OECD Economic Surveys
CZECH REPUBLIC

March 2014

OVERVIEW

Summary

- Main findings
- Key recommendations

Main findings

The economy has remained weak for longer than many other OECD countries and a hesitant export-led recovery is materialising, but significant reductions of the output gap are unlikely to take place over the short-term, raising the risk of deflation. Also, the income convergence process *vis-à-vis* the euro area has stalled, reflecting the recession and a decline in potential growth, reflecting decelerating investment and productivity. The main policy challenges are to sustain the recovery and raise potential growth, pointing to a need for developing a more competitive service sector and better school-to-work transition as discussed in Chapter 1 and 2, respectively.

Supporting the recovery and potential growth

The weak labour market has resulted in a lack of real wage growth over the past couple of years. Headline inflation is declining as the effects of indirect tax increases are fading and as underlying inflation is remaining below the lower band of the inflation target. The fiscal situation is relatively good with a public deficit and debt below 3% and 50% of GDP, respectively. However, fiscal sustainability challenges still have to be addressed. One of the problems encountered in this respect has been the difficulty of bringing on board all stakeholders to implement the necessary reforms in areas such as pensions and health care.

Promoting competition

A competitive service sector is key to boost value added in production, stimulate innovation and exploit domestic sources of growth. Competition in the sector is inhibited by red tape; government involvement in competitive areas; and uneven application of competition policy. Since joining the EU, great strides have been made in removing these barriers. The competition framework is at par with best practise, but successful prosecution of hard-core cartels has rarely happened. In addition, regulation of food retailing occupies scarce resources. Regulation of network sectors, on the other hand, has been weak, although improving in some sectors. This has meant that the drive towards more competition in network sectors has been slower than in other European countries, leading to relatively high prices and slow implementation of new technologies.

Strengthening skill use and school-to-work transitions

The ongoing structural change of the economy has led to profound changes in labour demand, requiring a reallocation of available labour resources as well as workers with new and different skills. However, the education system has not sufficiently kept up with the exception of a large increase in graduates with tertiary degrees. Students that leave the education system without a degree are experiencing difficulties in finding a job, while many of those with vocational training find that either there is little demand for their skills or that their skills are not suitable to modern work practises. The large expansion of tertiary education mostly reflects higher intake in the public system, but also the emergence of many private institutions. The public system has not had a corresponding increase in resources, which could lead to bottlenecks and has raised concerns about how to secure quality that is at an internationally comparable level. The gender wage gap is high and the labour participation of women with young children is relatively low, accentuating labour shortages of the ageing society.

Key recommendations

Supporting the recovery and potential growth

- Maintain an accommodative monetary stance until deflation risks definitively recede.
- Preserve a neutral fiscal stance until the economic recovery has been established and thereafter return to gradual fiscal consolidation to secure fiscal sustainability.
- Use a multi-pronged approach to secure fiscal sustainability. In this respect, measures are needed to ensure an increasing effective retirement age. Moreover, the government should continue to secure that the indexation of pensions does not lead to old-age poverty problems. In addition, the government should consider options for diversifying income sources for pensioners. An additional measure could be to bring forward the increases in the statutory retirement age.
- Strengthen consensus finding for important reform initiatives and introduce an independent fiscal council with a broad remit.

Promoting competition

- Improve the managerial integrity of remaining state-owned enterprises by concentrating governance within a single authority. Privatise and divest business-related state-owned enterprises and activities.
- Ensure that the leniency programme is working properly to unearth cartels, and that efforts to eliminate bid-rigging are successful. Remove the special sector regulation for food retailing from the competition policy framework.
- Secure effective independence for all network regulators, improve the co-ordination between the competition authority and regulators, and have a common approach to what constitutes a proper definition of market dominance. Tackle vertical constraints on competition via effective ownership unbundling or via holding structures with financial separation of all activities that counters the risk of cross-subsidisation.

Strengthening skill use and school-to-work transitions

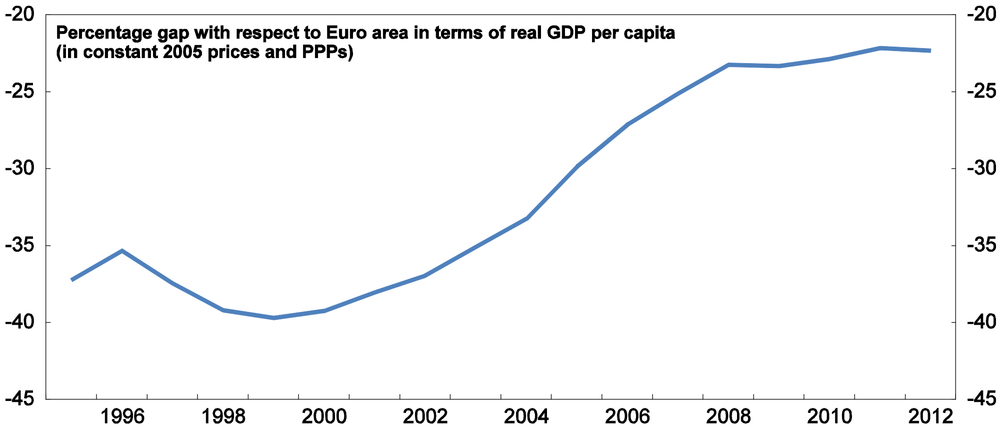
- Encourage employers to provide training to young unskilled workers through tax subsidies or targeted reductions in social security contributions. Looking ahead, if the statutory minimum wage increases sufficiently, an additional measure could be the introduction of a youth minimum wage linked to training.
- Increase participation of private employers in vocational education by simplifying institutional frameworks and governance. Introduce a contractual employment relationship between the apprentice and the employer. Expand workplace training by providing subsidies to the participating firms for difficult to place students.
- Secure quality in the provision of tertiary education by introducing output based accreditation criteria and student fees to increase resources for the provision of public tertiary education, accompanied by a mixed system of means-tested grants and income-contingent repayment loans.
- To boost female labour market participation and help families to reconcile family and working lives, provide an adequate supply of affordable and high quality early childcare facilities. Conditional on this development, reduce the maximum duration of the parental leave and replace part of the parental allowance with a system of childcare vouchers.

Assessment and recommendations

A bumpy recovery is under way after a prolonged recession

The income convergence process *vis-à-vis* the euro area has stalled, reflecting both a drawn-out economic recession and an estimated decline in potential growth from 3.5% to 1.5% - reflecting the fall in investment and decelerating productivity growth – more than in most other OECD countries (OECD, 2013a) (Figure 1). Thus, the most important macroeconomic policy challenges are to sustain an emerging recovery and raise potential growth.

Figure 1. Convergence in GDP per capita



Source: OECD calculations based on *OECD National Accounts Database*.

The recovery of the Czech economy started in mid-2013 after contracting for six quarters. The main factor behind the contractions was weak domestic demand - partly due to accumulated fiscal consolidation of 2% of GDP in 2011-12 (Table 1). Slowing export market growth also played a role, although the export sector managed to gain market share every year until 2013. At the start of the recovery, the output gap was more than 4.5%, reflecting that GDP had fallen by nearly 4% below its pre-crisis peak.

After a prolonged contraction, employment began to expand again in 2011. Employment gains were supported by a reform of the labour code that allowed, notably, more flexible working hour arrangements and by an increase in the internationally low level of part-time employment (Figure 2). The expansion of employment was accompanied by a faster increase in labour participation, partly reflecting higher shares of population groups with relatively high labour market participation, and participation has reached the EU15 average (Figure 3, panels A and B). In all, the unemployment rate increased by less than ½ percentage point in 2012 before starting to decline and levelling off at just below 7% by end-2013 - 1¼ percentage point higher than in early 2009. The relatively small response in unemployment to the cycle reflects contractions in average hours worked.

Table 1. Short-term macroeconomic indicators

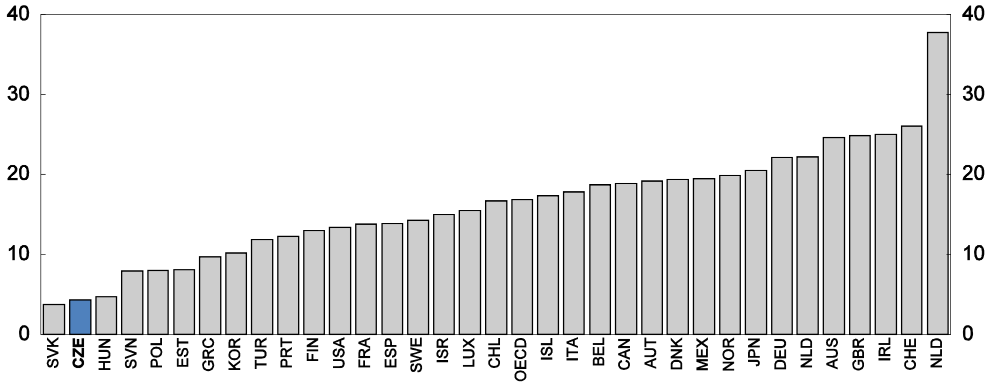
	2010	2011	2012	2013	2014	2015
	Current prices CZK billion	Percentage changes, volume (2005 prices)				
GDP	3 791	1.8	-0.9	-0.9	1.1	2.3
Private consumption	1 917	0.5	-2.1	-0.1	0.8	2.0
Government consumption	807	-2.7	-1.9	1.9	0.1	1.3
Gross fixed capital formation	931	0.4	-4.3	-3.3	0.4	2.3
Of which: Housing	159	-7.2	-1.6	-5.6	0.0	0.8
Final domestic demand	3 655	-0.2	-2.6	-0.5	0.6	1.9
Stockbuilding[1]		0.1	-0.1	-0.2	-0.2	0.0
Total domestic demand	3 664	-0.1	-2.8	-0.7	0.4	2.0
Exports of goods and services	2 554	9.6	4.7	0.1	4.6	5.0
Imports of goods and services	2 427	7.0	2.5	0.5	3.9	4.9
Net exports[1]	127	1.9	1.7	-0.3	0.8	0.5
Other indicators (% change, unless otherwise specified):						
Potential GDP	-	1.4	1.2	1.3	1.5	1.9
Output gap[2]	-	0.6	-1.6	-4.3	-4.7	-4.3
Employment	-	-0.2	0.4	1.0	0.6	0.7
Unemployment rate[3]	-	6.7	7.0	6.9	6.9	6.8
GDP deflator	-	-0.9	1.6	1.8	1.1	1.6
Consumer price index	-	1.9	3.3	1.4	1.0	1.3
Core consumer prices	-	0.3	1.0	0.8	0.9	1.2
Household saving ratio, net[4]	-	5.1	5.9	4.4	5.3	6.3
Trade balance[5]	-	4.1	5.6	6.4	7.4	7.7
Income balance[5]	-	-6.7	-7.5	-7.8	-8.4	-8.3
Current account balance[5]	-	-2.7	-2.4	-2.1	-2.3	-1.9
General government financial balance[5]	-	-3.2	-4.4	-2.9	-2.9	-2.9
Underlying government financial balance[2]	-	-4.5	-2.6	-1.6	-1.6	-1.7
Underlying government primary balance[2]	-	-3.3	-1.3	-0.3	-0.2	-0.4
General government gross debt[5]	-	48.2	55.7	58.6	61.2	63.5
General government debt, Maastricht definition[5]	-	41.4	46.2	49.0	51.6	53.9
General government net debt[5]	-	5.8	11.6	14.4	17.0	19.3
Three-month money market rate, average	-	1.2	1.0	0.4	0.2	0.6
Ten-year government bond yield, average	-	3.7	2.8	2.1	2.5	2.9

1. Contributions to changes in real GDP, actual amount in the first column.
2. As a percentage of potential GDP.
3. As a percentage of the labour force.
4. As a percentage of household disposable income.
5. As a percentage of GDP.

