth almost stopped, mainly reflecting a decline in productivity growth. Growth picked up sharply in 2015 although to a considerable extent it was on account of one-off factors, in particular exceptionally high public investment.



1. 2015 data for the Czech Republic and Poland are estimates.

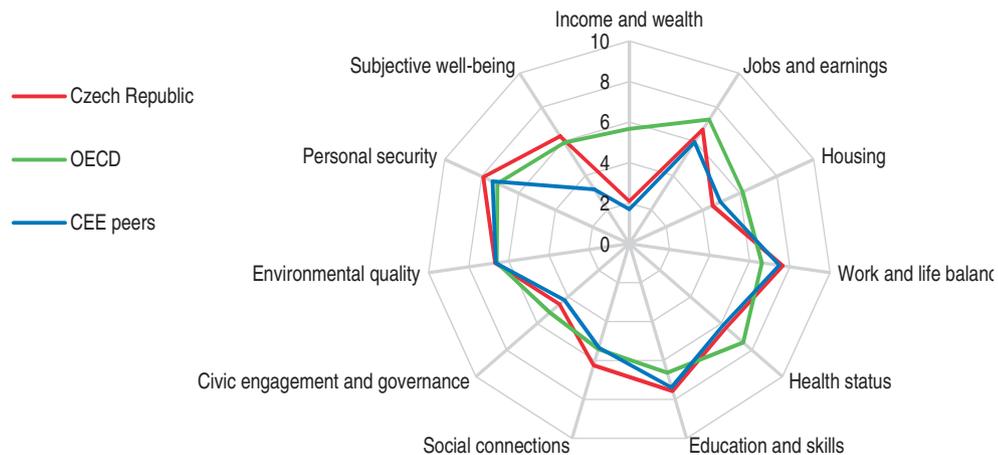
Source: OECD Economic Outlook database; OECD Productivity database; OECD National Accounts database; and OECD calculations.

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The Czech Republic is doing very well in terms of many aspects of well-being. It scores higher than the average OECD country in indicators of overall personal security, work-life balance, social connections, and education and skills. The income dimension is where the Czech Republic lags the most behind the average OECD country (Figure 2, Table 1). Improvements are also needed in civic engagement and governance, housing and health.

The Czech Republic is among the best performers in terms of inequality and poverty risks across OECD countries. Overall, inequality and poverty have stayed remarkably low in the past 15 years, even through the crisis. Inequality levels are fairly comparable among Czech regions, whereas poverty rates are high in the Northwest and Moravia-Silesia regions (but still below the OECD average) (Figure 3). These regional differences indicate where more initiatives to combat poverty are needed.

**Figure 2. Measures of well-being**  
Better life index<sup>1</sup>, index scale 0 (worst) to 10 (best)



1. For each dimension indicators are normalised according to the following formula:  $(\text{indicator value} - \text{minimum}) / (\text{maximum} - \text{minimum}) \times 10$  and averaged. The OECD aggregate is population-weighted. CEE peers are Estonia, Hungary, Poland, the Slovak Republic and Slovenia. Note that the OECD does not officially rank countries in terms of their BLI performance.

Source: OECD (2016), OECD Better Life Index, [www.oecdbetterlifeindex.org](http://www.oecdbetterlifeindex.org).

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**Table 1. Indicators of well-being relative to other OECD countries**

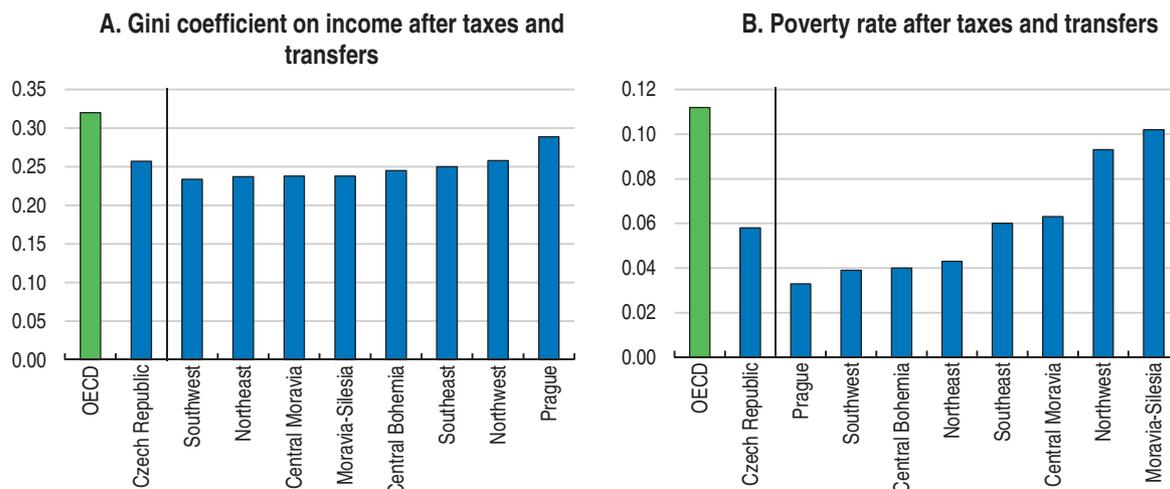
Ranked in top third ♦, ranked in middle third Δ, ranked in lowest third ●

Category	Indicator	Relative performance
Housing	Dwellings without basic facilities	Δ
	Housing expenditure as a share of household income	●
	Rooms per person	●
Income	Household net adjusted disposable income	●
	Household net financial wealth	●
Jobs and earnings	Employment rate	Δ
	Labour market insecurity	Δ
	Long-term unemployment rate	Δ
	Personal earnings	●
Social connections	Quality of support network	Δ
Education and skills	Educational attainment	♦
	Student skills	Δ
	Years in education	Δ
Environmental quality	Air pollution	●
	Water quality	Δ
Civic engagement	Stakeholder engagement for developing regulations	♦
	Voter turnout	●
Health status	Life expectancy	●
	Self-reported health	●
Subjective well-being	Life satisfaction	Δ
	Personal security	Feeling safe walking alone at night
	Homicide rate	Δ
	Work and life balance	Employees working very long hours
Time devoted to leisure and personal care		Δ

Source: OECD (2016), OECD Better Life Index, [www.oecdbetterlifeindex.org](http://www.oecdbetterlifeindex.org).

Figure 3. **Inequality and poverty are relatively low but vary across regions**

Ratio, 2010



Note: The Gini coefficient is zero if everyone has the same income and is one if a single person has all the income. The poverty rate shows the share of the population with an income of less than 50% of the respective national median income. Income is after taxes and transfers, adjusted for differences in household size.

Source: OECD Regional Well-Being database <http://dotstat.oecd.org/Index.aspx?DataSetCode=RWB> and OECD Income Distribution database.

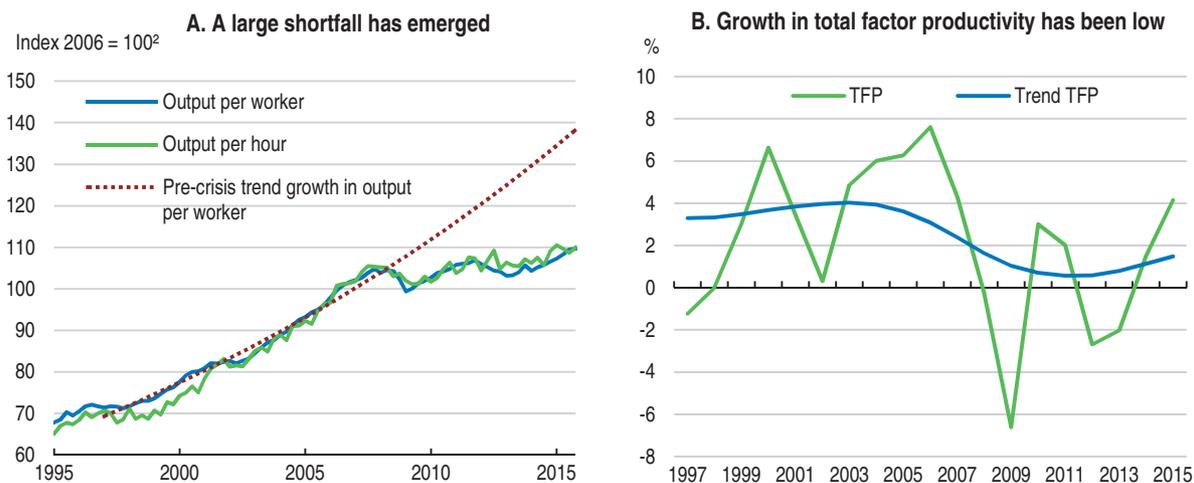
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The Czech Government has established a unit in the Office of the Government to coordinate plans for implementing and monitoring the Sustainable Development Goals (SDGs) – 17 goals for high and low income countries that are part of the global 2030 Agenda. While the Czech Republic is relatively well placed regarding the goal of ending poverty, there appear to be larger challenges relating to energy efficiency and combatting climate change (OECD 2015a, 2011a). This reflects the energy-intensive economy, high emissions of greenhouse gases and high exposure to particulate matter. Decisive policies should be designed to reverse trends and change behaviours. More progress is also needed to achieve effective and accountable institutions, as perceptions of corruption are still high. There is the need for a political push to fight corruption where it exists and to demonstrate to people that public services are run under fair rules.

The most promising mechanisms for increasing inclusive growth and well-being in the Czech Republic are to revive productivity growth and improve delivery of public services. As in many other OECD countries, since the crisis there has been a clear shortfall in productivity that has impeded strong growth (Figure 4). While part of the shortfall has a cyclical component, to a significant extent the decrease of the productivity growth rate appears to be of a structural nature.

To sustain further improvements in living conditions, the Czech Republic will need to move up the value chain and improve the skills of its workforce in order to pay higher wages. This will require deeper investment in the development of domestically-driven productivity growth. The key messages of this *Economic Survey* are:

- The macroeconomic situation is good. Overall, the fiscal position is satisfactory and monetary policy has supported the economic recovery. In the medium-term a pension reform is necessary to avoid that ageing-related spending will become an unsustainable burden for public finances if low replacement rates turn out not to be politically acceptable.

Figure 4. Labour productivity has disappointed since the crisis<sup>1</sup>

1. Output refers to real gross value added.
2. Pre-crisis trend growth in output per worker is calculated from a linear trend between 1997 and 2006, and is projected from 2007Q1 onwards.

Source: Calculations based on data from OECD Economic Outlook database.

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- The economy is recovering but productivity growth has decelerated markedly since the crisis. This calls for adjustments in government innovation and R&D policies and strengthening the framework conditions to make them more productivity friendly.
- Public sector efficiency suffers from insufficient monitoring and evaluation of policies and their outcomes, as well as the fragmented organisation of sub-national government. Better co-ordination, planning, monitoring and evaluation are needed at all levels of government to improve the effectiveness of the public sector.

### The economic outlook is positive

Economic growth was exceptionally strong in 2015, reaching 4.3% (Table 2). Growth was mainly driven by domestic demand underpinned by absorption of expiring EU funds and low commodity prices (Figure 5, Panel A). Household consumption was supported by income growth and a declining savings rate accompanied by a surge in credit (Figure 5, Panel B). The declining savings rate has followed rising household confidence (Figure 5, Panel E). Investment has risen, in particular public investment, which was boosted by the use of expiring EU funds. But this will decline in 2016 as the drawing from the new cycle of EU funding gradually begins. Industry was boosted by a rebound in the automotive sector, which benefited from both demand from abroad and domestic orders. Exports grew solidly in 2015, helped by strengthening demand from trading partners.

The unemployment rate has decreased steadily since 2013 and is now below the OECD estimate of full employment (Figure 5, Panel D). Robust job creation pushed up wages by around 4% in 2015, contributing to growth in household consumption and leading to the beginning of underlying inflation pressures, as evidenced by core inflation (CPI excluding food and energy) rising to 1.9% recently (Figure 6, Panel B). Headline inflation has remained low however, reflecting the very large decline in world oil prices and falls in food prices.

Economic growth is projected to slow in 2016 due to falling public investment, largely reflecting lower disbursement of EU structural funds in the transition to the new funding

**Table 2. Macroeconomic indicators and projections**  
Annual percentage change, volume (2010 prices)

	2012 Current prices (billion CZK)	2013	2014	2015	2016 (projected)	2017 (projected)
<b>GDP<sup>1</sup></b>	4 042	-0.5	1.9	4.3	2.4	2.6
Private consumption	1 998	0.7	1.4	2.8	3.3	2.8
Government consumption	783	2.3	1.8	2.8	2.3	2.0
Gross fixed capital formation	1 052	-2.8	2.0	7.4	0.0	3.2
Housing	149	-7.8	3.6	6.6	2.3	3.4
Final domestic demand	3 833	0.1	1.7	4.0	2.2	2.8
Stockbuilding <sup>2</sup>	9	-0.6	0.6	0.7	-0.5	0.0
Total domestic demand	3 842	-0.5	2.3	4.8	1.6	2.7
Exports of goods and services	3 097	0.0	8.8	7.2	5.5	5.7
Imports of goods and services	2 897	0.1	9.8	8.1	4.9	6.2
Net exports <sup>2</sup>	200	0.0	-0.2	-0.2	0.8	0.1
<b>Other indicators</b> (growth rates, unless specified)						
Potential GDP	..	1.3	1.5	1.8	1.8	1.8
Output gap <sup>3</sup>	..	-3.7	-3.3	-0.9	-0.4	0.4
Employment	..	1.0	0.7	1.4	0.6	0.4
Unemployment rate	..	6.9	6.1	5.0	4.4	4.2
GDP deflator	..	1.4	2.5	0.7	0.8	1.3
Consumer price index	..	1.4	0.4	0.3	0.5	1.8
Core consumer prices	..	0.8	0.4	1.4	1.6	1.9
Household saving ratio, net <sup>4</sup>	..	5.5	5.7	5.1	4.9	4.8
Current account balance <sup>5</sup>	..	-0.5	0.2	0.9	1.4	1.0
General government fiscal balance <sup>5</sup>	..	-1.3	-1.9	-0.4	-0.5	-0.4
Gross government debt (Maastricht definition) <sup>5</sup>		45.1	42.7	41.0	41.0	40.6
Three-month money market rate, average	..	0.5	0.4	0.3	0.3	0.3
Ten-year government bond yield, average	..	2.1	1.6	0.6	0.5	0.5

1. Working day-adjusted.

2. Contributions to changes in real GDP, actual amount in the first column.

3. As a percentage of potential GDP.

4. As a percentage of household disposable income.

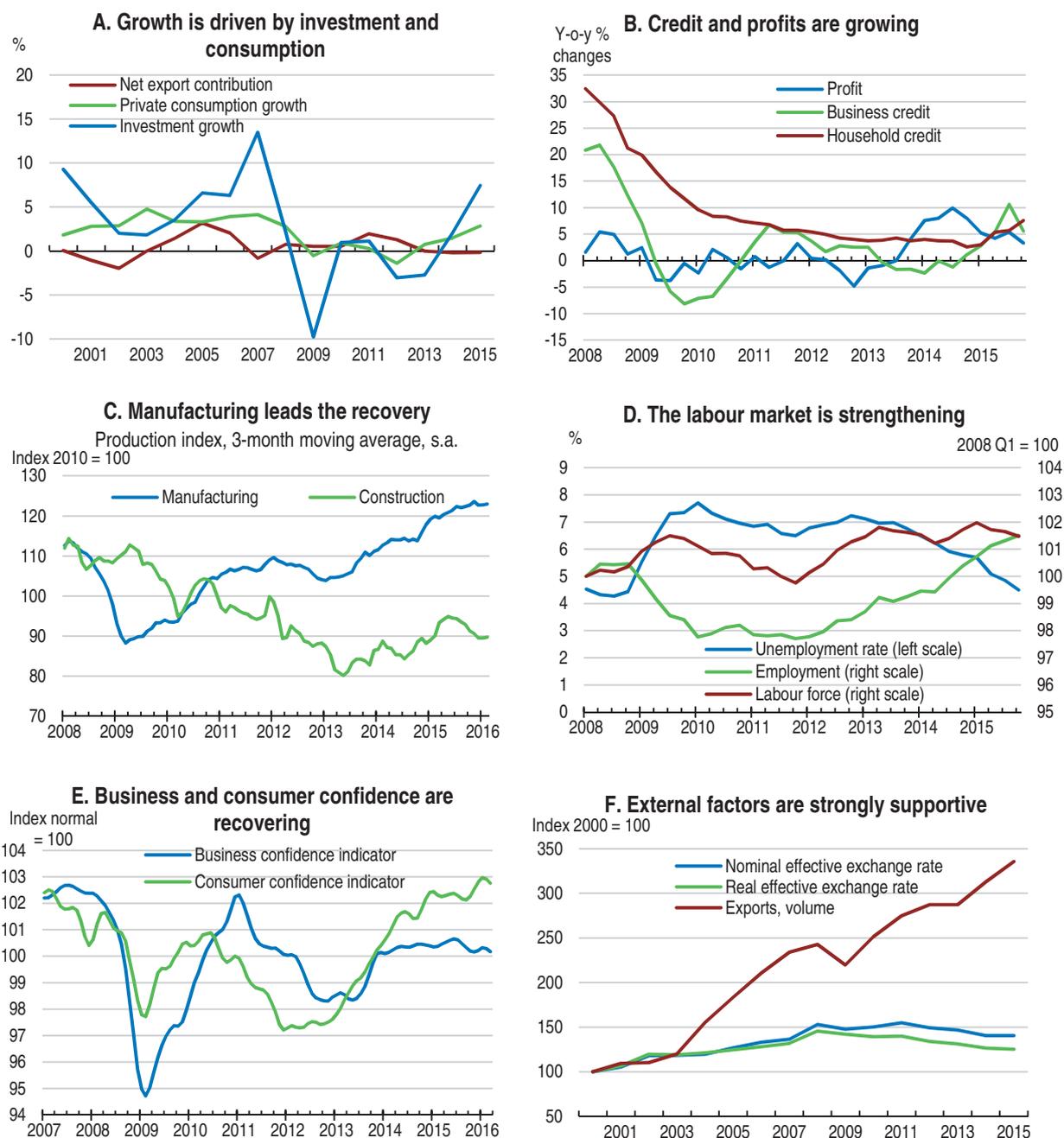
5. As a percentage of GDP.