Source: *O ECD Economic Outlook Database*.

Figure 2. Part-time employment is relatively low

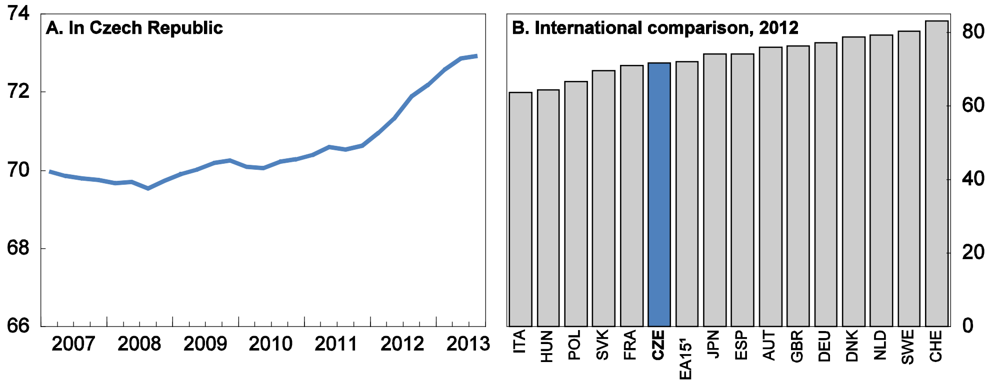
Share of part-time employment across OECD countries, in per cent of total employment, 2012



Source: OECD, *Labour Force Statistics Database*.

Figure 3. Labour force participation has increased to the European average

Labour force participation rate, in percentage of 15-64 population



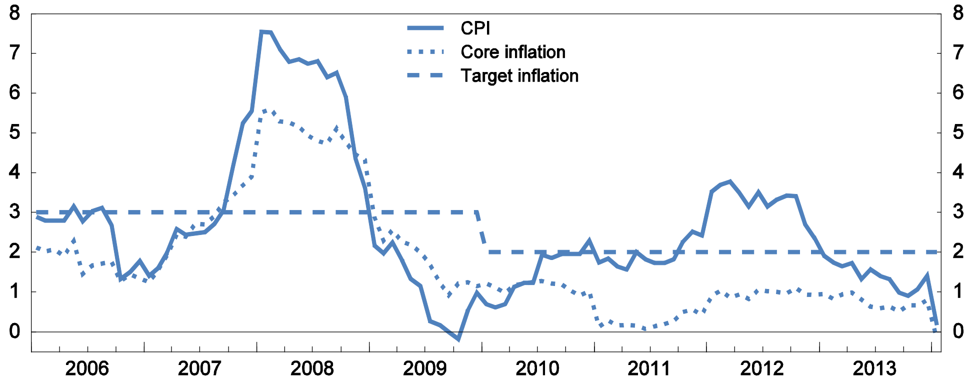
1. Arithmetic average over 15 old members of the euro area.

Source: OECD, *Short-term Labour Market Database*.

The widening output gap (Table 1) and higher unemployment drove down core inflation in 2012 and 2013 below the lower bound of the inflation target range of 2% ± 1% (Figure 4). In response, the Czech National Bank (CNB) has appropriately pursued a very supportive monetary policy stance, with the two-week repo and the discount rate set to 0.05% and the Lombard rate to 0.25% (Czech National Bank, 2013), at or below the level of comparable policy rates in the euro area and elsewhere. However, these measures, although decisive, were not enough to eliminate deflation threats. As a consequence, the credibility of the inflation target was at risk. In spite of historically low long-term interest rates and narrow spreads *vis-à-vis* Germany (Figure 5), credit demand has not picked up (Figure 6).

Figure 4. Inflationary pressures remain weak

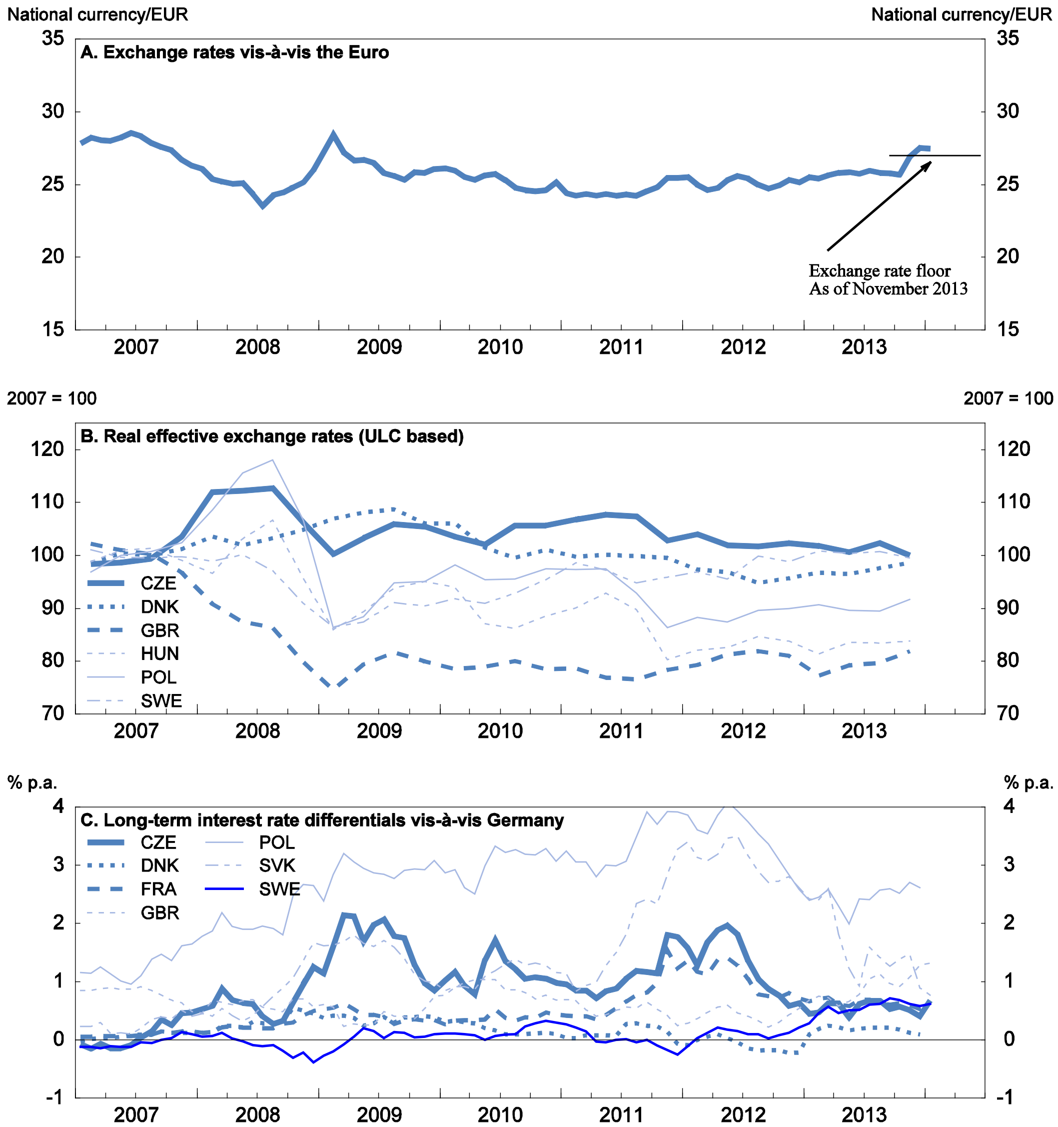
Year-on-year percentage changes



Source: *OECD Economic Outlook Database*; and Czech Statistical Office.

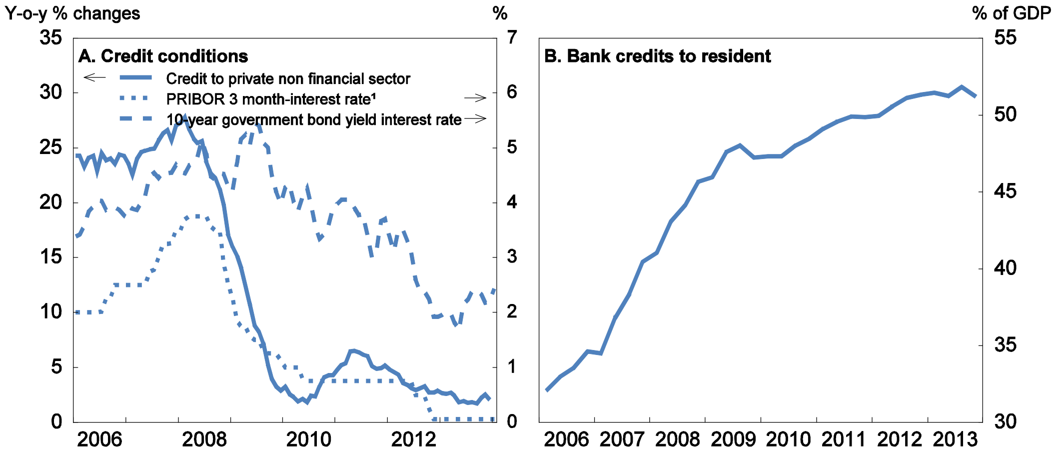
In this situation traditional monetary policy appeared to be exhausted and on 7 November 2013 the CNB announced an exchange rate floor of CZK 27 per euro allowing the exchange rate to float freely above it. The result was an immediate depreciation of about 4.5%. The CNB has indicated that this is a temporary measure and is communicating an exit from this measure once inflation has hit the target. The CNB expects the instrument to have its full effect on inflation within a horizon of up to 6 quarters, and OECD projections imply that the floor should be removed no later, and perhaps earlier, than that. Indeed, if inflation develops as projected, stopping the intervention, as planned, would further strengthen the inflation targeting framework.

Figure 5. A strong exchange rate is combined with low interest rate differentials



Source: OECD Economic Outlook Database.

Figure 6. Credit expansion has slowed



1. PRIBOR stands for Prague Interbank Offered Rate.

Source: *OECD Economic Outlook Database*; and Central Bank of the Czech Republic.

The outgoing government decided to put fiscal consolidation on hold and pursue a broadly neutral policy stance. The new coalition government has decided to adopt a fiscal policy that aims at keeping the public deficit below 3% GDP as well as a reform agenda focussed on promoting external competitiveness, investment, exports, infrastructures and quality of public services (Box 1). Given the still widening output gap, this implies a broadly neutral fiscal policy over the next couple of years. This seems appropriate considering the weakness of the economy and the possibility that further tightening at this point could derail a hesitant recovery (Valenta, 2011; Girouard and André, 2005). Moreover, the debt-to-GDP ratio is below 50% and, as mentioned, interest differentials are low. The authorities rightly wish to avoid budget deficits above the Maastricht ceiling, so the scope for discretionary fiscal measures is limited.

Box 1. Main policies in the government programme statement

A new three party coalition government came into power in early 2014 with a majority of 111 seats out of 200 in the chamber of deputies, consisting of the Social Democrats, the political movement ANO 2011 and the Christian Democrats.

The new government will strive for a market oriented economy considering social and environmental balance as primary preconditions for sustainable growth. The government economic programme is based on promoting entrepreneurship, an efficient and transparent state administration, a well-functioning labour market, a sustainable pension system, and investment in education, research and innovation.

The new government's priorities include:

- Promoting entrepreneurship, sustainable economic growth, competitiveness of the economy and job creation with special emphasis on disadvantaged social groups and problem regions.
- Efficient use of EU structural funds, including for infrastructure development.
- Increasing the efficiency of public finance management, including administrative cost savings, review of mandatory expenditures and more transparent public procurement.
- Fighting corruption, financial crime and usury; promoting financial literacy of citizens.
- Developing high-quality and universally accessible services in the area of education, health care, social services, transport and security.

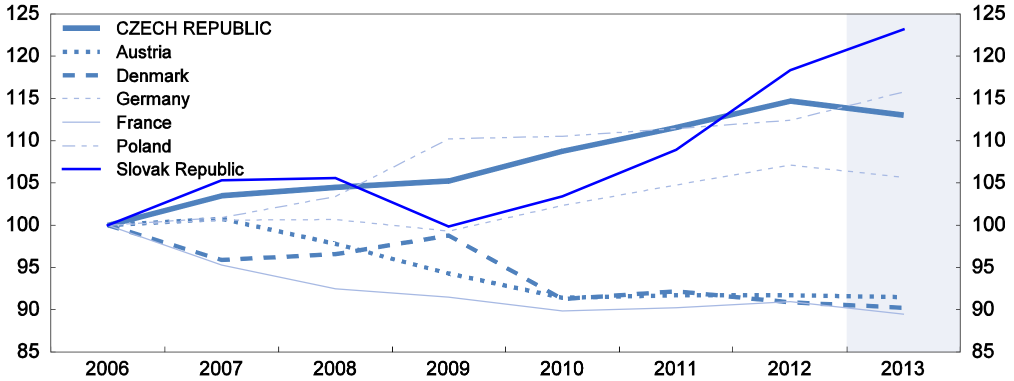
- Active membership in the EU including an active effort to create conditions for euro adoption.
- Adoption and implementation of the Civil Service Act to ensure the de-politicisation of the state administration, define clear and transparent criteria for hiring, rewarding and promoting public servants.
- Efficient use of ICT in public administration and development of the internet economy.

The key economic policies in the programme cover a wide range of areas. The government is committed to keeping the public deficit below 3% of GDP. It will seek to improve the efficiency of tax collection, reduce compliance costs and fight tax avoidance. With respect to pensions, the government aims to propose to withdraw the second pillar, as well as introducing measures to ensure the long-term stability of the public pension system and an adequate level of pensions. The minimum wage should be gradually increased to reach 40% of the average wage. The government will increase the level of staff in employment offices and pursue active labour market policies with a focus on disadvantaged groups, including women with young children, youth, low-skilled and older workers. Time-limited exemption for employer's social security contributions will be proposed for particularly fragile groups. The government will prepare a long-term strategy for the education system with an emphasis on enhancing quality of education and teachers' qualification at all levels. In addition, vocational education and training will be supported so as to better reflect labour market needs, while tertiary education at public institutions will remain free. Municipalities will be provided with funds to create sufficient capacity in kindergartens and elementary schools and the last year of pre-school education will become obligatory. The government will support the modernization of industry to increase its energy efficiency. Measures will be taken to further reduce the administrative burden for businesses. The government aims to re-launch the system of investment incentives for both foreign and domestic companies to stimulate projects with high added value and a high content of research and development.

The economy is projected to gradually recover in response to stronger exports, reflecting growth in export markets, the use of Czech exports as intermediate inputs in the German supply chain (see below) and an expected continued strong export market share performance (Figure 7). These factors will feed into further improvements in domestic confidence and stronger investment (Figure 8). The strength of the projected recovery is not sufficient to secure more than a slow reduction of the large output gap and unemployment is projected to fall only marginally.

Figure 7. Export performance

2006 = 100

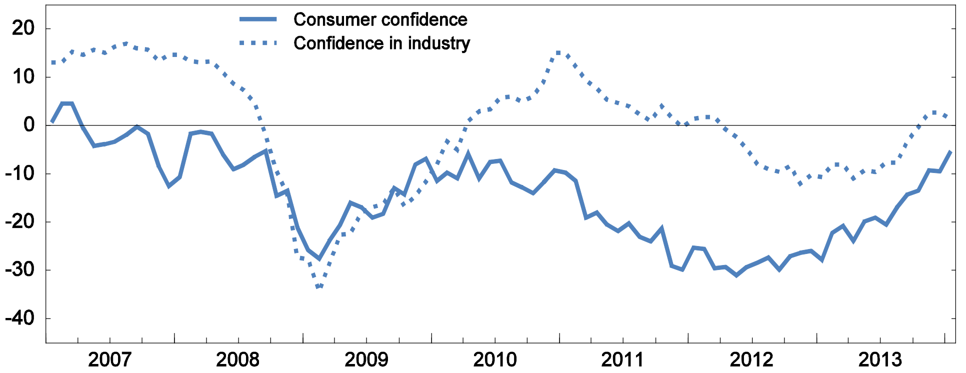


Note: OECD projections for 2013.

Source: *OECD Economic Outlook Database.*

Figure 8.Confidence is improving

% balance, seasonally adjusted



Source: Czech Statistical Office.

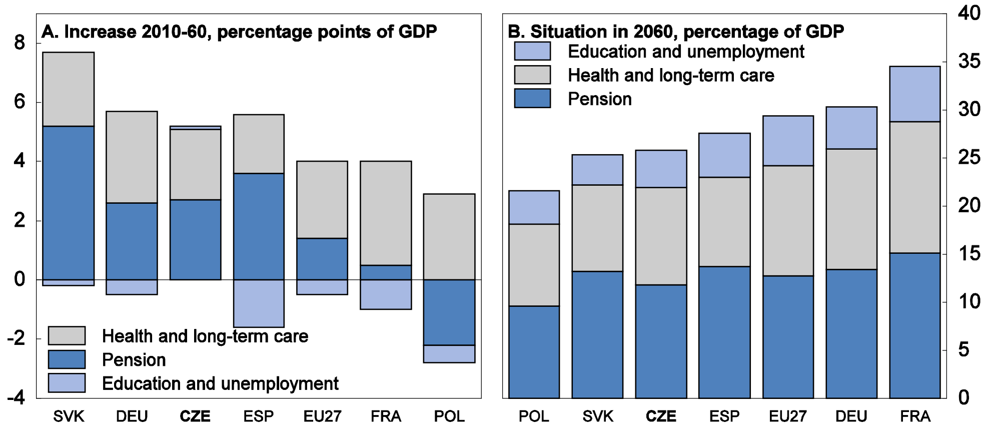
Risks to the export-led recovery are linked to developments in export markets, especially Germany and the rest of the euro area. If downside risks materialise in those markets, export growth would stall, harming confidence and the recovery. Another concern is the possibility of a renewed flare-up in European financial turbulence, which could affect the Czech Republic (Popov and Udell, 2012). However, the Czech National Bank has effective monitoring and prudential measures in place to minimise the risk of a sudden outflow of funds. On the other hand, a faster-than-expected recovery in confidence could trigger a more rapid upturn in investment, income and consumption growth.

A long-term challenge is to secure fiscal sustainability

At about 50% of GDP, the public debt is by OECD standards not high, but on current settings it will continue to rise in the decades ahead. Thus, policy will have to tighten somewhat in the medium term. The debt-to-GDP ratio is projected to increase further (Table 1). If the deficit thereafter remains at 2.9% of GDP, debt dynamics calculations using OECD's medium-term growth scenario (which includes a recovery of potential growth to an average rate of 2.75% between 2015-30) imply that debt will increase to more than 60% by 2030. If potential growth turns out to be 1 percentage point lower than expected, the debt-to-GDP ratio would increase to around 70%. Debt would increase to similar levels if long-term interest rates are 1 percentage point higher than expected. Moreover, ageing-related spending is projected to rise by 5.2% of GDP by 2060 (more than 1 percentage point more than the EU average), coming mostly from pension spending that starts to accelerate along with the old-age dependency ratio in the late 2020s (Figures 9 and 10; European Commission, 2012a). Deficit financing these ageing-related spending pressures could push debt up by another 10 percentage points of GDP by 2030.

To contain pressures on health spending, the *2011 Economic Survey* (OECD, 2011a) recommended the introduction of more competition among health insurance funds and improvements in the data infrastructure to secure better cost and quality control, but nothing has yet been done on these fronts. Future pension spending could be (partly) pre-funded by lowering public debt, but at the cost of skewing intergenerational burden sharing.

Figure 9. Age-related public expenditure

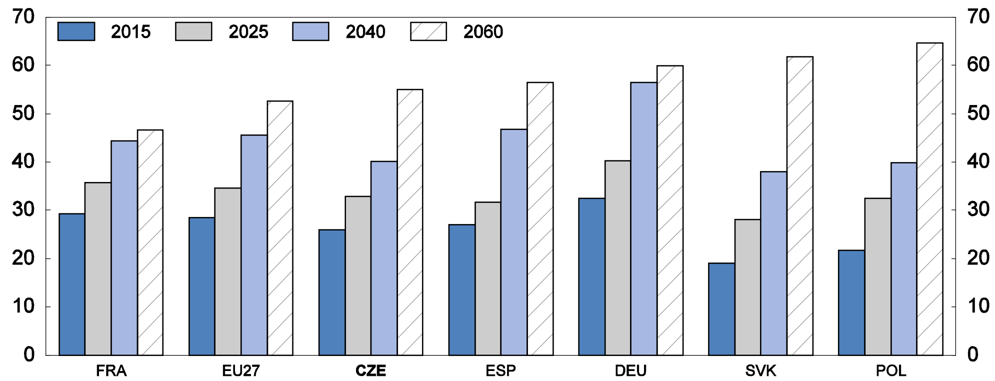


Note: The figure shows the decomposition of age-related budgetary expenditure projected under a reference scenario. In the reference scenario, healthcare expenditure is driven by a combination of changes in the population structure, assuming that half of future gains in life expectancy are spent in good health, and a low impact of income on per capita health care expenditure.