Source: OECD (2016), OECD Economic Outlook: Statistics and Projections database, June.

cycle. However, even at 2.4%, growth will be above its estimated potential. Wages and employment will keep household incomes, and therefore consumption, growing at a strong pace. Private investment is also projected to increase thanks to favourable credit conditions, growth in profits and better external demand conditions. As the effects of lower oil prices fade and the strengthening of employment and wages in 2015 continues in 2016 and 2017, inflation is projected to be around the central bank's 2% target in the course of 2017.

Risks stem mainly from external factors given the economy's integration in global value chains. Reductions in the degree of European integration, a disappointing growth recovery in Europe or the transmission of slower growth in big emerging economies would hit exports and investment. On the upside, swifter implementation of structural reforms in big European countries could strengthen confidence and improve the business climate. A stronger pick-up in wage growth or a lower savings rate would result in higher consumption growth. Faster take-up of EU funds would boost public investment. But there are vulnerabilities from the external environment, in particular from developments in Europe (Table 3).

Figure 5. Czech economic developments



Source: OECD Economic Outlook database; Czech National Bank; OECD Quarterly National Accounts database; OECD Main Economic Indicators database.

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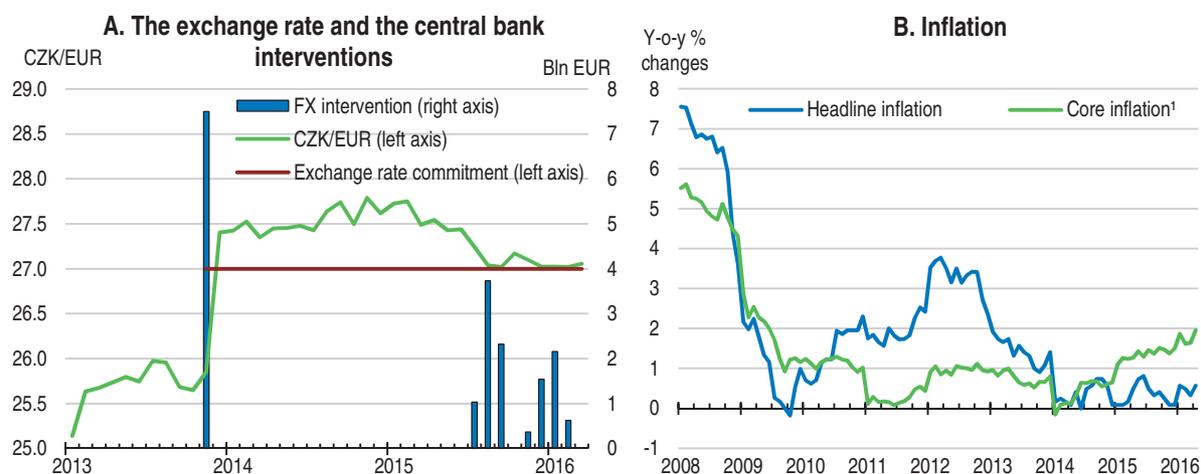
Table 3. Potential vulnerabilities of the Czech economy

Shock	Possible impact
Limits on the free movement of goods and labour in the European Union	The Czech economy is landlocked in the Schengen area and very integrated into European value chains and would be struck by major changes affecting the flow of goods and labour across Europe.
Geopolitical tensions in and around Europe, including an aggravation of tensions in the Middle East	A downturn in activity in Europe could jeopardise the economic development of the Czech Republic.

## Monetary policy

As the Czech economy slowly recovered from the global crisis, it was characterised by low growth, low inflation, and fears of real exchange rate appreciation. As in many countries and in the euro area, the Czech National Bank (CNB) has pursued extremely accommodative monetary policy. Since end 2012, the monetary policy rate was at the “technical zero” level. Confronted with a persistent deflationary risk, in November 2013 the CNB announced that it would use the exchange rate as a further policy instrument within its inflation-targeting strategy. In particular, the CNB announced, that it would (if necessary) intervene in the foreign exchange market, as much as necessary, to maintain the koruna above a floor set at CZK 27 to the euro (Franta et al., 2014; Alichì et al., 2015). This floor prevented an appreciation that could have pushed inflation negative (Figure 6). After the introduction of the floor, the CNB did not have to intervene until July 2015. Since then, foreign reserves have been accumulated, up to 38% of GDP. The CNB has confirmed its commitment to the inflation-targeting framework and a floating exchange rate and has postponed abolishing the floor several times in line with revisions of its inflation forecast. Recently, it has announced the floor will not be abandoned before the start of 2017 and considers it likely that the commitment will be discontinued in mid-2017.

Figure 6. Foreign exchange market and inflation



1. CPI excluding food and energy.

Source: Czech National Bank; OECD Main Economic Indicators database and OECD Economic Outlook database.

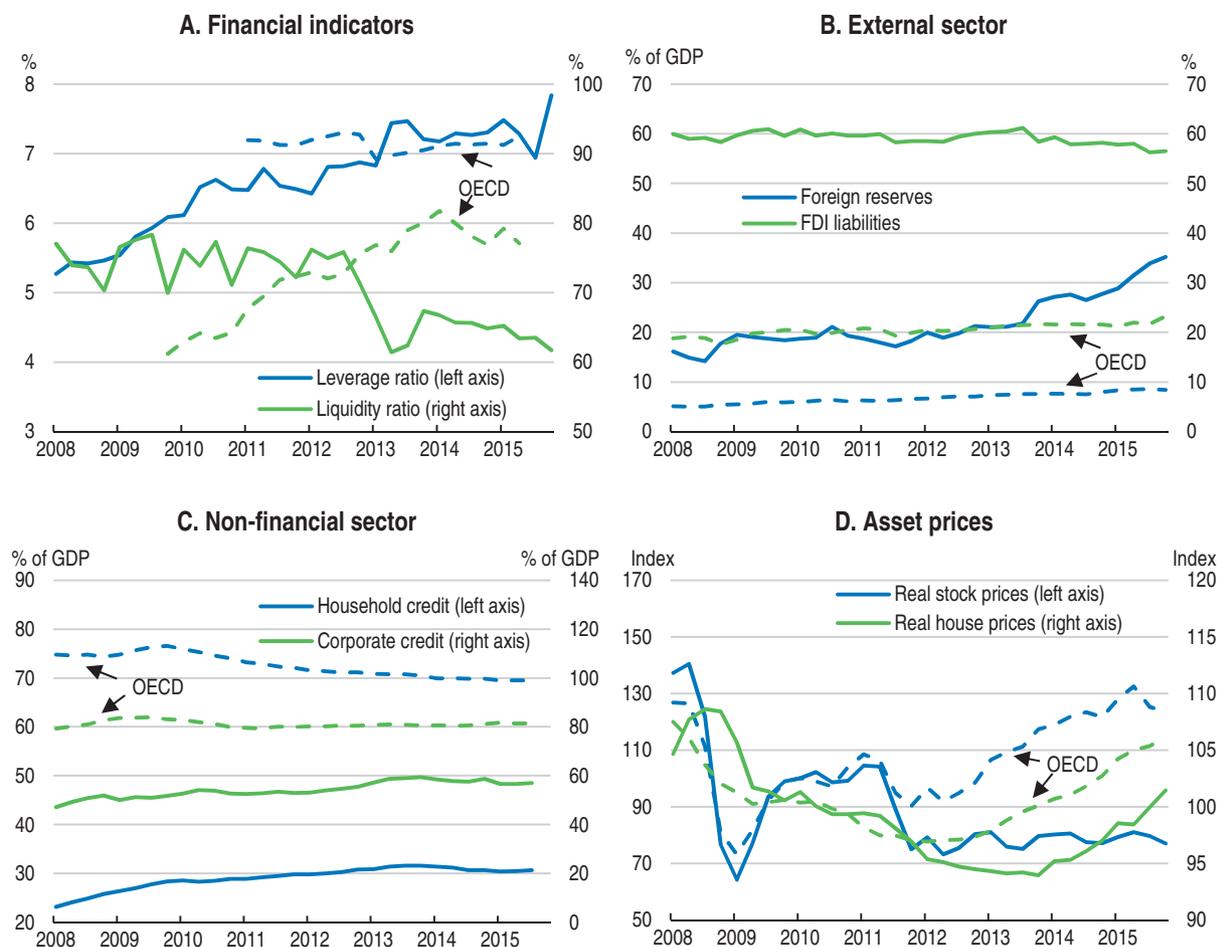
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Exiting the floor will have to be done with care, but exit must take place eventually because the floor will become incompatible with the inflation-targeting framework, and may require large and costly foreign exchange interventions to maintain for longer than necessary. Some intervention was needed in late 2015 and early 2016. Inflation is now being held down by the drop in energy prices, and is therefore expected to rise; core inflation, which excludes energy and food, is already near 2%. As the threat of deflation recedes, the CNB should therefore exit the floor according to its plans. This may be accompanied by an appreciation of the exchange rate, which may depress activity, but the CNB has repeatedly communicated its readiness to moderate any abrupt exchange rate swings after the exit. If necessary, there is also room to use expansionary fiscal policy to support activity (see below). Fiscal policy is projected to be slightly expansionary in the

next two years. Rebalancing the policy mix away from a very expansionary monetary stance could accelerate the structural consequences of a convergence towards a services-based economy as this policy mix will possibly result in a temporary loss of competitiveness. This underlines the importance of innovation- and entrepreneurship-friendly structural reforms, as well as the need for productivity-enhancing improvement of the co-operation between business and science. The effectiveness of this policy mix would also be improved by structural reforms which increase the supply elasticity of the part of the economy which produces for domestic use.

Financial vulnerabilities appear relatively low, with a well-capitalised banking sector and comparatively low levels of private sector indebtedness (Figure 7). FDI liabilities are a large share of external liabilities relative to the average OECD country and have been stable.

Figure 7. **Indicators of potential macro-financial vulnerabilities**



Note: In each panel the dashed line is the weighted average of OECD countries with available data using nominal GDP at PPP rates. Leverage ratio is regulatory Tier 1 capital to total (unweighted) assets. Liquidity ratio is liquid assets to short-term liabilities. FDI liabilities are direct investment liabilities, not seasonally adjusted, in per cent of total external liabilities. Real stock prices are the broad share index deflated by the consumer price index with 2010=100. Real house prices are deflated using the private consumption deflator from the national account statistics with 2010=100.

Source: Röhn, O., A. Caldera Sánchez, M. Hermansen and M. Rasmussen (2015), "Economic Resilience: A New Set of Vulnerability Indicators for OECD Countries", *OECD Economics Department Working Papers*, No. 1249, OECD Publishing, Paris; OECD Housing Prices database; OECD Monthly Economic Indicators database; BIS; IMF International Financial Statistics; IMF Financial Soundness Indicators.

StatLink  <http://dx.doi.org/10.1787/888933364323>

One emerging risk is the increase in private-sector credit during 2015, supported by falling lending margins and easing credit standards. In turn, this contributed to a pick-up in housing price growth. However, the increase in both credit and house prices is less stark when taking into account growth in GDP and household incomes. In 2015 the CNB deployed macro-prudential instruments to reduce the risks to the banking sector, including recommendations to contain loan-to-valuation ratios on loans against residential property, and announced the introduction of a countercyclical capital buffer from 2017. Consideration should be given to further tightening maximum loan-to-valuation ratios to avoid excessive lending and also increasing bank surveillance to ensure that property valuations remain prudent.

### **Fiscal sustainability**

In the last two years the stance of fiscal policy (not related to EU funds) has moved from being slightly expansionary to being slightly restrictive (Table 4). However, public investment, propelled by EU funds, has contributed to the rebound in growth (see Chapter 2) making the overall fiscal impulse (including EU-financed investment) clearly expansionary in 2014 and especially in 2015. Gross public debt has stabilised at a low level relative to most EU countries. Given the expected decrease in public investment due to lower use of EU funds, somewhat more expansionary fiscal policy in 2016 would smooth the investment profile and GDP growth.

**Table 4. Fiscal indicators**  
Per cent of GDP

	2013	2014	2015	2016 <sup>1</sup>	2017 <sup>1</sup>
<b>Spending and revenue</b>					
Total revenue	41.6	40.8	42.2	40.9	41.0
Total expenditure	42.8	42.8	42.6	41.4	41.3
Net interest payments	1.1	1.1	0.9	0.8	0.7
<b>Budget balance</b>					
Fiscal balance	-1.3	-1.9	-0.4	-0.5	-0.4
Cyclically adjusted fiscal balance <sup>2</sup>	0.4	-0.5	0.0	-0.3	-0.5
Underlying fiscal balance <sup>2</sup>	0.1	-0.4	0.2	-0.3	-0.5
Underlying primary fiscal balance <sup>2</sup>	1.2	0.6	1.1	0.5	0.1
<b>Public debt</b>					
Gross debt	58.4	57.6	55.8 <sup>1</sup>	55.8	55.4
Gross debt (Maastricht definition)	45.1	42.7	41.0	41.0	40.6
Net debt	18.2	20.4	19.8 <sup>1</sup>	19.7	19.3

1. Projection

2. As a percentage of potential GDP

Source: OECD (2016), OECD Economic Outlook: Statistics and Projections database, June

Building a fiscal framework to reinforce the sort of prudent fiscal behaviour that has characterised the Czech Republic in the past would help to cement medium-term fiscal sustainability. The Government has sent to parliament a proposal to strengthen the fiscal framework, which aims at implementing the EU directive on sound budgetary frameworks (Table 5). The framework includes a spending rule derived from the structural budget balance rule (Table 5). Such a rule depends on ex-ante estimation of the structural balance, that is, the fiscal balance adjusted for the cyclical position of the economy and one-off measures. The framework also includes a fiscal council, which can provide transparent

Table 5. **Key features of the proposed fiscal framework**

Instrument	Description
Central government spending rule	Expenditure ceilings in cash terms will be primarily derived from the need to achieve a structural deficit of not more than 1% of GDP and to prevent the general government deficit from exceeding 3% of GDP in normal times. It requires estimating government structural revenues plus one percentage point of the nominal GDP forecast with adjustments including a correction for previous outcomes. To allow some flexibility, escape clauses are included; e.g. following a large recession or natural disaster.
Central government debt rule	The first debt limit is 55% of GDP. At this point, the government must submit a draft of the next budget leading to long-term sustainable public finances to the Chamber of Deputies and local governments and other public institutions will face constraints. The second debt limit is the European debt threshold of 60% of GDP. Above this point, the government must propose measures that guarantee that the part of the debt level above the 60% threshold decreases by 5%.
Local government debt rule	Local government debt must not exceed 60% of the last four years' average revenue. If this is crossed, the local government must reduce the part above the threshold by 5% per year. If not, the equivalent amount is "saved" from the revenue transfers from central government
Independent fiscal institution	The National Budgetary Council will be created and made responsible for monitoring the development of general government finances and compliance with fiscal rules, including producing an annual report on each.
Public finance transparency	Fiscal data (including sub-sectors of general government) are already published on the website of the Ministry of Finance. Medium-term budgeting has been strengthened by making the budget draft and medium-term outlook publicly available.

Source: Ministry of Finance (2015), *Fiscal Outlook of the Czech Republic*, November 2015.

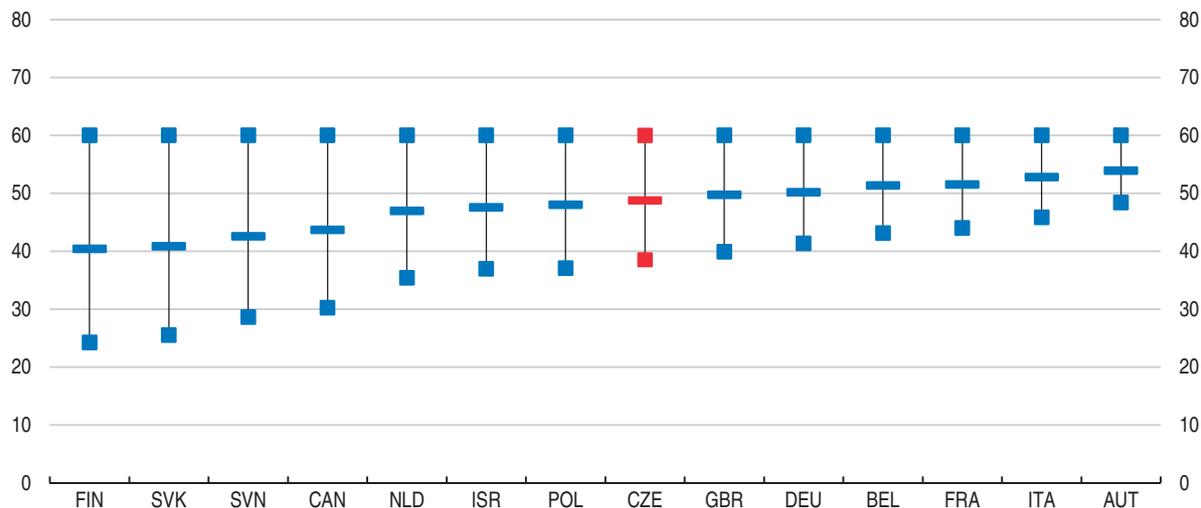
and independent assessment of the fiscal position. Swift implementation of the framework is important.

However, structural balance rules have important drawbacks when used for policy making because it is difficult to estimate output gaps and therefore structural balances in real time (Fall et al., 2015). By contrast, an expenditure rule can be decisive by limiting over-spending in cyclical upswings. As most of the automatic stabilisers are on the revenue side, such a rule does not imply pro-cyclicality. If after some experience the structural budget balance rule proves too difficult to implement, the authorities should consider modifying it.

The fiscal framework also has a debt ceiling of 60% of GDP. Simulations taking into account shocks on macroeconomic variables show that the risk of uncontrolled debt dynamics is limited if debt stays below 60% of GDP (Fall et al., 2015). A debt target should be set to maintain a low level of public debt and reduce the risk of going beyond the debt ceiling of 60% of GDP, even in a severe shock. Some other small open economies target much lower levels of debt; for example, Australia aims at maintaining the debt level between 20 and 30% of GDP, the Slovak Republic's debt brake rule starts at 50% of GDP and Poland's brake rule is at 43% of GDP. Simulations based on a country's past shocks can indicate the size of the cushion that is needed between the debt ceiling and the debt target to reduce the risk of exceeding the debt ceiling in the event of an adverse shock. In the case of the Czech Republic, taking into account a distribution of shocks similar to history, on average a debt target 10 percentage points below the 60% of GDP debt ceiling provides enough cushion (Figure 8; Fall and Fournier, 2015).

Figure 8. **Debt dynamics taking into account macroeconomic shocks**

Prudent debt levels under unchanged fiscal behaviour to minimize the risk of hitting a 60% of GDP debt threshold, 2030, per cent of GDP<sup>1, 2, 3</sup>



1. The thick horizontal lines show the median debt level and extreme values are the 25th and the 75th percentiles.
2. The modelling is done using the OECD debt measure which is 13.2 percentage points higher than the Maastricht measure for the Czech Republic in 2013.
3. For countries with a high initial debt level, the simulation induces a strong consolidation path.

Source: Fall, F. and J.-M. Fournier (2015), "Macroeconomic Uncertainties, Prudent Debt Targets and Fiscal Rules", OECD Economics Department Working Papers, No. 1230, OECD Publishing, Paris.

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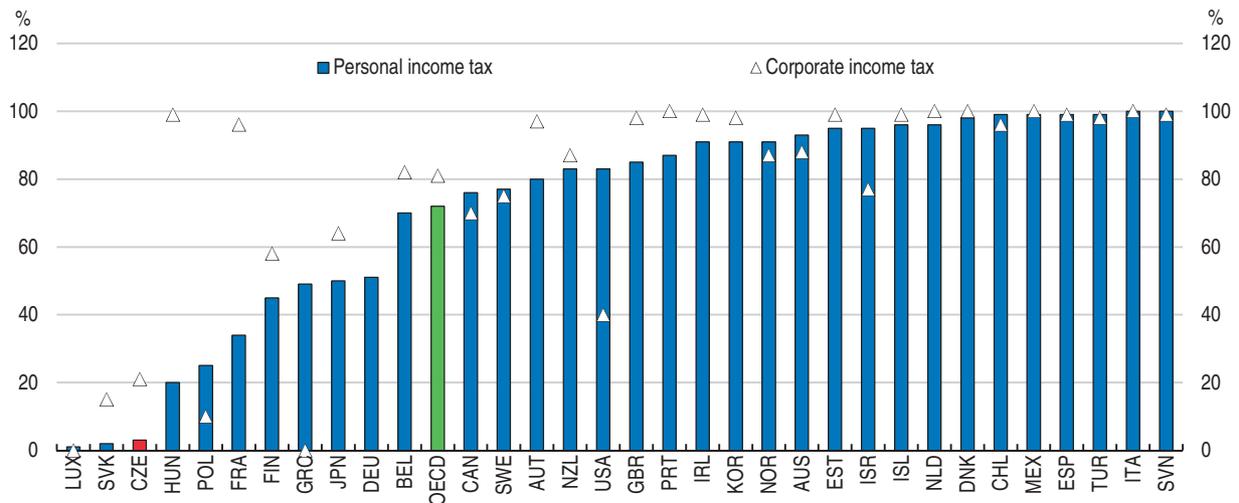
### Reforming tax collection and VAT

Tax collection is complicated and costly in the Czech Republic. Efficiency is also hampered by low use of electronic filing (Figure 9). VAT non-compliance is considerable and has become a policy priority for the government. The European Commission (2015a) estimates the difference between what VAT revenues would be with full compliance and perfect enforcement and actual VAT revenues to be 22.4% in 2013, which is 7 percentage points higher than the EU average (Figure 10). In recent years, the government introduced measures to fight VAT evasion and increase the efficiency of the system through greater use of electronic systems.

In 2015, the Czech Republic adopted further measures to fight VAT fraud. To increase transparency, a register of all contracts above CZK 50 000 signed by most public entities and state-owned enterprises is starting from mid-2016. Also, by the end of 2016 a system is to be in place for systematic electronic recording of sales. From 1 January 2016 all VAT payers are required to submit their VAT declaration electronically and they are obliged to file specific statements reporting data about their taxable supplies of goods and services based on invoices. The information provides the tax authorities with a detailed overview of taxable persons' transactions and it enables cross-checking of the data shown by the supplier and the buyer. The government is also expanding the use of the reverse charge method to collect VAT on domestic business-to-business transactions; this method can be helpful in reducing VAT fraud in high-risk sectors (OECD, 2014a).

The Czech Republic is encouraged to further enhance VAT compliance by simplifying its VAT regime and by ensuring a stable regulatory and administrative environment. Notably the multiple VAT rate system in the Czech Republic creates opportunities for

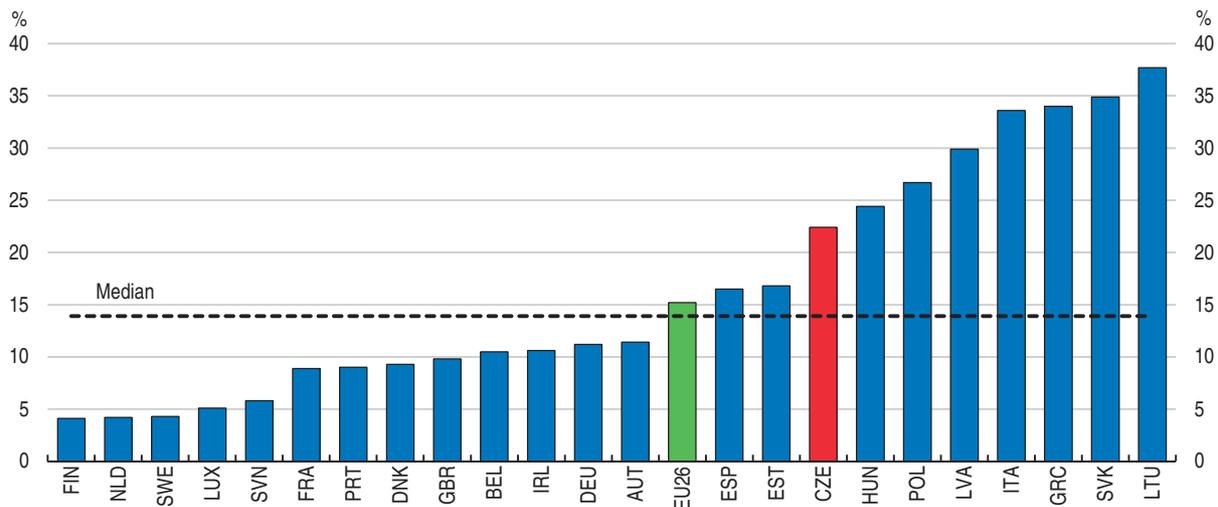
**Figure 9. Use of electronic tax filing is low**  
Percentage of all tax returns that were filed electronically, 2013 fiscal year



Source: OECD (2015), *Tax Administration 2015: Comparative Information on OECD and Other Advanced and Emerging Economies*, OECD Publishing, Paris.

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**Figure 10. VAT revenue loss due to tax avoidance and evasion is above the EU average**  
VAT gap as a percentage of liability<sup>1</sup>, 2013



1. The VAT Gap is defined as the difference between the amount of VAT actually collected and the VAT Total Tax Liability (VTTL), in absolute or percentage terms. The VTTL is an estimated amount of VAT that is theoretically collectable based on the VAT legislation and ancillary regulations.

Source: European Commission (2015), *Study to Quantify and Analyse the VAT Gap in the EU-27 Member States*.

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avoidance and optimisation strategies and increases compliance costs. The Czech Republic currently has a standard VAT rate of 21% but two reduced rates (10% and 15%) and the classification of items has been changing over time. These changes create uncertainties and incentives for vested interests to lobby for more favourable VAT rates and add to the administrative burden of firms. A clear rule and rationale for VAT classification should be established and the number of goods and services taxed at a reduced VAT rate should be limited.

## Structural challenges

### **Progress on structural reform recommendations from previous Surveys**

Previous surveys have examined policies in a wide range of areas, including: improving the fiscal framework and taxation policy; making the business environment more competitive; reforming education and strengthening skill use; raising health spending efficiency; and increasing energy efficiency. Progress has been made in many of these areas since the 2014 *Economic Survey*, as highlighted in Annex 1.

Promoting competition and improving the business environment has been a recurring theme in OECD surveys. In particular, recommendations have called for stronger enforcement of competition policy, more competitive markets in network industries, reduced government involvement in state-owned enterprises (and improved management) and more efficient judicial processes.

Fighting bid-rigging and cartels remains a top priority of the Office for the Protection of Competition. In 2015 it issued three decisions on cartels, one of which was related to bid-rigging and saw the highest fine ever imposed by the Office (CZE 2 billion or EUR 73 million). The Office has also been training public procurement officials in detecting bid-rigging. The resources of the Office are still insufficient and mostly devoted to public procurement, with a high staff turnover rate, partly reflecting low wages. The resources of the Office should be increased to allow it to better perform its duty and its regulatory power strengthened.

Reforming state-owned enterprises has been somewhat slower; however, the forthcoming State Ownership Policy contains proposals to concentrate governance of all SOEs under a single authority and to privatise minority shareholdings and companies operating on market principles, as was recommended. As discussed below, public procurement processes have improved substantially since 2012, although continued efforts are needed to stamp out corruption and improve value-for money.

Because of the importance of education to the convergence process and achieving equitable outcomes, Surveys have examined the full range of the education system. The need for early childhood education, reducing elitism in the school system (including early streaming) and benchmarking schools have been highlighted as ways of reducing the influence of social background on later outcomes. Recommendations also included measures to increase linkages between employers and the education system and increasing the quality of tertiary education.

The early childhood education system will provide legal rights to a kindergarten place for all children aged four from 2017 and aged three from 2018, and two-year olds will be allowed into kindergarten. However, these changes should be accompanied by an increase in capacity. Measures to reduce early streaming in the school system have yet to be elaborated.

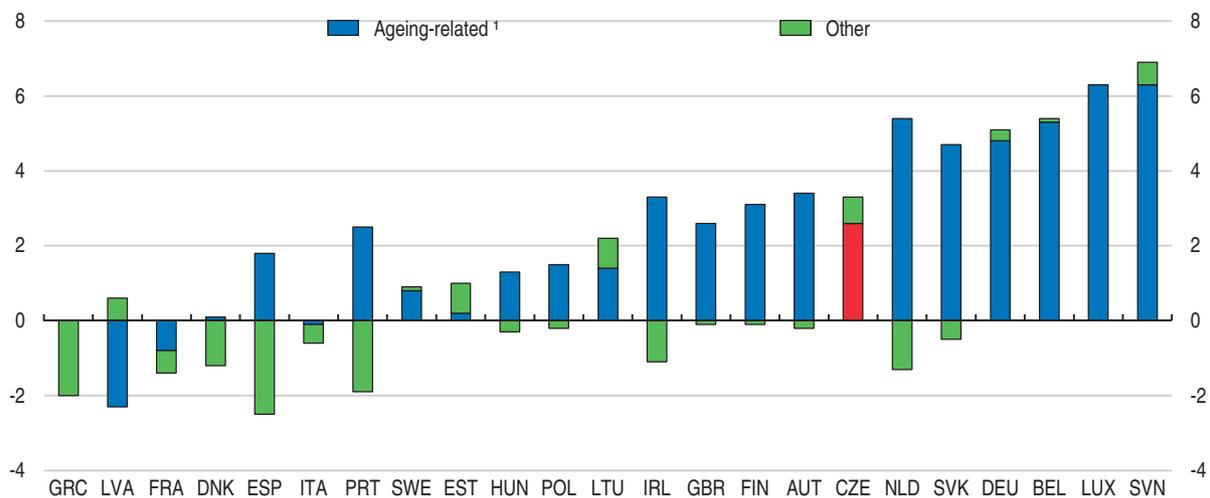
Programmes to increase linkages between educational institutions and employers include support for youth internships in firms and a new programme developed with business representatives to increase practical training within the vocational education system. In 2014 tax deductions were introduced to encourage workplace training of students. Amendments to the Higher Education Act (adopted in early 2016) will require greater measurement and reporting of performance, which will strengthen the accreditation process and therefore educational quality.