Source: European Commission (2012), *Fiscal Sustainability Report 2012*, European Economy 8.

Figure 10. Old age dependency ratio

Per cent of the population older than 65 as a share of population aged 15-64



Source: OECD calculations based on Eurostat data.

Pension spending increases are contained by the planned increase in the statutory retirement age (currently nearly 60 for females and 63 for males) to a common 66 years and 8 months in 2041 and to nearly 70 in 2060 and by indexing pensions (from 2016 onwards) to inflation plus one third of real wage growth. Without additional policy measures, this should ensure that pension spending is kept at between 8.5% and 9% of GDP until the late 2030s, before rising to nearly 12% of GDP in 2060 (European Commission, 2012a). Additional measures are needed to secure long-term sustainability of the pension system. The options in this area are policies to contain pension spending via lower replacement rates, higher contributions, or policies to boost the labour force participation of older workers.

In this respect, the Ministry of Labour and Social Affairs has prepared an amendment of the pension law that would index pension to price increases in pensioners' consumption basket (implying slightly faster indexation than when using the consumer price index) to secure unchanged pensions in real terms. A number of countries, including Canada, Belgium, France and the United States already index to overall consumer price inflation.

Looking forward, however, there may be limits on how much the replacement rate in the public defined-benefit pension system can be compressed in the Czech Republic before political pressures arising from old age poverty concerns force a reversal. The system provides on average nearly 95% of pensioners' income and has strongly falling replacement rates. Entitlements up to nearly half of average earnings are paid out in full, but entitlements above this threshold are gradually reduced. Looking ahead, the government should continue to secure that the indexation of pensions does not lead to old-age poverty problems as well as being in line with the long-term sustainability of the pension system.

The previous government tried to supplement replacement rates by changing the pension formula in 2011 and by introducing a second pillar with voluntary participation in 2013, but by mid-2013 only 80 000 contracts had been signed compared with the 1 million contracts expected in the 2013 Convergence Programme, and the deadline for older workers (+35 years) to sign up has expired. Moreover, the new government intends to eliminate this pillar. Nevertheless, the government should consider options for diversifying income sources for pensioners. As discussed in the previous *Survey* (OECD, 2011a) a second pillar system could be more successful if allowing voluntary contributions and basing participation on having an opt-out clause rather than current opt-in system.

The above policy initiatives should be complemented with measures to secure that the effective retirement age increases at the same pace as the planned increase in the statutory retirement age. If this does not suffice to secure the sustainability of the pension system, an additional measure would be to bring forward the increases in the statutory retirement age.

A stronger fiscal policy framework could improve policy formulation and implementation

The fiscal policy framework is centred on a fiscal target and a three year rolling budget framework that converts budget targets into expenditure ceilings. However, these ceilings are only binding for the state budget and six state funds (60% of general government spending), reflecting the constitutional independence of municipalities (which are nevertheless closely scrutinised by the Ministry of Finance and their creditors) and the exclusion of health insurance funds (which are supposed to balance their budgets). Moreover, frequent revisions of end-year targets are undermining the effectiveness of the three-year budget horizon.

The Ministry of Finance has proposed a target of a balanced budget in structural terms (as compared with the 1% deficit target agreed with the European Commission). The proposal also contains a debt brake rule for the central and local governments, requiring corrective and progressively stronger measures once public debt exceeds 45% of GDP. For such a measure to work properly it is important to make sure that there is enough room for the cyclical variation in order to avoid a pro-cyclical policy stance close to the ceiling. The proposal includes a Fiscal Council (to improve budget preparation, implementation and monitoring) and a Committee for Budgetary Forecasts (to assess the realism of the government's macroeconomic and budget forecasts). This is consistent with EU rules. The Council is to have 5 members, nominated by the president, the senate, the central bank, the Ministry of Finance and local governments, and elected by parliament (Ministry of Finance, 2013). Together with the proposed introduction of more demanding and regular reporting criteria, including annual reports on tax expenditures and contingent liabilities, the proposed framework is a welcome measure to promote fiscal sustainability, transparency and accountability.

The structural budget objective could be strengthened by linking expenditure targets to long-term fiscal sustainability concerns, such as debt targets, and by including municipalities via an internal stability pact that stipulates their (medium-term) budget objectives within the overall fiscal framework. In this respect, a Fiscal Council could play an important role in assessing the budgetary stance of all government levels and recommending corrective actions.

The legislation should ensure the Council's independence (including secure financing) and that it has sufficient resources to become a recognised centre of expertise to provide independent advice in the fiscal debate, including warnings against using cycle revenue increases for financing new structural spending measures, following the recent OECD guidelines (OECD, 2013b). It would be particularly useful in the Czech Republic, where there are relatively few (governmental and non-governmental) bodies participating in the fiscal debate, to extend the Council's mandate beyond what is now envisaged to include structural analysis, as in Korea and Sweden, and cost estimates of new spending measures, as in Canada, the Netherlands, and the United States (Curristine et al., 2013; Calmfors, 2010; Calmfors and Wren-Lewis, 2011). Structural analysis would allow the Council to provide important unbiased inputs (including clear explications of complicated trade-offs) into the debates concerning fiscal sustainability and public sector efficiency (as in Australia, Canada, the Netherlands and the United States) which could build support for reform measures.

Key macroeconomic policy recommendations

- Maintain the current accommodative monetary stance until deflation risks definitively recede.
- Preserve a neutral fiscal stance until the economic recovery has been established and thereafter return to gradual fiscal consolidation to secure fiscal sustainability.
- Use a multi-pronged approach to secure fiscal sustainability. In this respect, measures are needed to secure an increasing effective retirement age. Moreover, the government should continue to secure that the indexation of pensions does not lead to old-age poverty problems. In addition, the government should consider options for diversifying income sources for pensioners. An additional measure could be to bring forward the increases in the statutory retirement age.
- Introduce an independent fiscal council with a broad remit.

Long-term growth challenges

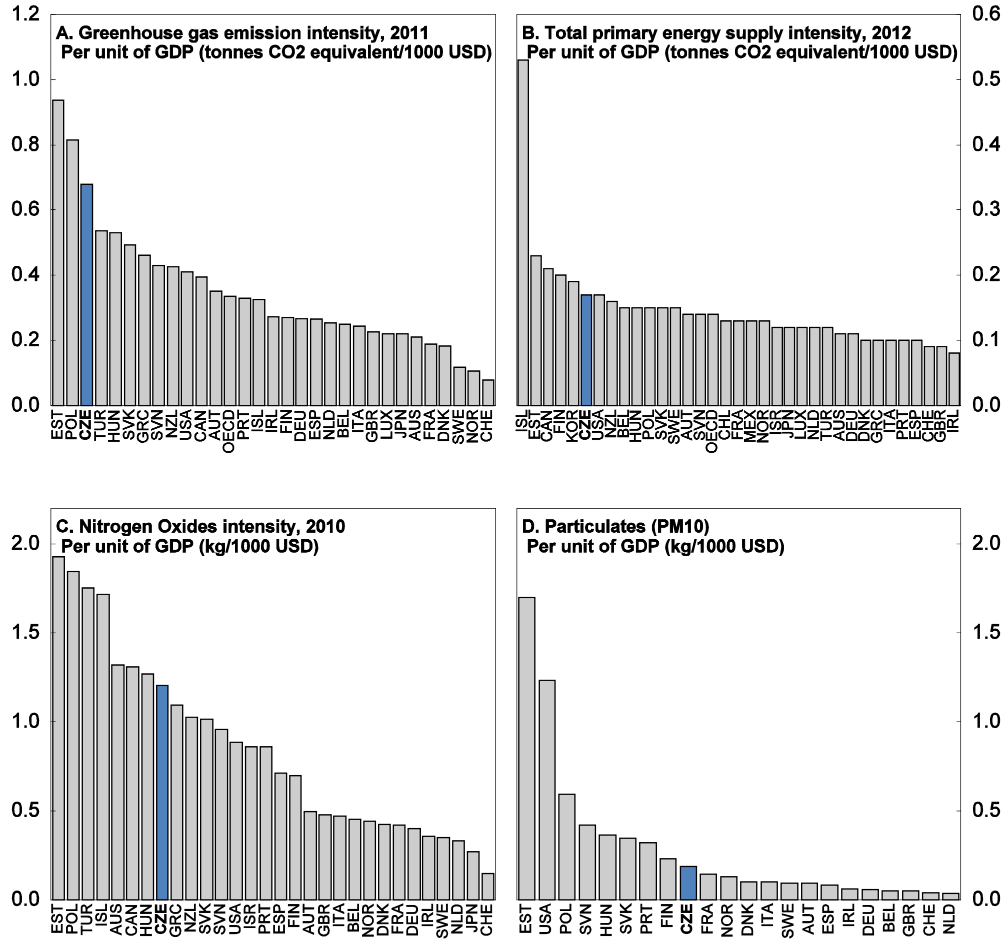
The OECD estimates potential growth to be around 1.5% at present. Implementing structural reforms of labour and product markets to achieve at least the average stance in the OECD could push potential growth to an average of 2.75% in the period to 2030, before an ageing-related contraction in the labour supply reduces it by 1 percentage point on average until 2060 (OECD, 2012a). The relevant product market reforms are discussed in Chapter 1. Labour market reforms have been analysed in previous *Surveys* and some of the main issues are discussed further in Chapter 2 (OECD, 2011a, 2010a and 2008a). The effectiveness and impact of these reforms could be further enhanced by broader and well-targeted use of EU structural funds, where the absorption remains low: in the programme period 2007-13, only half of the allocated funds were absorbed in projects with a fully completed financing process. In addition, good public governance and stable institutions are important for economic performance, highlighting the need for stronger consensus building among all stakeholders, particularly to implement necessary structural reform, and for fighting corruption.

Environmental challenges must also be addressed

An important long-term challenge is to improve environmental outcomes, a prerequisite for sustained economic growth and, more broadly, higher living standards (OECD, 2011a). Greenhouse gas emissions have been reduced since 2000, but the emission intensity (relative to GDP) is relatively high in part because of high energy intensity (Figure 11, panels A and B). Emissions will increase along with the economic recovery, but as emissions from sectors outside the European Emission Trading System are already 8% below their target value in 2013, the Czech Republic should have relatively few problems in meeting its EU 2020 emission target of a 9% increase relative to 2005.

The Czech Republic has successfully addressed a substantial part of the environmental burden from the Communist era, such as reducing SO_2 emissions and improving river water quality, although emission intensity of non-greenhouse gas emissions tends in most cases to be relatively high (panel C). Moreover, regional environmental issues need to be addressed, particularly in the highly industrialised Moravian-Silesian region that has one of the highest concentrations of Particulate Matter (PM10) among the EU regions, and with annual limit values for this and other pollutants (such as benzo(a)pyrene) regularly being breached (European Environment Agency, AirBase v. 7 data 2011).

Figure 11. Environmental indicators



Source: OECD, *Environment Database*.