### Future pension adequacy may pose a challenge for public finances

Government social spending represented 21% of GDP in 2014 and around 46% of government spending. Health and pension expenditures are the most important items. Ageing-related spending is expected to increase by 2.6 percentage points of GDP by 2060 (Figure 11). The public pension scheme has two components: a basic pension and an earnings-related pension linking benefits to average career wages and years of contributions. It has been reformed several times to guarantee its sustainability. The retirement age is set to increase gradually to 66 years and 8 months in 2041 for both women and men (OECD, 2015b, 2014b) and then by 2 months every year without a ceiling. A formal cap on retirement age is planned, however, with a regular assessment by an expert committee to link it with life expectancy.

Figure 11. **The impact of ageing on public finances**

Change in gross public expenditure between 2013 and 2060 in the baseline scenario, in percentage points of GDP



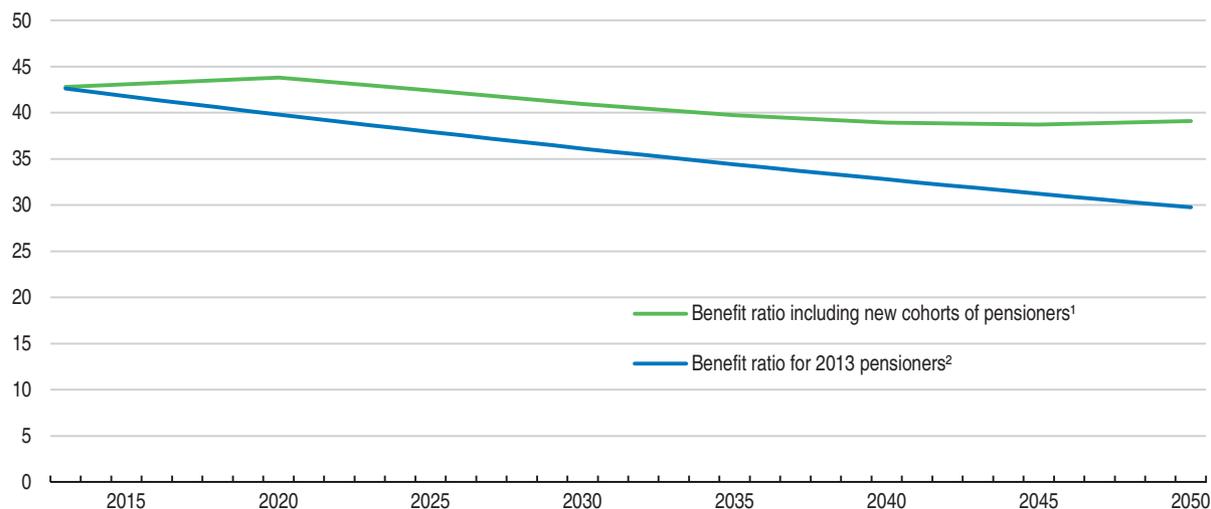
1. Ageing-related expenditure covers expenditure on pensions, health care and long-term care.

Source: European Commission (2015), "The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-60)", European Economy, No. 3, Economic and Financial Affairs, Brussels.

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Pension spending is also to be restrained by a falling replacement rate of public pensions over time (OECD, 2014b). As retirees' pension income is mainly constituted by public pensions, there is a risk that old-age poverty will rise, especially as the second pillar (a voluntary scheme) has been closed (there was little take-up). Indeed, in the future the average pension income relative to the average wage will be falling, increasing the poverty risk of pensioners, especially among old retirees, even though purchasing power is preserved (Figure 12). This could lead to political pressures that would significantly increase pension spending. Therefore re-instituting a second pillar could be a response to mitigate the risk of old-age poverty, although it might have to be made mandatory (as in, for example, Denmark and Sweden) or be accompanied by fiscal incentives (as in New Zealand where enrolment is automatic with an opt-out option). The financing of the second pillar should be designed carefully to guarantee that it will not lower the current sustainability of the first pillar or increase the overall already high level of labour taxation. As such schemes are typically defined-contribution, it will take time for people to

Figure 12. **The benefit ratio is declining over time**  
Average pension benefit as a percentage of average wage



1. European Commission projection.

2. Assuming annual inflation of 2% and real wage growth of 1.5% from 2013 to 2060. Pensions are indexed by inflation plus one-third of wage growth.

Source: European Commission (2015), *The 2015 Ageing Report: Economic and Budgetary Projections for the 28 EU Member States*, European Economy No. 3, Economic and Financial Affairs, Brussels; OECD calculations.

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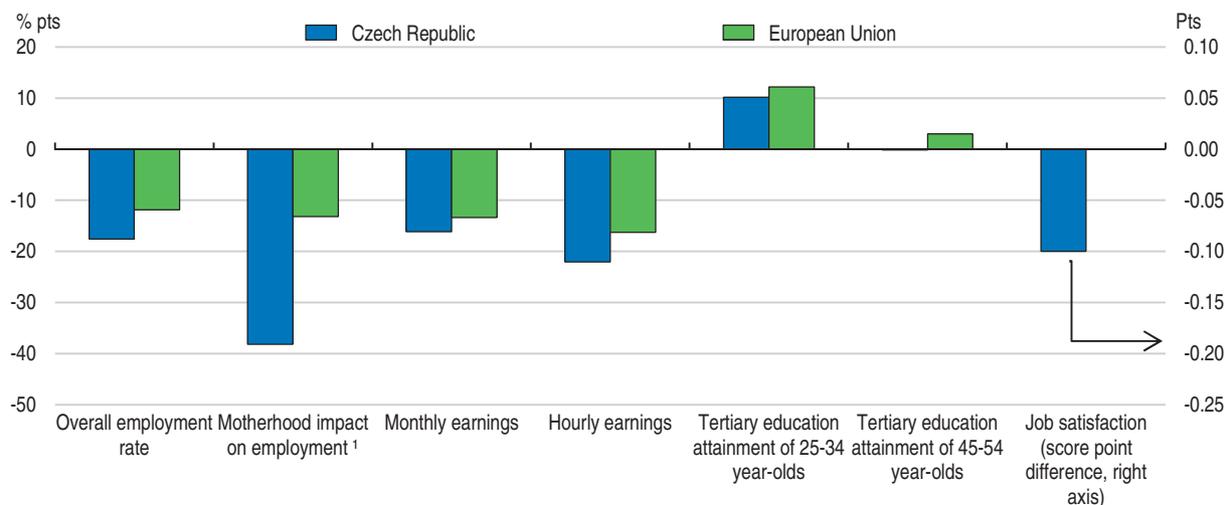
contribute enough to accumulate sufficient old-age incomes. Therefore, the sooner they are created, the better it will be.

### **Improve inclusiveness through a gender balance agenda and better integration of minorities**

Czech society is one of the most equal in the OECD. However labour market outcomes for women and for those in socially deprived areas, mostly people of Roma ethnicity, are relatively poor, as highlighted in earlier *Surveys* (OECD, 2014b, 2010a). For women the challenge is to raise wages, which are well below those of men, and improve career prospects by lowering barriers to participation. Better integrating Roma into the labour force would not only improve their well-being but would also be an investment that would yield returns by reducing future needs for social benefits and mitigating the fiscal effects of population ageing.

Reconciling career and family choices is a growing problem for Czech women, as is now recognised in the government's gender equality agenda. Women are increasingly investing in tertiary education, but their paid employment tends to fall once they have children and begin parental leave, which averages 2½ years (OECD, 2014b). Only 4% of children under two years old were enrolled in childcare and pre-school services in 2013, compared to the OECD average of 33% (OECD Family database). Accordingly, 82% of women without children have jobs but only 44% of mothers of children under six do, which is one of the largest gaps in the EU (Figure 13). By disrupting women's careers, these long spells out of the labour force contribute to a large wage gap between men and women and likely explain part of the low job satisfaction amongst Czech women. Removing obstacles to female career paths could raise job satisfaction and boost productivity by reducing skill

Figure 13. **Gender gaps in the labour market are large**  
Percentage point difference between female and male outcomes, unless specified



1. Difference in employment rates of women aged 20-49 with children up to 6 years old and those without children.

Source: OECD Labour Force Statistics database; Eurostat; OECD Earnings database; OECD (2015), *Education at a Glance*.

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shortages. In particular, ensuring that parents with children can make the same career choices as those without children is key.

Institutions and policy choices add to barriers to gender equity. There is a shortage of affordable early childhood education and care. Demand has expanded rapidly: in 2014/15 there were 50 800 unsuccessful applications for kindergartens, compared to 6 810 nine years earlier, although this may partly reflect an increase in the number of applications per child (Office of the Government, 2014; European Platform for Investing in Children, 2016). There are less than 50 public crèches (for children of less than three years of age) (OECD, 2014b). Private options are increasing but appear limited and expensive.

Parental leave arrangements are among the most generous in the OECD: paid maternity leave is six months, job protection is three years, and the parental lump-sum benefit can be paid out in monthly instalments according to the decisions of parents until the child is four. In the case of a long payment period, the monthly amount is low. Public spending on maternity and parental leave payments totalled 0.9% of GDP in 2011, which was the second largest in the OECD (according to the OECD Social Expenditure database). However, it is more than double pre-school expenditure; public spending on childcare is very low. The provision of an income tax credit for the principal earner with a dependent spouse earning less than CZK 68 000 increases the implicit tax rate on second earners' wage income. Returning to work is also hindered by the nature of jobs: just 7% of female employees work part-time, compared to 24% on average in OECD countries.

The government introduced two new measures in 2014 to expand access to childcare: a personal income tax credit for childcare expenses and incentives for the formation of "children's groups" by firms, NGOs and others. Further planned measures include lowering the age limit for kindergarten to two years (from three years) and making one year of pre-school compulsory. "Micro-nurseries" for children aged 6 months to 4 years are being piloted using EU funds. These steps are broadly in line with earlier OECD recommendations

(OECD, 2014b, 2010a) although it remains an open question whether the credit is sufficiently high to have a significant impact on the affordability of private services (Kalíšková, 2015).

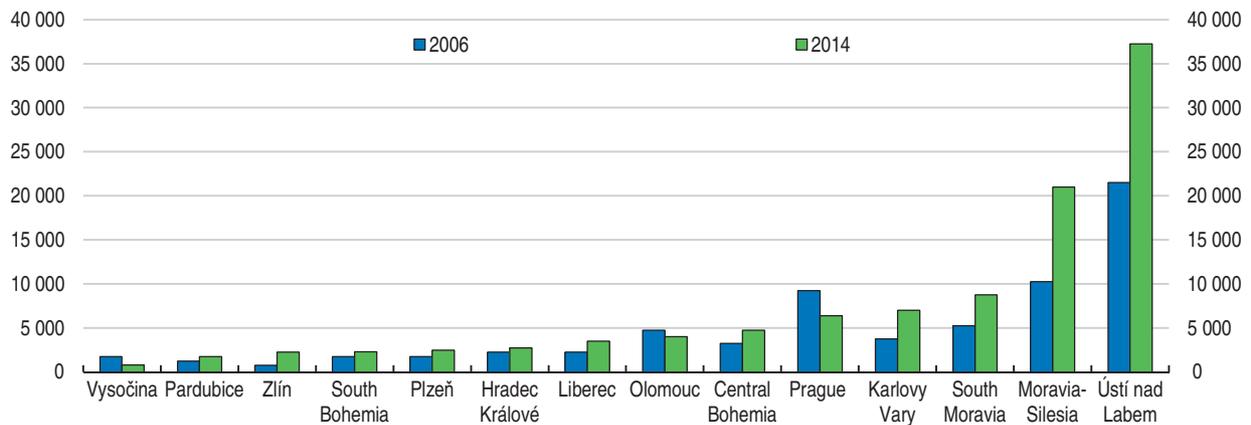
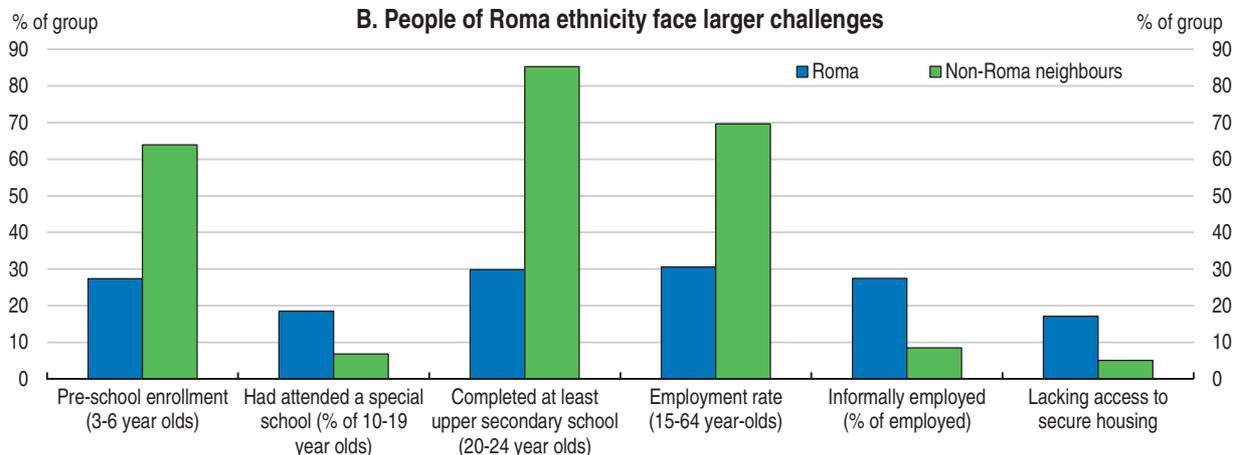
Going forward, measures should focus on expanding childcare and reducing disincentives to returning to work. Government spending should shift to a larger share on childcare, particularly to address the shortage in crèches that arose when responsibility for childcare shifted to municipalities without matched resources. Pre-schools and schools should offer after-hours care. Conditional on the expansion of affordable and quality childcare, the maximum duration of parental leave should be reduced as planned and, to break down stereotypes, part should be reserved for fathers. The public sector could play a leading role by promoting part-time work and other flexible working arrangements in a way which does not restrict career choices, by providing child groups and by reporting statistics on gender equality.

Social exclusion is a small but growing challenge: the number of socially excluded areas doubled from 2006 to 2014, to 606 areas, affecting an estimated 95 000 to 115 000 inhabitants (GAC, 2015). The increase has been uneven across the country and mostly affects people of Roma ethnicity, who face additional challenges (Figure 14). A general problem is that key policy areas such as education and social housing are the responsibility of municipalities, but funding allocations do not match the considerable variation in the severity of the problem.

Features of the Czech education system – such as practical special schools, early streaming and the difficulty of transferring from one educational track to another – reinforce the effects of socio-economic background on educational outcomes (OECD, 2014b). This mechanism particularly affects Roma who disproportionately attend special schools for children with mild mental disabilities, which has been attributed to discrimination and low language capacity because Czech is often not the language spoken at home (Figure 14, Panel B; World Bank, 2012; Gatti et al., 2016). These schools have reduced curricula, permanently limiting educational attainment, and graduates face very limited labour market prospects. The government's plans to support as many pupils as possible in mainstream education and to introduce a year of compulsory pre-school are welcome steps towards breaking the cycle of disadvantage. The successful integration and acceptance of Roma (and children with mild mental disabilities) into mainstream schools will require additional support for schools, including teacher training, specialised teacher aides and financial resources.

The adoption of the National Social Housing Strategy in 2015 is an opportunity to create a more coherent policy with appropriate governance and oversight. Currently, support is available through allowances funded by the central government and also public housing, which is mostly owned by municipalities. However, the lack of a national social housing framework means that many low-income households, particularly Roma, rent private dormitories and hostels, using housing allowances, because municipalities will not accept them as tenants (ECRI, 2015). Only around 6% of the public housing stock is reserved for low-income and disadvantaged households (de Boer and Bitetti, 2014). The planned Act on Social Housing should create the right to “decent housing”, to fair and equal treatment, define disadvantaged groups and create a register of social housing.

The government plans to increase spending on housing benefits in 2016. However, the change in the composition of housing benefits increases the risk of many disadvantaged people, particularly Roma, falling into homelessness. The timing of the policy changes

Figure 14. **Challenges for social inclusion****A. The number of people living in socially excluded areas has increased<sup>1</sup>****B. People of Roma ethnicity face larger challenges**

1. Socially excluded areas are defined as physically or symbolically delimited spaces where more than 20% of the population live in inadequate conditions. The data shown are the midpoint of the estimated range.

Source: GAC (2015), *Analysis of Socially Excluded Localities in the Czech Republic*, Prague. UNDP/World Bank/European Commission Regional survey 2011 and FRA Pilot survey 2011, [www.eurasia.undp.org/content/dam/rbec/docs/Roma\\_survey\\_data\\_Czech\\_Republic\\_2011.xls](http://www.eurasia.undp.org/content/dam/rbec/docs/Roma_survey_data_Czech_Republic_2011.xls); World Bank (2012), *Toward an Equal Start: Closing the Early Learning Gap for Roma Children in Eastern Europe*, World Bank, Washington, DC.

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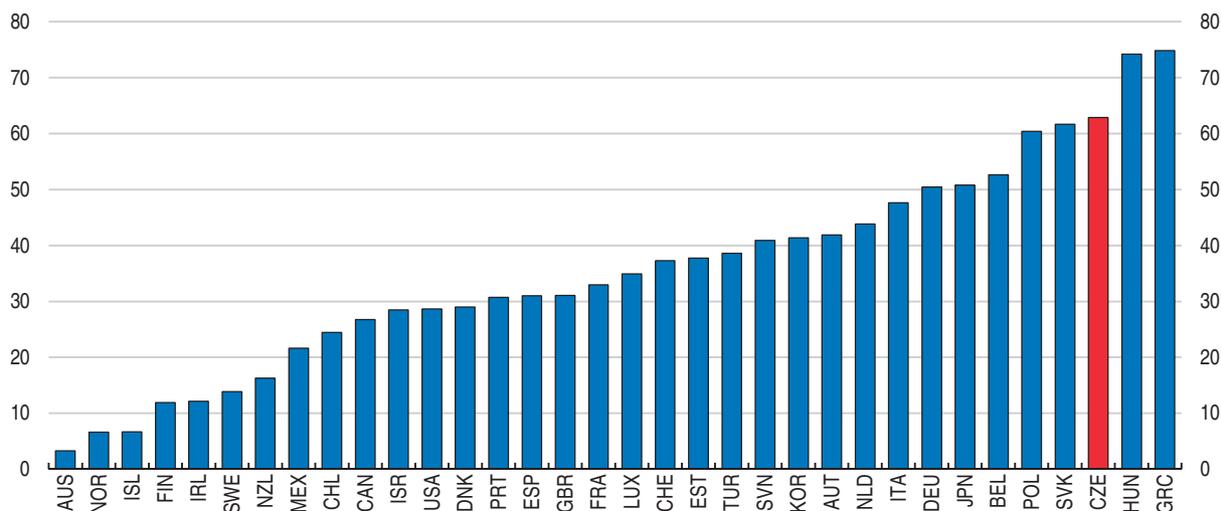
should be reconsidered so the changes form a package. Local governments should be provided with sufficient resources, including legal advice and social workers, as is planned under the government's Roma integration strategy. The establishment of a national social housing register should include targets and minimum occupancy rates of the most severely disadvantaged groups, including Roma, to be monitored to prevent segregation.

**Greener growth through more co-ordinated and cost-effective policies**

The economic expansion over the past two decades has been accompanied by efforts to improve the environment. Indicators of environmental outcomes – such as measures of air and water quality – have improved. Nonetheless, air pollution remains a major environmental and health issue, the rate of death due to air pollution is among the highest in Europe and emissions of some pollutants continue to breach EU limits (Figure 15) (EEA, 2015). Greenhouse gas emissions per unit of GDP are the sixth-highest in the OECD due to

Figure 15. **Reducing air pollution is important for the environment and Czechs' health**

Deaths from air pollution per 100 000 inhabitants, 2013



Source: Institute for Health Metrics and Evaluation.

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a coal- and energy-intensive economy despite significant progress in reducing total greenhouse gas emissions in the first years after transition.

In addition to regulation, a range of investment programmes, subsidies and other forms of support aim to improve energy efficiency and reduce air pollution. Subsidies and grants for energy efficiency and pollution reduction schemes have been expanded, using EU and national funds. These include improving the energy efficiency of housing, commercial buildings and public buildings through better insulation, and promoting renewable energy installations on buildings. To improve air quality, an EU-funded boiler replacement programme for households has begun, replacing the solid fuel boilers that create pollution, notably particulate matter. Take-up has been high. However, the programme is not targeted to areas of high air pollution. Also, many of the replacement boilers are still coal-fuelled; installation of gas boilers would cost more initially but would reduce pollution more. All programmes, including national programmes, should be evaluated *ex ante* and *ex post* and monitored during implementation and amended accordingly.

Effective tax rates on carbon emissions (apart from transport fuel) are amongst the lowest in the OECD, which dulls the incentives to transition towards a low carbon economy (OECD, 2015c, 2013a). The tax reform which was put forward to partly shift the tax mix from income taxes towards environmentally related taxes did not receive legislative approval. Such a reform would increase incentives to increase energy efficiency and contribute to lowering pollution.

Final prices for electricity for households and firms have fallen since 2012, weakening the incentive to adjust consumption patterns. Relatively low commodity prices provide an opportunity to increase effective taxation rates on carbon emissions. Likewise, the currently low oil price provides an opportunity to reduce the 20% gap between diesel prices and petrol prices to reduce diesel use which is more polluting.

Policies that reduce the price of pollutants should be phased out as they essentially increase the incentive to consume these products and run counter to other measures. There may be more efficient ways of assisting low-income households than discounted heating bills, through the social safety net and programmes such as upgraded insulation.

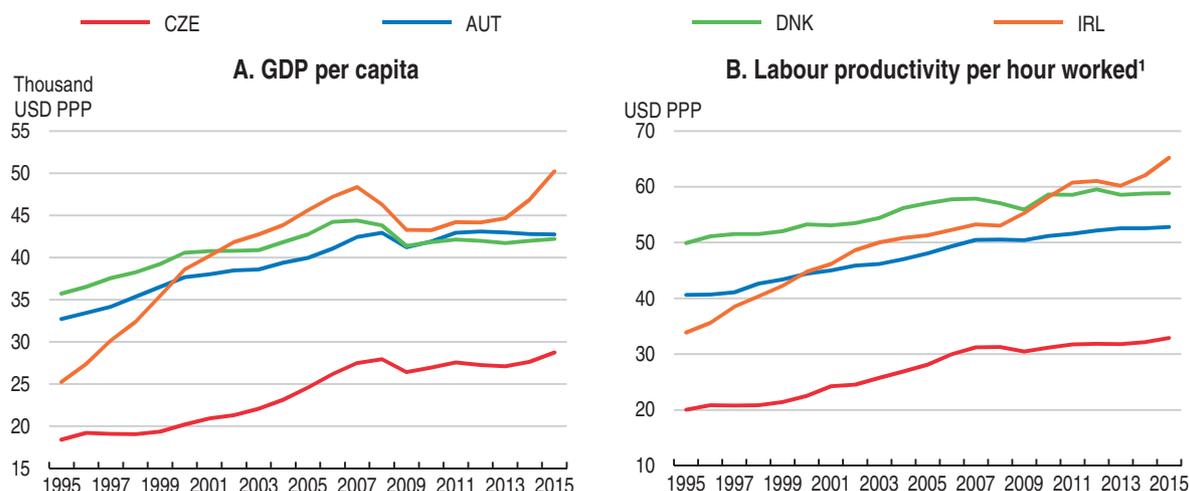
Although there is a State Environmental Policy, the multitude of national action plans and programmes create both duplication and gaps. For instance, the Energy Efficiency Action Plan does not include transport policy. However, the creation of an Energy Efficiency and Savings Department under the Ministry of Industry and Trade should improve co-ordination across ministries. Integrating Environmental Impact Assessments into the building approval process has proved also difficult and further changes to the Building Act are expected in 2016.

### Fostering productivity for better living standards

Over the past two decades, incomes in the Czech Republic have risen towards the OECD average. Between 1995 and 2014, real GDP per capita rose by 48%, and it stood at 76% of the OECD average in 2014. Productivity catch-up was critical, aided by better integration into the global economy. However, since the 2008 global crisis, the convergence process has stalled (Figure 16, Panel A).

Figure 16. **Stalled convergence of the Czech Republic**

Constant prices, USD PPP



1. 2015 data for the Czech Republic and Ireland are estimates.

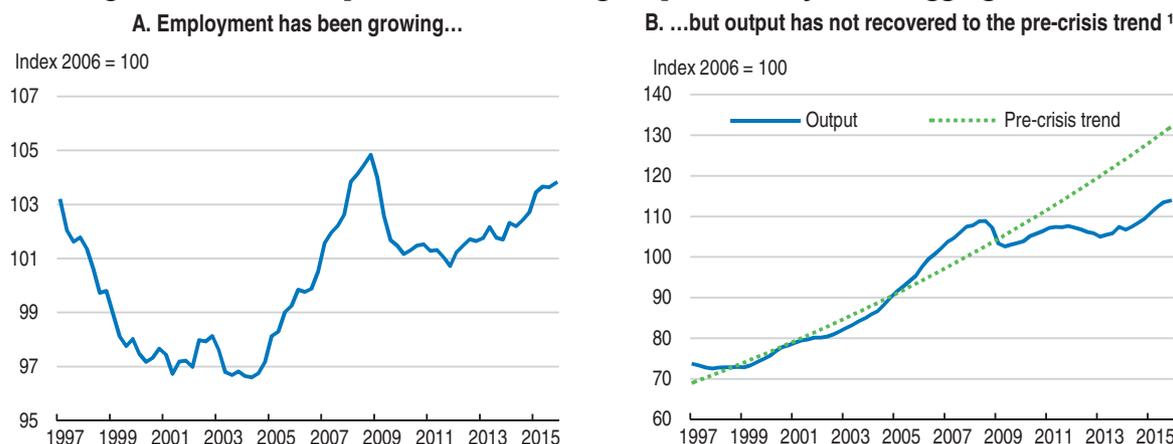
Source: OECD Productivity database; OECD National Accounts database; OECD calculations.

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Labour productivity trends show a clear structural break in 2008 at the beginning of the crisis (Figure 16, Panel B). Furthermore, labour productivity growth fell in all sectors but financial and insurance activities in the period 2007-13 compared with 2001-07, with manufacturing suffering the strongest decrease (Chapter 1). On the upside, since 2013 both employment and output have grown at a faster rate than pre-crisis trends, although it is difficult to say how long this will continue (Figure 17).

The analysis of the productivity shortfall since the crisis shows that productivity is 21% below its pre-crisis trend (Figure 18, Panel A) and potential productivity is 16% lower

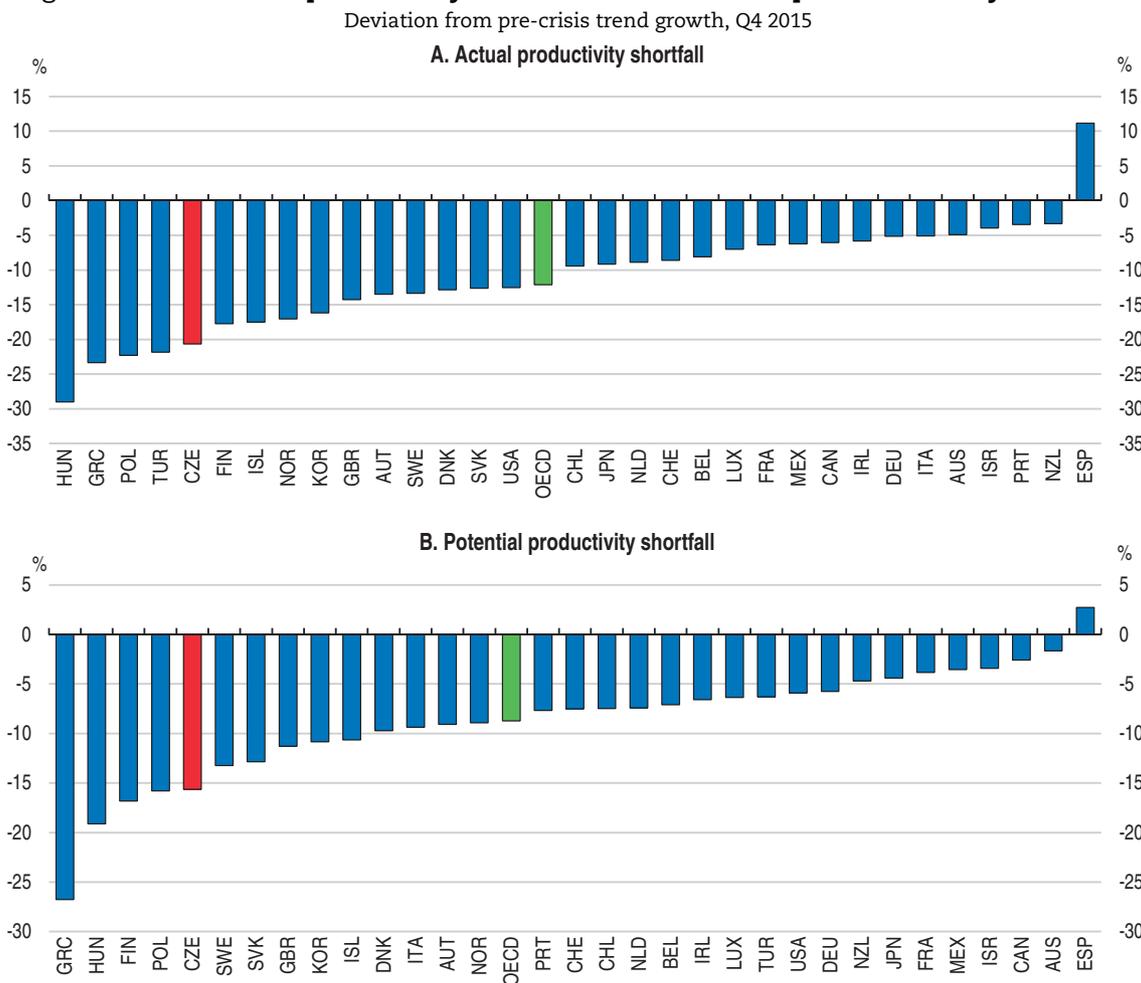
Figure 17. **Weak output is the main drag on productivity at the aggregate level**



1. Pre-crisis trend growth for output (real GDP) is calculated from linear trends between 1997 and 2006, and are projected from 2007Q1 onwards. Source: Calculations based on data from OECD Economic Outlook database.

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Figure 18. **The labour productivity shortfall in the Czech Republic is mainly structural**



Note: Pre-crisis trend growth (potential growth) is calculated via a linear trend between 1997 and 2006, and is projected from 2007Q1 onwards. Labour productivity is defined as real gross domestic product (GDP) divided by total employment. The OECD aggregate is calculated as an unweighted average of the data shown.

Source: Calculations based on data from OECD Economic Outlook database.