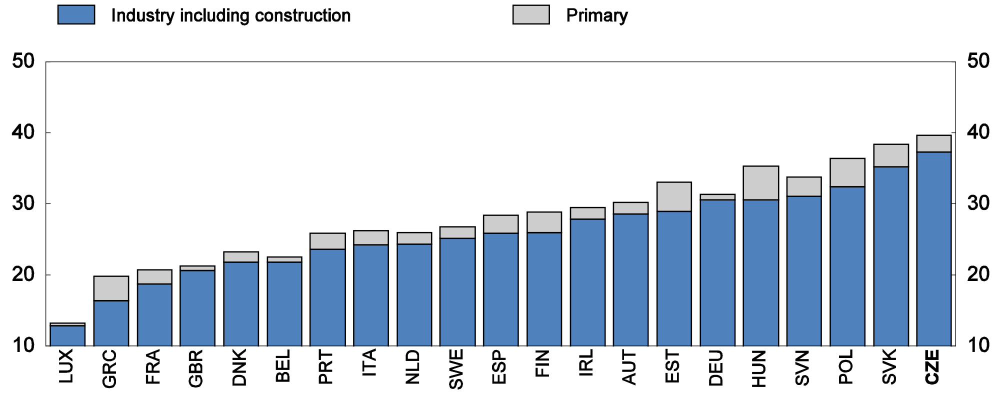
Part of the emission reduction strategy has relied on developing renewable energy sources. According to the 2012 National Renewable Energy Action Plan, the share of electricity from renewable sources (including hydropower) was 11.5% of total electricity consumption, as compared with a 2020 target of 13.5% (Ministry of Industry and Trade, 2012). Photovoltaic power has expanded rapidly in response to the introduction of guaranteed prices and falling investment costs, but government subsidies amount to 0.25% of GDP and costs from higher electricity prices for private entities are three times higher than that. Another environmental concern is that, despite progress, there are still 22% of residents living in dwellings not connected to waste water treatment plants. Flooding has become more frequent and severe over the past 15 years, which could be combated by supporting and recreating natural features of the landscape, including stricter zoning laws. Stricter zoning would also have positive effects on soil quality and conservation, and reinforce natural water filtration to improve ground water quality. EU structural funds could be used to address some of these environmental challenges as national disbursement rules now include environmental projects for large producers (and pollutants).

Income convergence has stopped

The convergence process *vis-à-vis* the euro area has come to a halt since 2008. Foreign direct investment and export-driven growth underpinned a share of industry in value added of nearly 40% - the highest among the European OECD countries (Figure 12). This reflects the traditional strengths of the Czech economy and a policy focus on promoting manufacturing output and exports. Given the size of this part of the economy, the scope for further income convergence is mostly via productivity gains rather than a larger industrial sector.

Figure 12. Value added shares by industry

In percentages of total gross value added, 2012

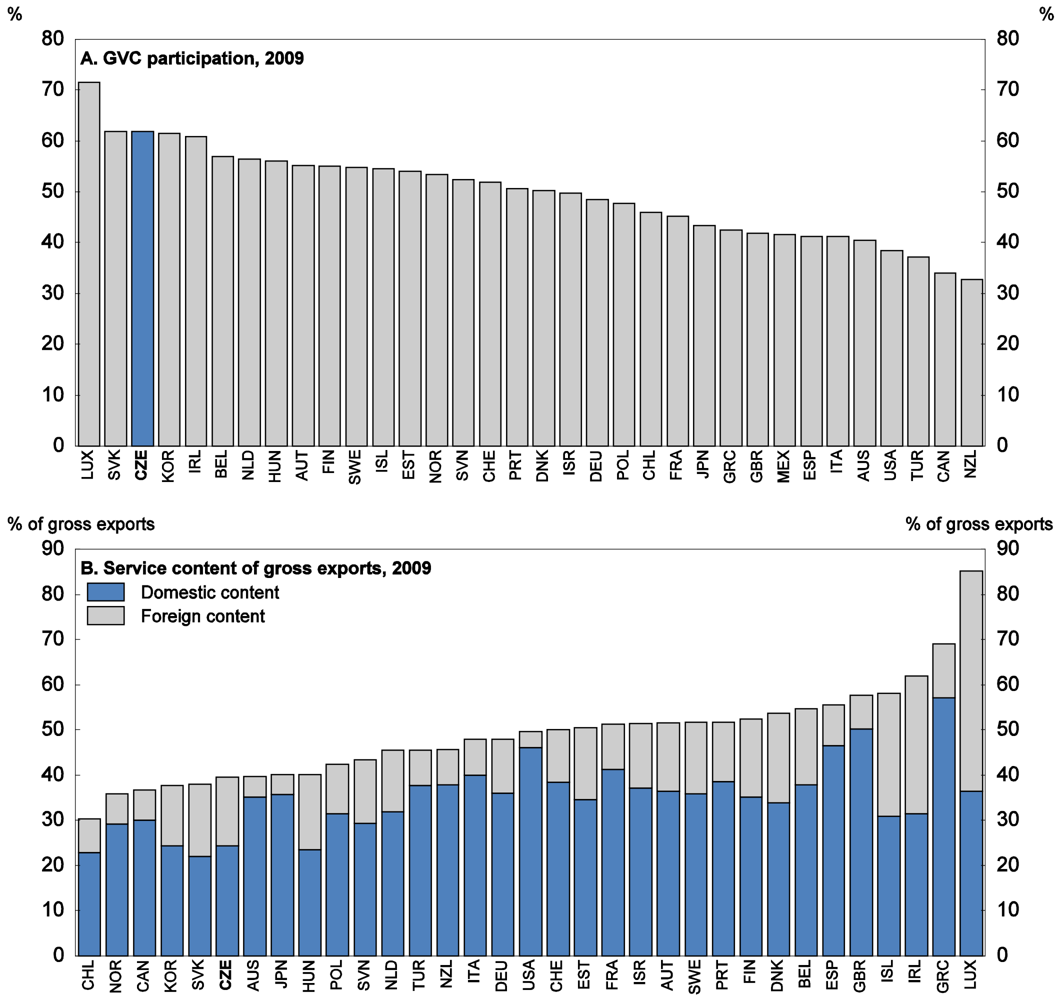


Source: *OECD National Accounts Database*.

A principal factor behind the rapid technology catch-up has been the rapid and deep integration of the Czech economy into German led supply-chains (Baldwin, 2012; Elekdag and Muir, 2013) (Figure 13, panel A). Bilateral trade with Germany alone amounts to nearly half of Czech GDP and relatively few firms export to countries outside the EU (IMF, 2013; Araújo and Gonnard, 2011). The rapid integration reflects an initial large differential in unit labour costs, a relevant labour skill endowment and bilateral advantages, such as geographical proximity, similarities in traditions and industrial sectoral structure which attracted large inflows of foreign direct investment, particularly in the form of modern assembly technology in the electrical and transport equipment producing sectors. As a result, Czech export oriented manufacturing is focussed on final products with a relatively large amount of imported intermediate inputs, while Czech production of intermediate goods is relatively little used in Czech exports and as intermediate input in international production (OECD, 2013c). Likewise, the domestic service sector is poorly integrated as its content in exports is among the lowest in the OECD countries (panel B).

Thus, the challenge for Czech policy makers to better exploit the favourable position in the global supply chain is to increase the content of Czech produced intermediate goods and services in final exports as well as move Czech final production up the value added chain. This requires a continuous skill upgrade of the labour force to match technology driven changes in labour demand through a more flexible and effective education system (IMF, 2013; OECD, 2013d) as discussed in Chapter 2. Boosting the service content in final production to secure higher value added production requires modern and competitive services – such as business services, transport and logistics (OECD, 2013c). A competitive service industry also provides innovative Small and Medium sized Enterprises (SMEs) with auxiliary support for complex tasks, facilitating moving production up the value added chain and supplying sophisticated inputs to larger exporters. An additional benefit of a larger services sector is the higher prevalence of part-time jobs, which tend to favour female labour force participation. However, such services are often sheltered from international competition and therefore require a strong domestic competition policy (Chapter 1).

Figure 13. Czech Republic is highly integrated in the global value chain



Source: OECD (2013), *Interconnected Economies: Benefiting From Global Value Chains*; *OECD-WTO Trade in Value-Added Database* (TiVA).

A stronger framework for promoting competition supports domestic drivers of growth

Making regulation more competition friendly and reducing administrative overheads

Despite improvements, important barriers to entrepreneurship remain in terms of bureaucratic delays for construction, business start-ups and other operational impediments, particularly at the local level (World Bank, 2013). Another often voiced concern from the business community is "gold-plating" regulation, where the Czech adaptation of European regulations exceeds the standards of *European Community directives without a clear estimate of the involved costs and benefits*. Regulation can be improved by submitting it to more effective regulatory impact assessments (RIA). Increasing the independence of the current assessment committee by making it into an independent agency would help in this regard. Perhaps most important is to complete the process of dismantling economic regulations for services as defined under the EU Services Directive. With respect to liberal professions, the most problematic aspects are excessive, confusing and fragmented regulation (Ministry of Education, Youth and Sports, 2013).

Impediments to the growth of SMEs come from state interference, including substantial state ownership, deficiencies in public procurement procedures and corruption. A significant number of state-owned enterprises remain and they have experienced severe governance problems (SAO, 2013). According to the OECD guidelines on Corporate Governance of State-Owned Enterprises, public control should be more transparent, and separated from the State's regulatory function, by concentrating the ownership control function within a single authority enforcing professional corporate governance and explicit financial and other performance objectives (OECD, 2005 and 2011a). As recommended in the *2011 Survey*, a number of state enterprises still engaged in commercial activities need to be privatised or to divest such activities.

Public procurement continues to pose risks in terms of breaches of procedures and standards. New legislation is in place to correct these deficiencies and needs to be implemented vigorously. At the same time, irregularities in the disbursement of public funds may involve the professional integrity of civil servants, pointing to a need for a new Public Servants Act to separate political appointees from non-political staff, improve transparency, and create a well-functioning career system to reduce high staff turnover. This could be backed with a requirement of asset declarations of government officials involved in public procurement. The ranking in the Transparency International's corruption index is unfavourable and so are the scores concerning perceptions and actual experiences of corruption as reported in a recent EU report (European Commission, 2014). Also, there is low awareness of international bribery risks as addressed by the OECD anti-bribery convention (OECD, 2013e).

Czech merger policy follows European practice, but *ex post* impact assessment of decisions in merger cases should be introduced. The prosecution of cartels involved in collusive anti-competitive behaviour has been desultory, apart from a concerted attack on bid-rigging in public procurement. The unearthing of hard-core cartels has been strengthened by a revamping of the leniency programme in 2012, including the introduction of criminal sanctions, and the reform should be monitored to ensure it works effectively. However, an unresolved issue is how a proposal for an increased use of private enforcement, i.e. the awarding of compensation, interacts with the leniency rules. At the same time, the use of competition advocacy and settlement processes to solve what are considered less serious cases may be a problem if it is perceived that non-competition issues, such as industrial policy considerations, enter into the assessment processes. The recent revision of advocacy tools helps in this respect.