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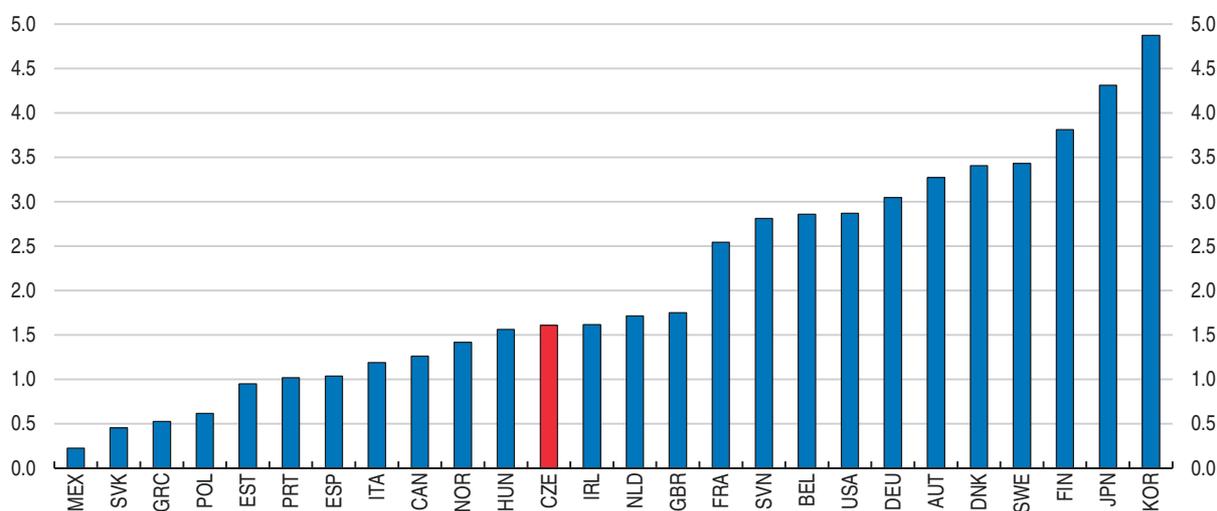
(Figure 18, Panel B). While cyclical developments are at play, these findings indicate that the productivity shortfall is mainly structural (Chapter 1). This suggests scope for improved structural policies to boost productivity in the Czech Republic.

### **Strengthening R&D and innovation policies to foster productivity**

#### **R&D and innovation performance are still low**

R&D spending has been increasing since 2003 and amounted to 2% of GDP in 2014. This represents a significant effort towards setting up a performing innovation system. Spending on R&D is still below the OECD average (2.4% of GDP). It is evenly distributed among basic research, applied research and experimental development. Business enterprise research and development (BERD) represents the biggest share of R&D spending but government spending is 40% of the total. BERD is mainly by firms that are foreign-owned or affiliated to foreign enterprises (56% of BERD in 2014). Nevertheless, R&D intensity remains relatively modest for a country with such a large manufacturing sector (Figure 19). One reason is that Czech firms affiliated to foreign companies, in particular in manufacturing, tend to be concentrated in the low value-added segment of the global value chain with low R&D (Münich et al., 2014).

Figure 19. **Business R&D intensity**  
2014 or latest available, as a percentage of value added in industry



Note: Business R&D intensity is calculated as business R&D expenditure relative to value added.

Source: OECD (2016), Main Science and Technology Indicators database.

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Despite the sustained effort to increase R&D spending, the innovation performance of the Czech Republic remains mixed. In the European Union's classification of country innovation performance, the Czech Republic is classed as a moderate innovator (European Commission, 2015b). The manufacturing sector has only a moderate innovation performance. Lacklustre performance also reflects that SMEs, which are the vast majority of firms, do not innovate much (OECD, 2015d).

### ***Streamline the administration and implementation of innovation policy***

The organisation and administration of R&D and innovation (RDI) policies is still too complex (see Box 1.2 in Chapter 1). Spending is divided among 11 ministries and bodies and 7 types of financial support (Government of the Czech Republic, 2015). There are also initiatives at the regional and industry levels. This creates a fragmented system of support. There are also overlaps between the different strategies (Innovation, SMEs and Exports) and the programmes put in place for their implementation. Some restructuring has already been made with the merging of some spending bodies in the Technology Agency. The fragmented organisation of R&D between universities and the institutions pertaining to the Academy of Science is amplified by the competition for research funding based on grants and on the institutional funding allocation based on a points system. Moreover, while university funding is managed by the Ministry of Education, the Academy of Science has its own budget chapter and the Council of Research and Development and Innovation is an advisory body to the government responsible for R&D strategy, evaluation and R&D budget allocation. On the other hand, innovation policies are mainly managed by the Ministry of Industry and Trade.

The fragmentation of innovation policies seems to be partly driven by the specialisation of the different bodies along with a limited set of financial instruments available to each. The respective role of the different stakeholders should be further clarified as they all intervene in the same areas. It is furthermore necessary to unify the design, assessment and coordination of implementation of research and development and innovation policies in a single institution. The intended creation of the Ministry of Science and Research could be an opportunity to put all research institutions under the responsibility of the same institution and give that institution the mandate to co-ordinate the design, implementation and evaluation of R&D and innovation policies. First steps were taken in 2014 by establishing the position of Deputy Prime Minister in charge of Science, Research and Innovation within the Office of the Government.

### ***Increase and better target R&D and innovation funding***

The increase in RDI spending should be continued as it is a key element for upgrading the economy in the global value chain. The Czech Government has put in place programmes to encourage higher business R&D spending by intensifying collaboration between businesses and research institutions. These programmes are financed by EU funds as well as from national resources (the new high-tech R&D support programme TRIO and programmes administered by the Technology Agency of the Czech Republic). However, direct government funding of business RDI is modest, representing 0.1% of GDP in 2013. Using these programmes, more co-financing should be developed to incentivise firms to mobilise their own resources.

Well designed and properly administered tax incentives for RDI can complement direct support. Government support for business R&D through tax incentives increased by 12.2 percentage points between 2006 and 2013, to 32.1% of government R&D spending (OECD, 2015d). Tax incentives are more neutral, except for firm size, and less government-guided than grants are, as firms have to mobilise their own resources toward their own projects before claiming the tax refund. Furthermore, it is important to guarantee that R&D tax incentives are refundable or contain carryover provisions so as to avoid overly favouring less dynamic incumbents at the expense of dynamic young firms (OECD, 2015e). However, grants tend to be more effective in spurring RDI spending and they correspond

more to SMEs' needs for RDI. Therefore, a balance should be maintained between different types of government funding through grants, loans, co-financing, loan guarantees and tax provisions. In any case, the uncertainties about receiving tax deductions related to RDI spending should be reduced through a simplified and more transparent claiming system. To ensure that R&D tax credit claims are legitimate, programmes such as the Technology Agency's training of tax officials should be further developed.

Demand-side measures can also support innovation. Such measures can help to create a market for innovation that addresses particular environmental and societal challenges (e.g. healthcare and pollution reduction). In particular, public procurement contracts have played a central role in creating a leading innovation sector in some countries (for instance defence spending in technology in Israel). Innovative pre-commercial public procurement and partnerships can stimulate innovation. In those cases, a public contracting authority, for the purpose of purchasing goods, services or works, introduces into the procurement terms criteria that require innovative solutions. A strong regulatory framework should be put in place to make sure that young innovative firms have access (OECD, 2014c).

Venture capital is very low in the Czech Republic (0.006% of GDP in 2014) and essentially non-existent for seed and start-up enterprises. This produces a financing gap for early-stage innovative companies. To remedy this, the government is planning to set up an innovation fund with the participation of the European Investment Fund. Also, a guarantee programme for innovation is being developed, jointly financed by the EU and managed by the Czech-Moravian Guarantee and Development Bank (CMZRB). The main instruments envisaged are loans, financial guarantees and grants for SMEs, while consultancy services for start-ups will be supported by grants only. While targeting the early financing of seeds and start-ups is appropriate given the lack of risk capital available for these projects, the choice of instruments should be considered carefully. Some grants are necessary to encourage the development of innovative initiatives. Also, fiscal incentives could be considered for venture capital investments in innovation. Moreover, in addition to venture capital, the development of seeds and start-ups necessitates a favourable ecosystem constituted of high quality infrastructure, available skilled human resources, frontier research and a business-friendly environment (Wilson, 2015).

### ***Framework conditions are key for productivity***

#### ***Facilitating start-ups and SME growth to fuel productivity***

Entrepreneurship plays a key role in innovation and therefore productivity (OECD, 2010b). Start-ups and SMEs often play a leading role in the introduction of advances in products, processes, organisational methods and marketing techniques, which push catching-up toward the technological frontier and are thus conducive to rapid productivity growth and job creation (Adalet McGowan et al., 2015; Aghion et al., 2007; Criscuolo et al., 2014). It is therefore critical for policy to stimulate start-ups and SME creation.

To this end, the government should accelerate the implementation of instruments planned in the SME Strategy 2014-20 (Ministry of Industry and Trade, 2015), such as the National Innovation Fund. The one-stop-shop for start-up companies, which would promote direct registration of new companies in the commercial register and, in the second phase, the simplification of the registration process and the reduction of fees, is still under examination by parliament.

Instruments (loans, grants, subsidies, guarantees, consultancy support) and programmes for SMEs could be simplified. There are too many instruments, calls for projects and grants that imply administrative costs for SMEs that apply. Indeed, an SME needing different types of support would have to address requests to different institutions for: support of financially healthy businesses in search of investors, (CzechLink programme), consulting services for strategic management and innovation management (CzechInvest Agency), programmes aimed at improving the infrastructure for the development of human resources with an emphasis on technical education (CzechInvest Agency), soft loans and preferential loan guarantees for SMEs (CMZRB), and support for experimental development in the field of advanced technology, environment and energy and transport (TACR). Such streamlining would also ease access to finance for SMEs, which is particularly important in the Czech Republic as SMEs are the vast majority of firms.

### ***Firms tend to have low managerial quality but a high share of over-skilled workers***

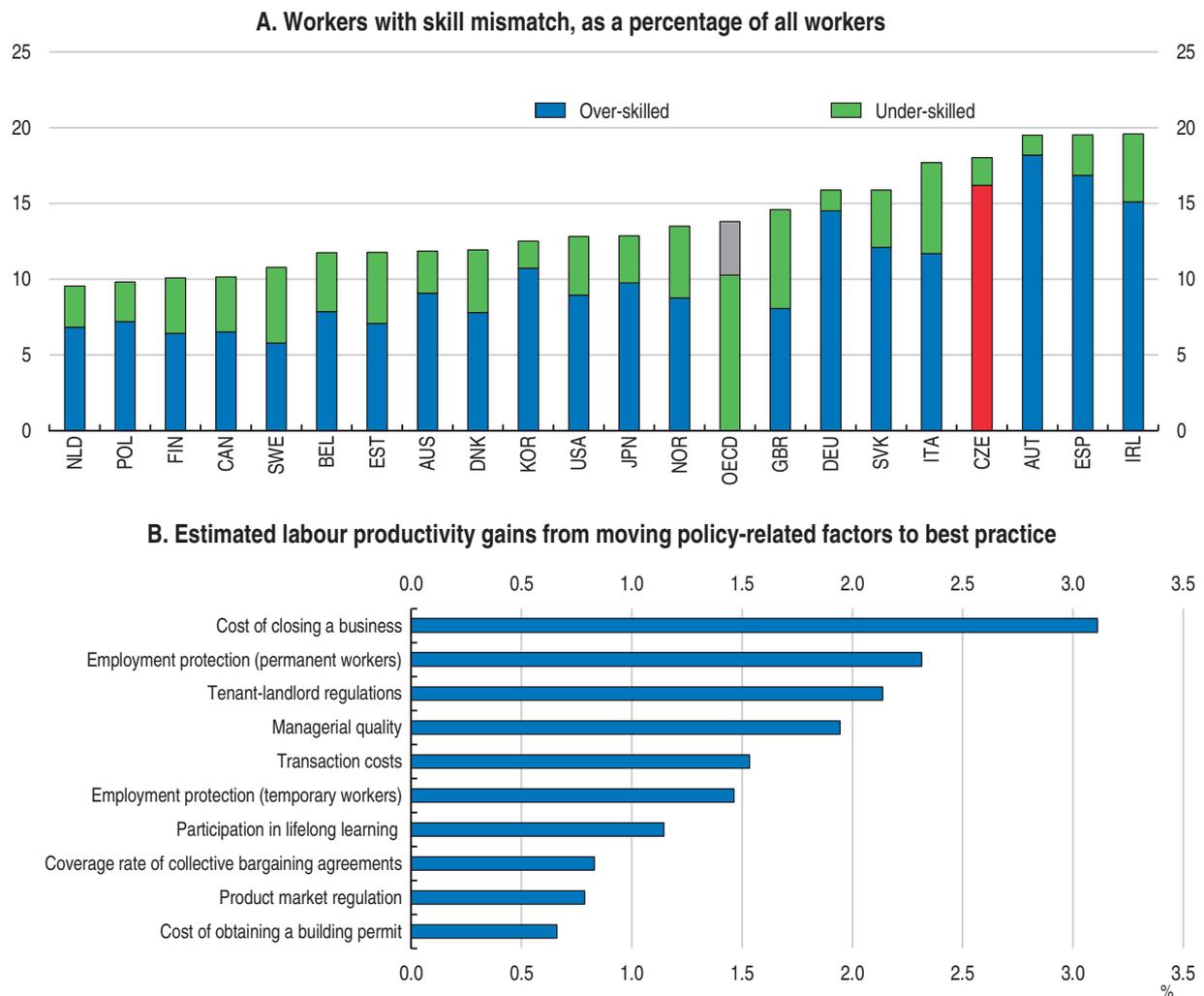
Efficient management to boost productivity requires managers with the necessary skills, knowledge and authority, and high managerial quality has been shown to improve firm-level performance (Adalet McGowan et al., 2015; Bloom et al., 2012). A range of metrics related to managerial quality and practices suggest that Czech managers outperform those in other CEE countries but they fall short of small high income countries (Chapter 1). For example, there is considerable scope to increase the use of professional management, which is associated with faster convergence in multifactor productivity at the country level (Andrews and Westmore, 2014; World Economic Forum, 2015). Also, Czech firms invest a smaller share of value added in managerial organisational capital than in most OECD countries with available data (OECD, 2015d).

Lower managerial quality is associated with skill mismatch, which is particularly high relative to other OECD countries (Adalet McGowan and Andrews, 2015a). The skill mismatch measure suggests that a relatively small share of Czech workers is under-skilled but a relatively high share of workers – 16% – is over-skilled (Figure 20, Panel A). This seems partly due to the unattractiveness of wages and careers in some industries and regions and to mismatch between workers' education and labour market demands. Estimates suggest that improving the quality of managerial capital to the level of Finland (best practice) would reduce the probability of skill mismatch by around 5%, which would increase labour productivity by almost 2% (Adalet McGowan and Andrews, 2015a, 2015b; Figure 20, Panel B).

### ***Raising competition and resource re-allocation to boost productivity***

Key policies to lower mismatch are those that remove barriers to mobility of resources and workers and promote competition (Adalet McGowan et al., 2015). There could be large impacts from lowering the cost associated with closing a business and reducing the stringency of employment protection legislation (Figure 20, Panel B). In particular, the protection of workers against individual dismissal is the second-highest in the OECD (OECD, 2013b). Improving the functioning of the private rental market and also transport linkages could increase the number of jobs workers can reach, thereby improving the match between workers' skills and their job. Efficient allocation of resources by facilitating the entry and growth of SMEs would improve productivity. Increasing the effectiveness of the education system, as proposed in OECD (2014b), would also improve skill use and transitions from school to work.