The resources of the competition authority may be inadequate for the effective implementation of its mandate. The overall staff level is on the low side compared with other competition authorities, and high staff turnover creates skills shortages. Also, apart from merger control, resources seem skewed away from competition policy enforcement towards other administrative areas (see below). The low rate of initiation of dominant position cases is likely to be related to resource constraints in addition to the complexities of proving abuse. The authority's increasing use of market surveys is welcome as a means of identifying the presence of competitive anomalies, but the surveys are costly. Moreover, bottlenecks have resulted in an increasing number of cases being rejected after often long and drawn out judicial review by the competition court (the Administrative Regional Court in Brno). A more effective competition policy requires a markedly shorter judicial review process.

The retail sector is dominated by larger outlets, providing scale benefits for consumers. However, concerns about the impact of unequal bargaining power on small suppliers, particularly farmers, has led to special sector regulation in food retailing to improve producer power *vis-à-vis* distributors. This regulation is rather prescriptive and its effect has been to increase tensions between retail chains and their suppliers. This regulation should not be part of the competition policy framework. Legitimate concerns over consumer protection should be addressed through health and safety regulation. Industrial policy and sector concerns should also be addressed directly. Contractual imbalances associated with unequal bargaining power should be addressed by contract law or unfair commercial practices laws (Høj et al., 2007).

Network consumers suffer from inefficiencies and high prices

A common concern for network industries is the lack of effective unbundling as the minimalist legal approach leaves the incumbents/network managers with too much power to block (upstream) market entry, restrict infrastructure investment and cross-subsidise. Unbundling in the energy sector according to the EU third energy packages has been completed. Nevertheless, ownership unbundling would be the first-best option. Alternatively in some sectors, clear separation of network managers from operators via holding companies could be considered. Another concern is that some sector regulators lack effective independence, which leaves them with insufficient incentive to police abuses of dominance; in the case of the energy regulator this has necessitated legislation to reinforce its independence and this should become the general model.

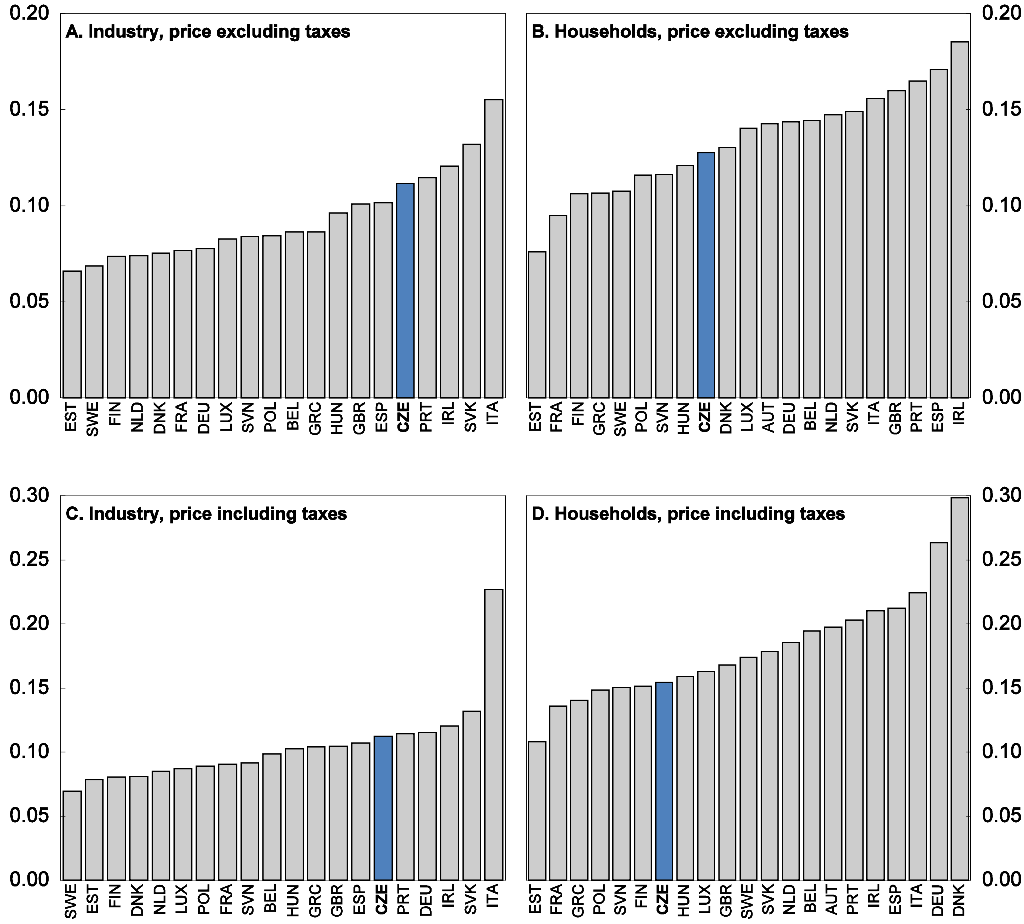
Network sectors have strong natural monopoly elements, requiring sector regulation. Some of these sectors have frequently been cited as problem areas with respect to infrastructure delivery and popular perception is that some of these industries have been performing poorly in terms of serving consumers' interests (European Commission, 2012b). A problem in network industries is that at times the competition authority and the network regulators come to different conclusions concerning the degree of competition in the market.

In the highly concentrated electricity sector, there has been no instance of domestically instigated competition-infringement investigations or sanctions for abuse of dominance, despite it being a highly vertically integrated industry with weak (legal) unbundling. However, market liberalisation has led to the establishment of new energy distribution companies and increased competition. To prevent cross-subsidisation, the energy regulator requires cost reporting directly allocated to each regulated activity. Nevertheless, pre-tax prices for industry are relatively high (particularly when compared with neighbouring countries), while post-tax prices are in line with those in neighbouring countries, suggesting that the public purse is compensating for a lack of competition (Figure 14). In addition, surveys show that over half of Czech firms see electricity infrastructure pricing and provision as a major business constraint. For consumers, pre-tax prices are at par with the EU average and post-tax prices are relatively low, helping to explain that consumer surveys suggest that households have no particular problems with electricity provision. Moreover, in most countries prices of industry are lower than for households, reflecting relative cost of provision, while in the Czech Republic prices are very similar, indicating effective cross-subsidisation.

Concerns have also emerged that the existing regulatory regime may not be generating an adequate level of infrastructure investment (European Commission, 2012b; World Bank and IBRD, 2009). A particular issue is the strong position of the government-owned incumbent (CEZ), which has roughly 70% share of the generation market, where national energy policy imperatives (social, environmental and national security driven) have given the incumbent the possibility of extracting economic rents from coal, renewable and nuclear energy sources. The possibility is somewhat curbed by the integration with electricity markets in neighbouring countries. This should be countered through effective ownership unbundling, further divestment, and a more stable energy policy (Chapter 1).

Figure 14. Electricity prices

Price in EUR per kWh, 2012 [1]



1. 2011 data for Spain.

Source: *IEA Energy Prices and Taxes Database* and OECD calculations.

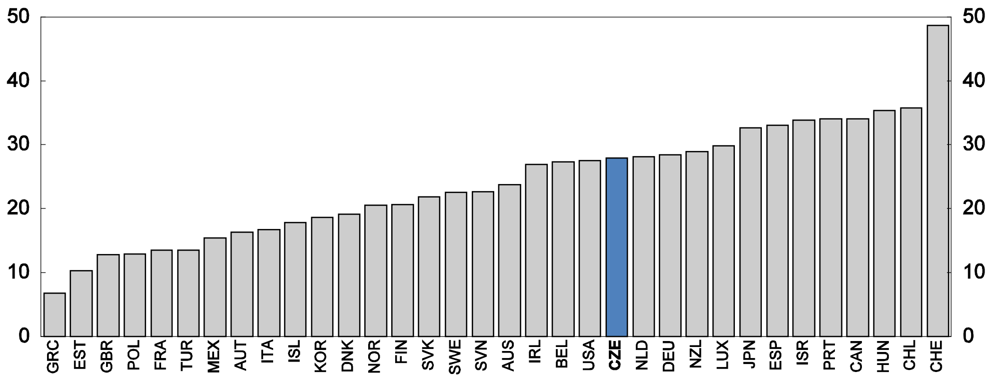
The liberalisation of the Czech gas market has been successful in part because the energy regulator has ensured that market dominance did not hinder market access, boosting the number of gas suppliers and stimulating a significant increase in switching. Nevertheless, pre-tax prices for household are relatively high, and noticeably so when compared with neighbouring countries, albeit post-tax prices are similar. Indeed, concerns have emerged that gas market participants have inflated their profits by exaggerating the value of their past investments and hence their regulated asset base. In response, the regulator proposed to cut short by one year the current five-year regulatory agreement. The proposal was not accepted in the end and it is important to remain vigilant that regulatory interventions do not undermine the credibility of the regulatory system as it may raise the cost of capital and deter future investment in the sector.

In the telecommunications market competition and regulation, particularly of the mobile segment, seem weak. Since spring 2013, telecommunication prices have come down rapidly, but remain high by international standards, particularly for mobile services, as are profit margins (Figure 15). The number of mobile virtual network operators (MVNO) has expanded rapidly to reach about 50 registered MVNOs by end-2013. However, their combined market share remains less than 0.5% of telecommunication traffic. This reflects partly that they have little data transmission. Effectively the ICT sector continues to have a highly concentrated structure, suggesting that dominant behaviour may still be an issue. The powers of the competition authority over the sector were strengthened in 2007 and the sector has been the subject of a number of competition policy investigations. However, cases tend to be very slow-moving and difficult to prove, particularly where there are judicial differences over the definition of the "relevant market". Prospects for developing a more competitive market depended on reserving a block of spectrum for a new entrant in the recent auction of 4G licences to boost the number of network operators to four, although in the final auction this failed to materialise.

This means that the onus of ensuring competitive markets must rely on securing non-discriminatory access for MVNOs, either through regulation or investigations of abuse of dominant position and the facilitation of private actions for redress of damages in the courts. The introduction of MVNOs in the Czech telecom market is a positive development. So far, however, no Full-MVNOs have developed that manage their own Mobile Network Codes (MNCs) and could change host network without having to issue new SIM-cards to their customers. The government is advised to investigate whether there are regulatory or competitive barriers that preclude MVNOs to choose to become Full MVNO independent of their host network. In addition, the same regulations should enable non-telecom companies such as car companies, energy companies and the central government to become independent of mobile operators.

Figure 15. Mobile prices remain relatively high

OECD 100 calls mobile basket[1], in USD, November 2013



1. OECD basket of mobile telephone charges, 100 calls, per month, VAT included, November 2013.

Source: OECD and Teligen Tariff and Benchmarking Knowledge Center.

The transport and postal services sectors are in a state of transition, with growing downward pressure on prices:

- The benefits of opening up the rail network for passenger services can be seen in fierce ticket price competition on a few main lines. However, the partial separation of the government owned incumbent's operational activities from infrastructure management, together with the lack of a fully independent regulator, creates the risk of operational barriers to entry, under-investment in infrastructure, cross-subsidisation of transport activities and predatory pricing. Financial separation of all activities should be designed in a way to counter the risk of cross-subsidisation.