Figure 20. Reducing the extent of skill mismatch would increase labour productivity



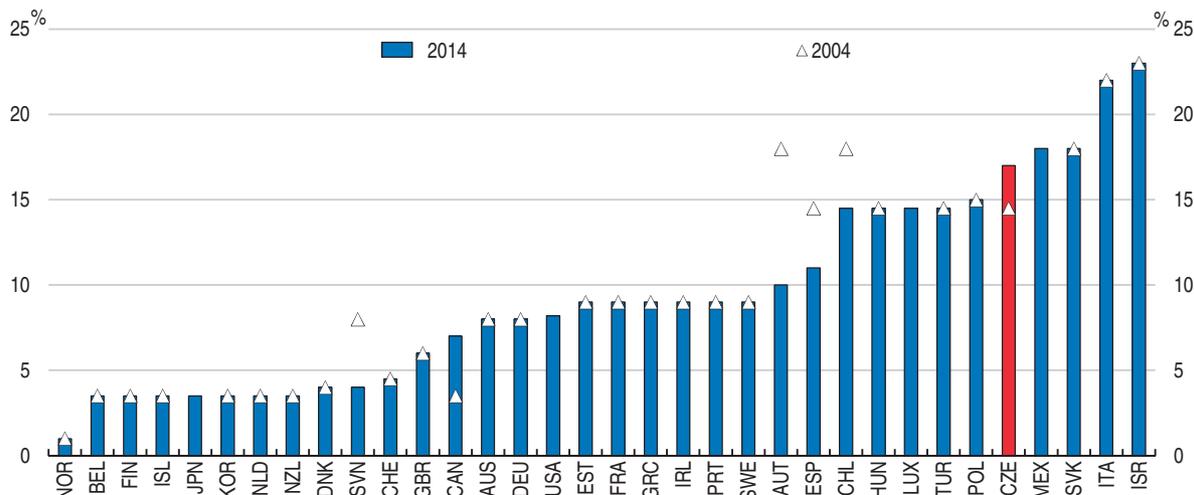
Note: In Panel A data for Belgium are from Flanders and data for the United Kingdom are from England and Northern Ireland. Mismatched workers are those whose literacy proficiency score is in the top or bottom 5% of self-reported well-matched workers in their country and occupation following (OECD, 2013). In Panel B estimates are based on: i) logit regressions of probability of mismatch controlling for age, marital and migrant status, gender, education, firm size, contract type, a dummy for working full-time and working in the private sector; and ii) OLS regressions of labour productivity on skill mismatch. “Employment protection” relates to the stringency of employment protection legislation.

Source: OECD (2013), *Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris; Adalet McGowan, M. and D. Andrews (2015), “Skill Mismatch and Public Policy in OECD Countries”, *OECD Economics Department Working Papers*, No. 1210, OECD Publishing, Paris.

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Costly and time consuming insolvency procedures hinder resource re-allocation between lower productivity firms and better performing ones (Adalet McGowan et al., 2015). The total cost of bankruptcy procedures is among the highest in the OECD (Figure 21). In the Czech Republic, the insolvency proceedings is mainly focused on preserving creditor claims and is restrictive for entrepreneurs. When bankruptcy resolution does not successfully satisfy creditors, remaining claims are not extinguished and persist to burden the debtor. The length of the proceedings should be reduced by limiting the possibilities for creditors (or, in principle, debtors) to delay the final decision

Figure 21. **The cost of bankruptcy proceedings is high**  
Average cost of bankruptcy proceedings as a percentage of the estate's value



Note: 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.

Source: World Bank, Doing Business database.

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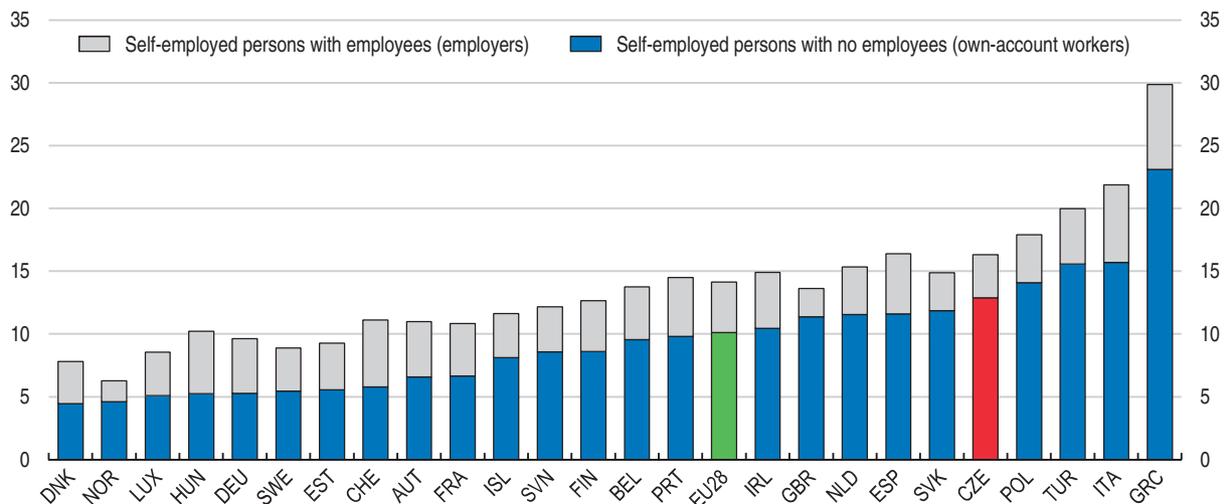
point. Finally, it is also desirable to enhance the possibilities of liabilities write-off at the end of the judicial proceedings.

Competition and regulation policies could be further improved, as discussed in the 2014 *Czech Republic Economic Survey* (OECD, 2014b, Chapter 1) and in the section above reviewing implementation of past recommendations. A competitive environment favours the development of successful firms and reduces economic rents. For instance, the Czech Republic has a high number of regulated professions. Therefore, reform to open regulated professions is needed.

The efficiency of resource allocation is influenced by the differences in taxes on businesses and revenues of the self-employed. There is a risk that the pattern of SME growth could be distorted by differential treatment of firms in the tax system. One particular issue is the development of self-employment. Self-employed workers are 17% of total employment and this number is increasing (Figure 22). That number is particularly high for a country which does not have an important agricultural segment (Araújo and Maleček, 2015). In part, this may be induced by the tax structure, which gives preferential treatment to the self-employed in comparison with employees. The total tax burden for an average employee in the Czech Republic (personal income tax together with social security contributions) reached 37% in 2013, as opposed to 28.1% in the case of an average self-employee, while self-employees' average gross earnings are 34% higher than that of employees (OECD, 2015f). For instance, based on an annual cash-flow threshold of CZK 2 million, self-employees' benefit from income tax deductions of up to 80%, depending on their occupation, which comes on top of preferential treatment with respect to social security contributions.

These tax differences are suspected to have led to the development of strategic subcontracting by firms which reduces the tax base for both firms and the self-employed. Indeed, the low tax burden for the self-employed has led to a phenomenon of false self-

Figure 22. **Self-employment is high**  
Per cent of total employment (15-64 year olds), 2015



Source: Eurostat

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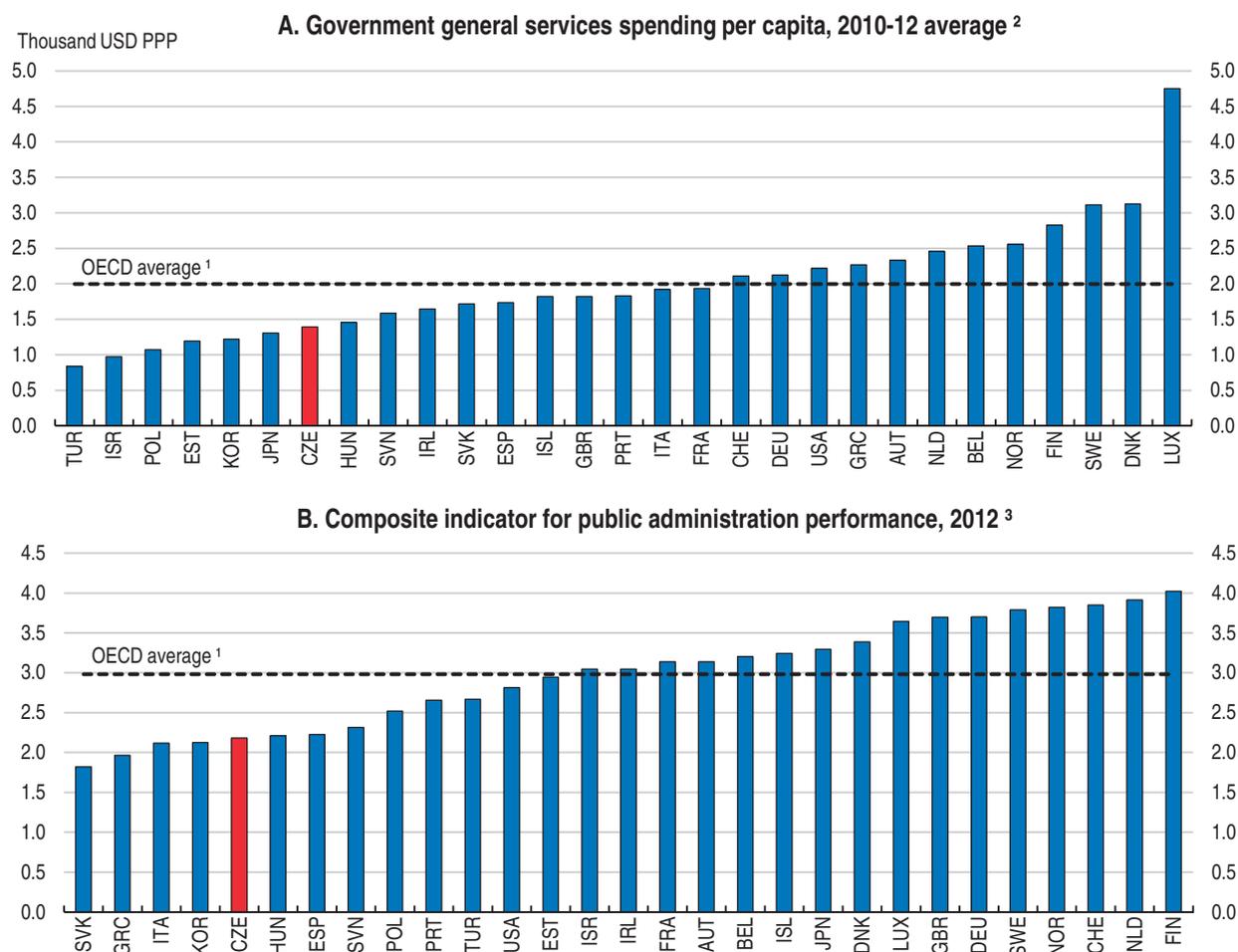
employment (commonly referred to as “švarcsystém” in Czech), with employees not benefitting from a standard contract with their employer, working instead as a self-employed worker (OECD, 2010a; Araújo and Maleček, 2015). Given the negative effect of self-employment on tax revenues and the PAYG pension pillar, an amendment of the Act on Income Taxes imposed ceilings for flat-rate tax deductions for self-employees, effective from 2015, which should somewhat reduce the attractiveness of false self-employment. The tax structure could be reformed to ensure less distortion between workers and self-employees.

## Enhancing the effectiveness of the public sector

Spending on public administration is, per capita (PPP-adjusted), less than three-quarters of the average OECD country (Figure 23, Panel A). However, indicators of the performance of the public administration – the degree of corruption and regulation, the quality of justice and the level of government efficiency – are also comparatively low (Figure 23, Panel B). Even allowing for spending levels, performance appears low, with some estimates suggesting performance could be improved by around one-third, holding spending constant (Dutu and Sicari, 2016). The government’s *Strategic Framework of the Development of Public Administration in the Czech Republic* aims to improve the quality and efficiency of the public administration (Ministry of Interior, 2014).

### Increasing the effectiveness of the public administration

The capacity of the government to design and administer projects has been hampered by high levels of turnover of personnel within the civil service, creating discontinuities in policy and loss of institutional knowledge. The 2015 Civil Service Act created a national civil service, which had been an unfulfilled requirement of EU accession. The Act aims to depoliticise the public service and increase professionalism and stability. Key changes include: requiring all appointments and promotions to be opened to competition under specified procedures; linking remuneration and performance assessment more closely;

Figure 23. **Expenditure and performance for public administration are low**

1. Unweighted average of data shown; excludes Australia, Canada, Chile, Mexico and New Zealand.

2. General services spending includes general public services, order and safety and excludes interest payments.

3. Synthetic indicator based on OECD's Product Market Regulation (PMR) Indicator to proxy the levels of bureaucracy (33% of indicator) and results of the 2014 WEF survey on the quality of justice, level of corruption and government inefficiency.

Source: Dutu, R. and P. Sicari (2016), "Public Spending Efficiency in the OECD: Benchmarking Health Care, Education and General Administration", OECD Economics Department Working Papers, No. 1278, OECD Publishing, Paris.

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codifying rights and responsibilities; and facilitating whistleblowing. The changes bring many human resource management policies more in line with other OECD countries.

The implementation of the Act should improve stability of the workforce by weakening political influence, increasing tenure and providing clearer career paths. Regular performance pay, which can reach up to 43% of regular pay, is better linked to performance appraisals, which should improve incentives. However the large wage penalty for skilled public sector workers (de Castro, Salto and Steiner, 2013) may still make retention difficult. The appropriateness of compensation and conditions should be reviewed with the aim of improving retention. Also, some new requirements may constrain policy innovation and improvements in management; for instance, private-sector candidates face significant barriers when applying for senior public sector management positions. Similarly, making senior civil servants permanent in their role to bar political influence could increase rigidity too much. Mobility could be increased by taking

experience in other roles (or ministries) into account in promotion decisions, or by encouraging secondments. In Australia, Belgium and the Netherlands, competencies (knowledge, skills and behaviours) are being managed so as to increase transferability and accordingly, mobility and flexibility (OECD, 2015g). A review is planned for 2016. It should evaluate the implementation of the new Act, including the effects on staff engagement and the capacity of human resources units, with follow-up changes to the Act, its implementing regulations and associated processes as required.

Parts of the e-Government programme should complement the evolution of more outcome-based monitoring and evaluation processes, which will also raise the effectiveness of the public sector. The focus to date has been on creating portals for accessing information and interacting with the government. Datasets that have been made available have helped to increase transparency but have generally been input-focused. Nonetheless these data have allowed some municipalities, NGOs and academia to carry out benchmarking and other evaluation exercises. In many cases – such as education outcomes – data already exist but are not published. Standardised performance indicators should be created and published and used in budgetary processes. As with other projects, continuous monitoring and evaluation of e-government projects is required to control costs and keep processes on target. An OECD Public Governance Review could help the implementation of a whole-of-government approach to performance monitoring and the e-Government programme.

### **Reducing wastage and increasing value from public procurement and investment**

Public procurement is a means of acquiring intermediate goods and services and construction works and was equivalent to around one-third of government spending in 2014 (according to the OECD Government at a Glance database). Significant steps have been taken since 2012 to increase transparency and controls over procurement processes, but some concerns about the lack of competition, transparency and enforcement remain (OECD, 2014b). In 2015 the Supreme Audit Office labelled procurement “the highest-risk area of the state’s financial management” (SAO, 2015a). Legislative changes in 2016 improve access to tenders, increase transparency and lower the administrative burden.