- The postal monopoly has been removed, but potential distortions to competition arise from the obligation of all postal service providers to contribute to the reimbursement of the universal service costs provided by the incumbent, which would impede entry if this payment were set too high. In addition, there is a danger of cross-subsidisation within the widely diversified operations of the incumbent.

Key recommendations to promote competition

- Improve the managerial integrity of remaining state-owned enterprises by concentrating governance within a single authority. Privatise and divest business-related state-owned enterprises and activities.
- Ensure that the leniency programme is working properly to unearth cartels, and that efforts to eliminate bid-rigging are successful. Remove the special sector regulation for food retailing from the competition policy framework.
- Secure effective independence for all network regulators, improve the co-ordination between the competition authority and regulators, and have a common approach to what constitutes a proper definition of market dominance. Tackle vertical constraints on competition via effective ownership unbundling or via holding structures with financial separation of all activities that counters the risk of cross-subsidisation.

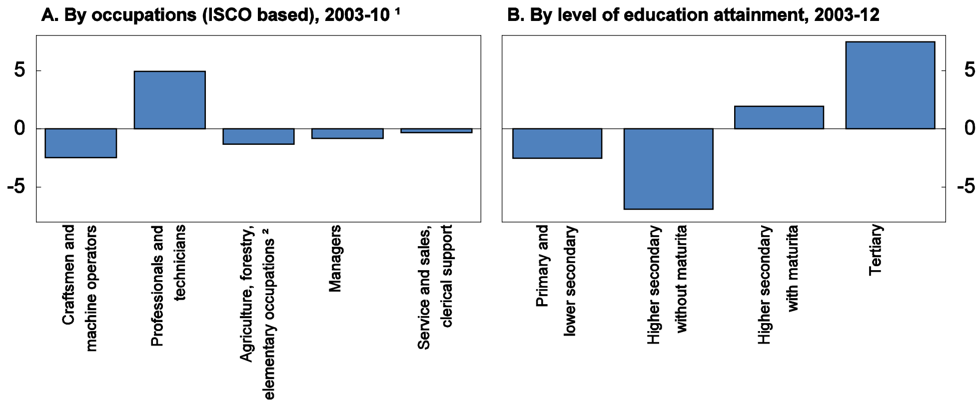
Strengthening skill use and school-to-work transitions

The transition to a market economy has led to significant changes in the labour market. In manufacturing, employment losses in low-technology intensive and heavy industries were offset by expansion in the transport equipment and electronics sectors. This shift has boosted the share of professionals and technicians relative to total employment, while reducing the share of all other occupations (Figure 16, panel A). The shift also increased the share of workers with tertiary education by more than 7 percentage points and reduced the share of workers with apprenticeships by a similar amount (panel B).

The transformation in employment patterns has not been accompanied by changes in relative wages across occupations or by a dispersion of wages within occupations. This means that relative wages are poor signals to students when they choose their studies. Indeed, wage increases tend to be very similar for all workers (except for managers), which is somewhat surprising as wage determination typically takes place at the sector or firm level. Only 40% of all employees are covered by collective agreements (covering most of the larger firms) and only half of the agreements consider pay increases (Working Conditions Information System surveys; Visser, 2013). In addition, tripartite negotiations between the government and social partners typically do not extend to norms for wage increases, although the largest trade union (CMKOS) makes regular recommendations on wage increases, based on its inflation forecast and expected economic developments. Moreover, detailed wage information is easily available through the earnings survey by the Czech Statistical Office and Ministry of Labour and Social Affairs. The only strong wage signal for students is a relatively high wage premia for workers with tertiary education. Against this background, relative labour demands are better reflected through employment and unemployment rates.

Figure 16. The occupation and education structure of the labour force is changing

Change from 2003 in shares of employment, in percentage points



1. A change in the classification of occupations from ISCO-88 to ISCO-08 precludes meaningful comparisons of changes in the occupation structure of employment from 2011 onwards relative to previous years.
2. "Elementary occupations" is the title of major group 9 in the ILO classification system of occupations. It comprises, inter alia, street vendors, shoe cleaners, domestic helpers, building caretakers, messengers, doorkeepers, garbage collectors, hand labourers, etc.

Source: Eurostat and Czech Statistical Office.

Important geographical dispersions of labour market outcomes remain, reflecting the fact that the loss of jobs during the transition process was not fully offset by job-creating investment, while local education institutions have not addressed changing labour market needs. Low geographical mobility has aggravated the situation, as vacancies for jobs with low-skill requirements co-exist with registered low-skilled unemployed within commuting distance. Thus, it should be investigated whether employment offices could make more use of measures to support mobility.

Demand for unskilled workers has not been stimulated by recent increases in the bargained minimum wage at the sector level, which rose from 10% higher than the statutory minimum wage to 25% higher in 2012. Moreover, the youth minimum wage, which stood at 80 and 90% of the statutory minimum wage for those less than 18 and those between 18 and 21 years of age, respectively, was abolished on 1 January 2013. Given the high youth unemployment rate of around 20%, the government should encourage employers to provide training for young unskilled workers. This could be achieved via tax subsidies or a targeted reduction in employers' social security contributions; these are among the highest in the OECD (OECD, 2013f). Indeed, a growth enhancing revenue-neutral tax reform would lower taxation on labour and raise environmental and property taxes. Looking ahead, if the statutory minimum wage increases sufficiently an additional measure could be the introduction of a reduced youth minimum wage linked to training.

One response to the challenge of population ageing is to remove impediments to labour-force participation of remaining pockets of under-utilised labour resources, particularly females. Indeed, closing the gender employment gap by 2030 would increase the annual growth of GDP per capita by 0.5 percentage points (OECD, 2011b). Older women's low activity rates reflect their low statutory retirement age and the programme of increasing and aligning it with the male statutory retirement age should, as argued above, be brought forward. Younger women delay entry in the labour market as they pursue higher education studies, while low employment rates thereafter reflect long parental leaves, negative personal income tax burden and a dearth of in-kind childcare options. The latter is the result of a drop in in-kind child care from more than 1 000 crèches in 1990 to less than 50 two decades later (mainly in the major cities), which was the outcome of a regionalisation of this responsibility without an associated fiscal transfer or mandatory service obligations. In addition, the classification of nurseries as healthcare facilities has boosted operational costs, and fee revenues in public crèches cover only about a fifth of total costs. While enrolment in kindergartens is higher, capacity is not distributed evenly and there are significant constraints in larger cities. Thus, most working mothers rely on family provided childcare.

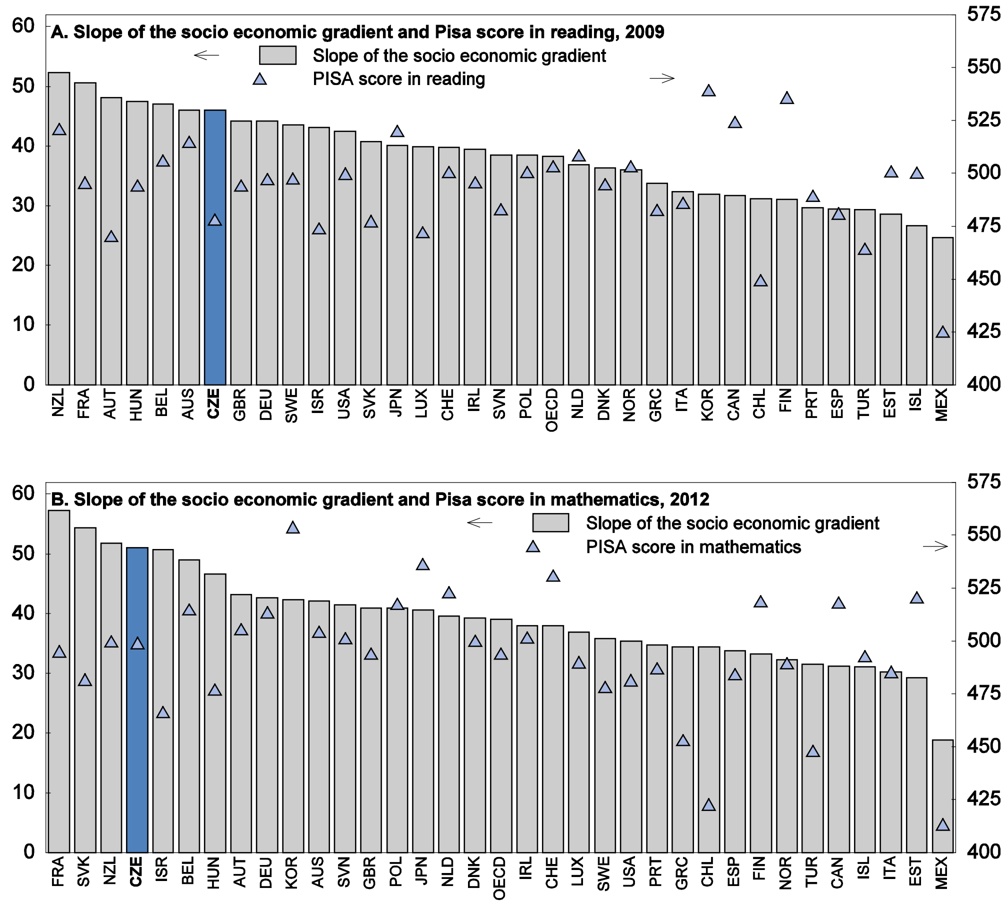
Parental leave averages 2½ years. After 6 months of maternity leave, parents are entitled to a lump sum parental allowance (paid at three quarters of the annual average wage). For children less than 2 years old, the allowance is conditioned on the child being in a crèche for less than 46 hours/month. The allowance, together with other elements of the tax and benefit system, produces high effective tax rates, especially for low wage earners and single parents, discouraging women from resuming work (OECD, 2013f). The tax and benefit system should be made more neutral and thus support parents in combining work and family lives. This could be achieved by a gradual reduction in the duration of the parental allowance so as to limit the combined maternity and parental leave period. In many other OECD countries with high female labour market participation, the combined period is around one year. Under all circumstances, reductions in leave periods should be conditional on an accompanying expansion of affordable and high quality early childcare facilities (OECD Family database, 2012b). The practice of withdrawing childcare benefits if working parents use (public) childcare facilities should be discontinued. In addition, a share of the parental allowance could be made conditional on fathers taking part of the parental leave, as in Germany and Austria.

To stimulate the supply of childcare, part of the parental allowance should be transformed into a voucher for purchasing childcare services (OECD, 2007). A step in the right direction to expand the supply of childcare is the recently proposed Act on Child Group, which increases the scope for both public and private in-kind childcare provided on not-for-profit basis, contributing to the expansion and diversification of childcare provision as recommended in the *2010 Economic Survey* (OECD, 2010a; Hrdlicka et al., 2010). Given the very low number of crèches, the availability of places in kindergartens to children younger than 3 years should be expanded.

The education system has provided the economy with a well-qualified labour force as more than 90% of the working age population has attained at least upper secondary education - the highest share in the OECD (OECD, 2013g). On the other hand, the Czech Republic has one of the lowest tertiary education attainment rates, although it is increasing fast. In PISA tests, secondary school pupils score around OECD average in mathematics and reading and above average in science (Figure 17). However, performance declined over time and the share of low achievers increased (Figure 17; OECD, 2013h). PISA results associate this outcome to practices in the education system that reinforce students' socio-economic background, such as early tracking, streaming and low transferability between educational tracks (Koucký et al., 2004; Münich, 2005; OECD, 2013h). Moreover, the recent OECD survey of Adult Skills shows that the relationship between the socio-economic background and literacy proficiency among young people is stronger than among the overall adult population, which is in contrast with many OECD countries (OECD, 2013i). These problems are preventing students from fulfilling their educational potential, which have negative effects on their labour market prospects and human capital accumulation (OECD, 2010b).

Figure 17. Student performance is relatively low and strongly influenced by socio-economic status

PISA score and score point difference associated with a one-unit increase in the PISA socio-economic index



Note: Defined as the estimated coefficient from the country-specific regression of PISA performance on corresponding index of economic, social and cultural status (ESCS).

Source: OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, and OECD (2010), *PISA 2009 Results: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science* (Vol. I); OECD, *PISA 2012 Database*, Table II.1.2b.

Teacher quality can make a difference in disadvantaged schools with high shares of low performing students (OECD, 2013j). The *2006 Economic Survey* identified poor management tools as a problem and recommended that school principals should be given more opportunities to reward individual teacher effort and the quality of teaching (OECD, 2006; Goglio, 2006). Additional support and incentives to school leaders and teachers in the form of special training, coaching (induction), mentoring and improved working conditions is also important (OECD, 2013j). Struggling students in primary education have frequently been streamed into special schools with reduced curricula and very few opportunities to return to the regular education system. More recently, this practise has been changed with greater emphasis on integration into regular classes, although streaming into special classes is still happening. Instead, increasing enrolment in pre-primary education and developing targeted initiatives for low performing students in primary education would improve learning outcomes. Tracking begins at age 11 even though there is evidence that early student selection has a negative impact on students assigned to lower tracks and does not raise average performance (OECD, 2012c). Moreover, there is evidence that family background matters more than academic ability in explaining access to the more prestigious academic tracks (Koucký et al., 2004; Münich, 2005). Therefore, early tracking should be postponed and combined with increased possibilities to transfer between education tracks.

Vocational Education and Training (VET) is an important feature of the education system. Over 70% of upper secondary education enrolees are in VET - the highest share among OECD countries. The system comprises a technical education programme of four-year vocational programmes, preparing the student either for the labour market or for tertiary education, and an apprenticeship programme, lasting mostly three years, ending with a certificate providing direct access to the labour market. Over the past decade, enrolment in apprenticeship programmes has declined, but has increased in the technical programme. This reflects, at least partly, a declining number of 15-year olds. Indeed, the rigid system of quotas imposed on the maximum number of places offered in educational programmes and fields of study is not adequately supporting student preferences or the changing set of skills demanded in the labour market (OECD, 2010c). A disturbing development is the falling employment of workers with apprenticeships. Indeed, a growing concern is that the VET programmes are neither providing the occupations demanded by the labour market nor the right skill sets within individual occupations (OECD, 2013h; OECD, 2010c; Trhlíková, 2013).

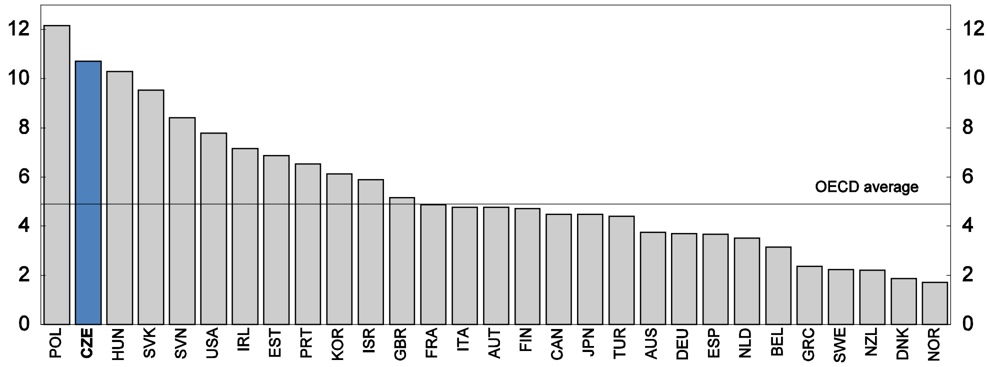
The variation in the quality of teaching is high, particularly in apprenticeship programmes, and is poorly connected with the labour market as few VET students have access to workplace training (OECD, 2010c). In addition, the skill sets acquired in school are often not following developments in the labour market. Low investment in equipment and a flat career system give teachers few incentives to update their knowledge, disconnecting them from technological developments, new production processes and working practices. Another problem is a large variation in skills sets, reflecting the regional implementation of VET policy, although the introduction of national standardised exams in apprenticeship programmes, which is expected to become compulsory in the academic year of 2014/15, should partly address this concern. However, schools remain in charge of practical school or workplace training, leading to a large variation across schools and training fields in terms of the number of students participating and the length and quality of training.

A first step to improving VET would be to develop binding rules for workplace training and assessment standards to secure transferable skills, and to strengthen interaction with private employers (OECD, 2010c). Links to the private sector should be strengthened by replacing the fragmented governance system with an institutional framework with clear objectives and responsibilities as recommended by the Review of VET (OECD, 2010c). Moreover, employers and trainees should have stronger incentives by better matching opportunities, including a remunerated training contract, as is the case in Austria, Denmark, Germany, Netherlands, Norway and Switzerland. Subsidies could play a supplementary role. To make VET programmes more responsive to student demand and labour market needs, the system of school financing should (at least partly) be tied to the student. In such a system, VET schools would have incentives to adjust programmes to changes in demand.

Since the mid-2000s, the favourable labour market prospects and the high net returns associated with tertiary education have contributed to a 32% expansion of enrolment in public universities, but only a 6% increase in expenditures (Figure 18). In addition, the share of students enrolled in private tertiary institutions has increased from 1% to 13% over the past decade. The slow increase in public funding raises quality concerns. The high private returns to tertiary education and the revealed willingness to pay argue for the introduction of an element of cost sharing by students. However, to ensure equitable access to tertiary education a mixed system of means tested grants and income contingent repayment loans needs to be introduced (OECD, 2008b). Quality in tertiary education could be further secured through improved accreditation of institutions by introducing output based criteria (such as graduation rates and students' labour market outcomes) in addition to input criteria (such as library collections, computers, academic qualifications of teaching staff) (OECD, 2009). In addition, teaching quality could be enhanced by stimulating the development of a more diverse academic career structure. This could be achieved by restructuring career progression based on teaching and research results rather than on the current *habilitation* system based to a large extent on bureaucratic procedures, discouraging foreign academics and professionals from the private sector (OECD, 2009). A Ministry of Education proposal from 2013 to address quality assurance, accreditation mechanisms and academic career paths could form the basis for reform in this area.

Figure 18. There are high net private returns associated with tertiary education

Net private returns over the life-cycle of a male attaining tertiary education,
as compared with returns obtained from upper secondary or post-secondary non-tertiary education
as multiples of GDP per capita, 2009



Note: The figure shows the discounted net economic payoff to a male in obtaining tertiary education and provides a monetary estimate of the value of investing in tertiary education in terms of its economic benefits (increased earnings and a higher probability of being employed), after accounting for the cost of the investment (foregone earnings, training costs net of grants, additional tax payments resulting from an education-induced increase in taxable income and decrease in transfers). Net private returns are calculated using an actuarial method of discounting overtime costs and benefits, using a fixed discount rate of 3%.

Source: OECD (2013), *Education at a Glance* and *OECD National Accounts Database*.

Key policy recommendations to strengthen skill use and school-to-work transitions

- Encourage employers to provide training to young unskilled workers through tax subsidies or targeted reductions in social security contributions. Looking ahead, if the statutory minimum wage increases sufficiently, an additional measure could be the introduction of a youth minimum wage linked to training.
- To boost female labour market participation and help families to reconcile family and working lives, provide an adequate supply of affordable and high quality early childcare facilities. Conditional on this development, reduce the maximum duration of parental leave and replace part of the parental allowance with a system of childcare vouchers.
- Increase participation of private employers in vocational education by simplifying institutional frameworks and governance. Introduce a contractual employment relationship between the apprentice and the employer. Expand workplace training by providing subsidies to the participating firms for difficult to place students.
- Secure quality in the provision of tertiary education by introducing output based accreditation criteria and student fees to increase resources for the provision of public tertiary education, accompanied by a mixed system of means-tested grants and income-contingent repayment of loans.

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Chapter summaries

Chapter 1. Completing the transition to a competitive domestic economy

The stalled income convergence and the economy's high reliance on international trade point to a need for a more balanced and stable income convergence process. This requires the development of a strong domestic economy, implying a substantial expansion of one of the smallest private service sectors in the OECD. This would constitute a growth driver as well as an improvement in international competitiveness as more competitively priced services are intermediate inputs in manufacturing production and contribute to stimulating innovation processes and product diversification. Promoting a competitive private service sector relies on the effective implementation of competition policy. Over the past couple of decades, many impediments to entrepreneurship have been dismantled and the foundations of a competitive market based economy established. The competition authority and its tools are close to best practice, but still have to uncover any domestic hard core cartels, pointing to a need for a review of its resources and some of its key tools, such as the leniency programme. Many of the network sectors remain dominated by vertically integrated state-owned incumbents, requiring additional measures to restrict public sector interference and securing non-discriminatory access to networks.

Chapter 2. Strengthening skill use and school-to-work transitions

The education system has reacted slowly to changes in labour market needs, leading to an increasing number of school leavers without sufficient qualification. In addition, declining PISA scores and a rising share of low achievers are raising concerns about the quality of the future labour force. These factors play a role in the stalled income convergence process. Indeed, practices such as early tracking, streaming and low transferability between academic tracks hamper employability, human capital accumulation and social mobility. In the vocational education and training system, resources continue to be allocated on a historical basis. A more endogenous adjustment of the system to better align students' qualifications with labour market needs requires active participation of social partners, students and education institutions. The rapid expansion of tertiary education without a corresponding increase in resources has led to fears about declining quality. Measures to better balance family and work lives can improve career options for women and therefore reduce the current tensions between having children and full time labour market participation of younger women. This could also ease the coming labour shortages associated with population ageing.

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

The economic situation and policies of the Czech Republic were reviewed by the Committee on 13 February 2014. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 28 February 2014.

The Secretariat's draft report was prepared for the Committee by Jens Christian Hoj and Sonia Araujo under the supervision of Andreas Wörgötter. Research and editorial assistance was provided by Béatrice Guérard.

The previous Survey of the Czech Republic was issued in November 2011.

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