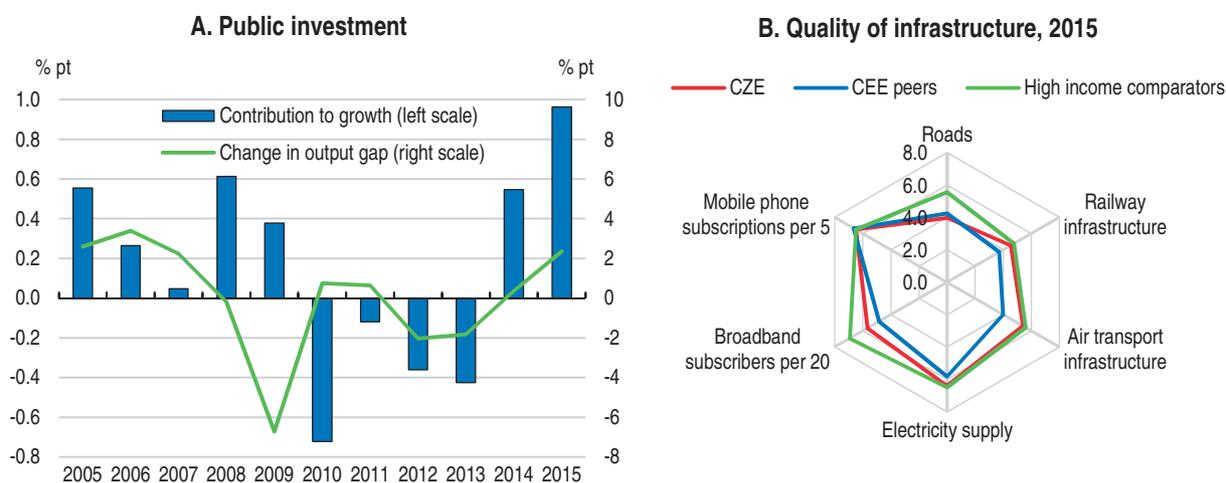
Indicators from the European Commission’s *Single Market Scoreboard* suggest that competition in procurement is too low. In 2014 almost one-fifth of procedures were granted without a call for tender and one-fifth of contracts were awarded in tenders with only one bidder. Joint purchasing by public authorities is used less than in other EU countries but would be particularly beneficial given the large number of contracting authorities. Combining contracts would increase contract size, thereby generating economies of scale, lowering administrative costs and improving competition in tenders. Tools should be further developed to facilitate joint purchasing. Active steps should be taken to achieve greater use of available tools across government bodies, including through rules and guidelines. Central and regional governments should help to co-ordinate innovative solutions among other public bodies and municipalities.

Greater oversight and personal accountability are also needed to overcome a range of problems including failures to observe rules and regulations, setting discriminatory tender terms, contract splitting, inappropriate use of exceptions and failures in audit systems (SAO, 2015a, 2015b; UOHS, 2015). Clear chains of responsibility should be established. Auditing should be increased throughout the process. Procurement officials should be required to disclose conflicts of interest and register their private interests (including those

of close relatives) to bring disclosures more in line with best practice (OECD, 2015h). The procurement portal should continue to be developed in a user-focused way, making clearer guidelines, training and technical assistance available. Specialist competency centres should be established at the central and sub-national level to help with technical contracts, including for public-private partnerships.

Problems with procurement processes, along with broader co-ordination issues, have contributed to volatility in government investment by central and local governments. The pro-cyclicality of investment deepened the recent recession then contributed to shortages in construction in 2014 (Figure 24, Panel A). Public investment contributed 1 percentage point to real GDP growth in 2015 (adjusted for the effect of a fighter jet lease) and will subtract from growth in 2016. Investment in some types of infrastructure has been relatively low and there appear to be large gaps with small high-income countries in road quality and broadband access, for example (Figure 24, Panel B).

Figure 24. **Public investment has been volatile and lacking in some areas**



Note: In Panel A public investment in 2015 has been adjusted for the effect of the Gripen fighter jet lease. In Panel B high-income comparators are: Austria, Belgium, Denmark and Sweden; CEE peers are: Estonia; Hungary; Poland; the Slovak Republic and Slovenia. Measures of the quality of transport infrastructure and electricity are based on a score from 1 (low) to 7 (high).

Source: OECD Economic Outlook database; OECD National Accounts database; OECD Broadband database; World Economic Forum, The Global Competitiveness Index Historical Dataset.

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The investment cycle needs strengthening to reap the gains from public investment expenditure. Prioritisation of national investment projects is needed to direct funds to where returns are highest. The forthcoming Strategic Framework of Sustainable Development provides an opportunity to adopt a whole-of-government approach and overcome sector-based investment strategies. It should lead to greater co-ordination of projects and multi-year planning. It should also be informed by an evaluation of current and future infrastructure gaps. To improve project selection, *ex-ante* cost-benefit analysis should be used systematically for large projects. Likewise, the new “standing conferences” of key stakeholders at the national and regional level that will prepare action plans for EU-financed investment should also be used for all national programmes cutting across ministries or levels of government. Improvements to practices for monitoring and evaluating EU-financed projects should be extended to all significant investment projects.

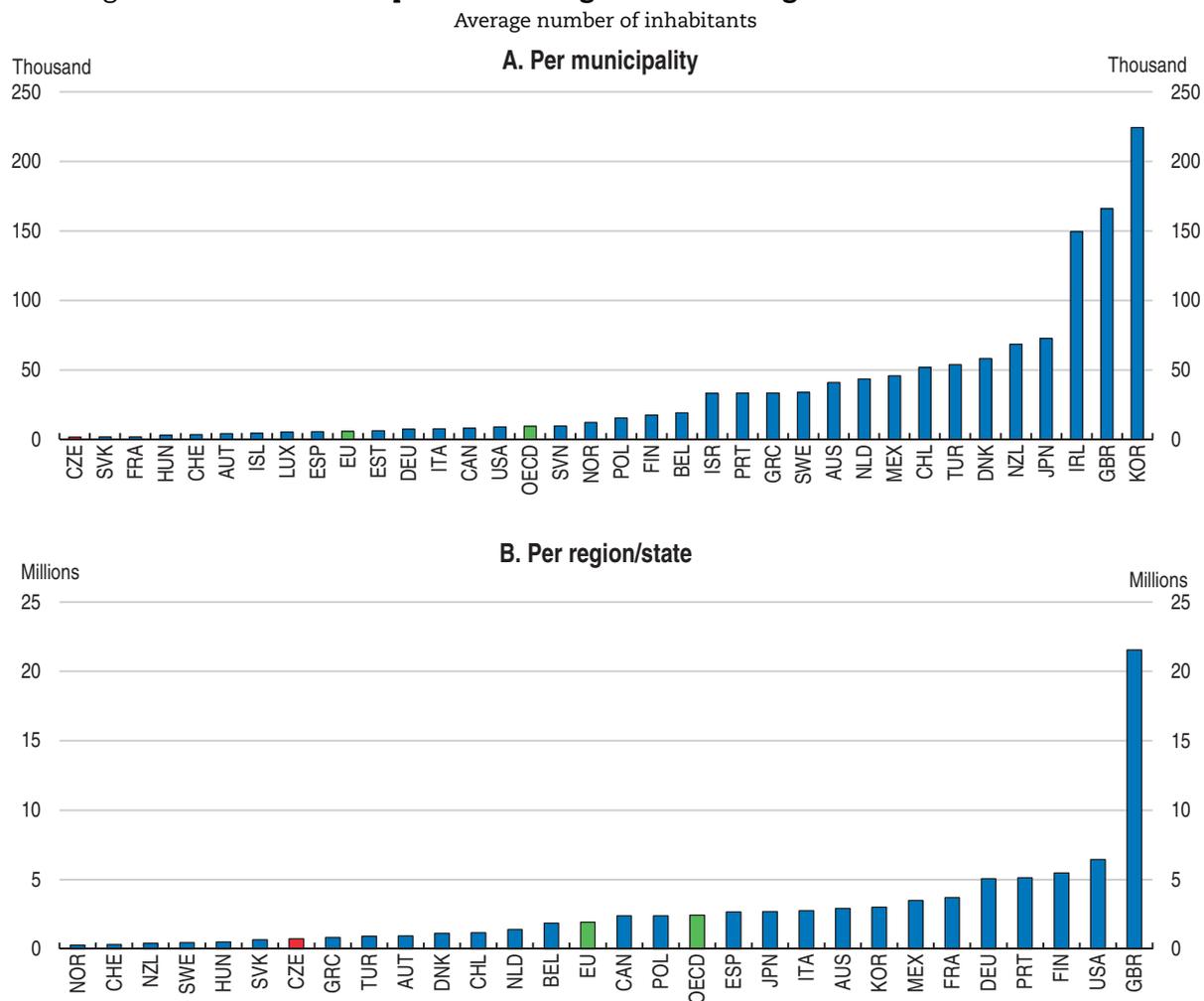
### **Realising the benefits of decentralisation**

Czech local governments have responsibility for delivery of some key government services, including education (regions and municipalities), transport (regions and municipalities), social services (regions and municipalities), waste and waste water services (municipalities), and health (regions and municipalities, with social security funds). But their autonomy is limited in areas such as education and health. Overall, sub-national governments account for around one-quarter of government expenditure, close to the average OECD country.

A well-known feature of sub-national government in the Czech Republic is the high degree of territorial fragmentation: with over 6 200 of them, its municipalities are the smallest on average in the OECD; and the regions are the seventh-smallest (Figure 25). Around three-quarters of municipalities have fewer than 1 000 residents and one-quarter have fewer than 200 residents. An additional layer of territorial administration is formed by the 205 “municipalities with extended powers” that perform specific functions on behalf of the central government, such as child protection and issuing passports. However, the system is complicated further by differentiated delegated functions performed by some other municipalities, such as issuing building permits or having a registry office. Another complication is the incomplete transition from the previous administrative system based on districts and municipalities (Ministry of Interior, 2014). The government’s Strategic Framework for the public administration is a welcome attempt to streamline these responsibilities and complete the transition. Services such as driving licences and ID cards could be concentrated in “one-stop shops” at the 205 municipalities, for example.

Longstanding concerns are that municipalities are too small to deliver high quality services, and that capacity is stretched too thinly (OECD, 2011, 2006). Costs of administration per capita are higher in the smallest municipalities and decline as municipal size increases, up to 1 000-2 000 residents. In addition, municipal provision of key social services – for example, preventative health services, childcare and long-term care – is too low overall, but data enabling comparisons are not available. While educational attainment is good across the country, the large number of municipalities is hampering the consolidation of the school network so regions with many municipalities tend to have smaller schools (Figure 26; Shewbridge et al., 2016). Performance indicators should be introduced, regularly published and used in benchmarking exercises to help to identify good practices, inform local constituencies and improve outcomes. Norway’s KOSTRA system is an example of best practice in monitoring local services that integrates information from multiple sources to make performance indicators accessible for local governments, the public, the media and researchers (OECD, 2009).

The problem of small municipalities is mitigated through inter-municipal co-operation. Around 90% of municipalities are involved in some form of inter-municipal co-operation, and bodies such as the Union of Towns and Municipalities try to promote co-operation. Ultimately, however, co-operation has been ad hoc. It is often relationship-dependent and it does not necessarily occur where fragmentation is worst (Chapter 2). It is also difficult to manage. Mergers are a first-best solution to achieve more concentrated service provision and are used by many OECD countries but they are difficult politically. Nonetheless they should be supported more, using stronger financial and non-financial incentives and performance indicators such as efficiency of service delivery to generate local support. Other ways of achieving similar benefits of consolidation of services through

Figure 25. **Czech municipalities and regions are among the smallest in the OECD**

Note: Average calculations are based on estimated population data as of 2015 or 2016 for most countries. Data for OECD and EU are unweighted averages.

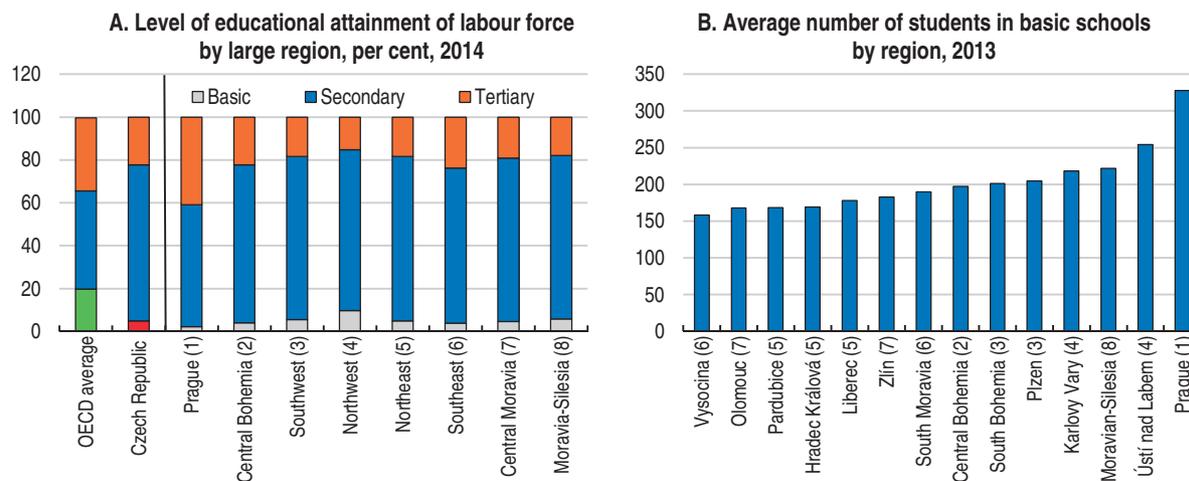
Source: OECD (2016), Subnational Governments in OECD Countries: Key Data (brochure), OECD, Paris, [www.oecd.org/regional/regional-policy](http://www.oecd.org/regional/regional-policy). Database: <http://dx.doi.org/10.1787/05fb4b56-en>.

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their joint provision should be established to achieve a minimum size for service delivery in particular areas, such as health care, education or social services. In Italy and Hungary some form of co-operation is required for small municipalities. Alternatively, minimum standards of service provision or financial incentives could be used to generate co-operation but they would need to be sufficiently strong. A unit could be established in the central government to facilitate and monitor co-operation. Centres of shared specialist services are currently being piloted on a voluntary basis and, if successful, should be expanded to form a country-wide network.

Sub-national governments are mostly financed through a mix of shared taxes (personal and corporate income tax and VAT) and grants and transfers, from the central government. Over 60% of municipalities' revenue is from tax revenue, while for regions a little over 60% of revenue is from grants and transfers. Compared to other OECD countries, sub-national governments have relatively little autonomy over revenues: they have control

Figure 26. **Educational attainment is consistently good but the system could be organised more efficiently**



Note: Large regions (TL2 level) encompass several small regions (TL3 level). The numbers in parentheses show which larger region the small regions in Panel B belong to. Basic (or elementary) education includes primary and lower secondary education. OECD average is an unweighted average of countries with available data for 2013 or 2014.

Source: OECD Regional Statistics database; Shewbridge, et al. (2016), *OECD Reviews of School Resources: Czech Republic*, OECD Publishing, Paris, forthcoming.

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over just 1.2% of total tax revenues. Most grants are earmarked. Municipalities receive recurrent tax on immovable property and can set the rate within a range specified in legislation. Municipalities that perform additional functions (e.g. issuing permits) receive additional compensation. User charges and income from infrastructure are other sources of revenue for municipalities. Regions and municipalities can also raise funds by applying for additional grants from the central government or European Union or by selling assets.

The tax-sharing formula has been the subject of much debate. Each region's share of the overall allocation to regions is set in the legislation. For municipalities, revenues are strongly linked to the population size and only weakly to cost drivers and the local economy and therefore there is little reward for growing the tax base. The link in the tax-sharing formula to where revenue is raised could be strengthened further, for regions and municipalities, accompanied by an explicit equalisation component to account for differences in revenue-raising capacity. Recurrent tax on immovable property is low relative to other OECD countries and most municipalities only charge the minimum tax rate. Effective tax rates should be raised to increase the share of revenues that municipalities directly control. More importantly, the calculation should be based on property value rather than property size, with these values updated regularly, as in most OECD countries. This could be combined with land-use planning instruments at municipal and regional level to avoid unintended consequences such as urban sprawl (Blöchliger, 2015).

The vast majority of grants and transfers to sub-national governments are earmarked, and are mostly for education and investment spending. Earmarking is generally associated with lower efficiency (Bergvall et al., 2006). It also limits regional and municipal governments' ability to match services provided to local needs. Part of the regions' revenues earmarked for education is for municipalities, which complicates administration and assessment of the system (Shewbridge et al., 2016). Greater use of benchmarking, including measures of quality, along with requirements of minimum service levels could

accompany greater flexibility in grant spending. This could encourage innovation and efficiency gains while safeguarding performance. It may also increase spending on infrastructure investment (Kappeler et al., 2013).

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