# OECD Economic Surveys
# CZECH REPUBLIC

November 2011

**OVERVIEW**

# Summary

The Czech economy was hit through the external trade channel during the recent crisis, but it had no significant domestic imbalances, so macroeconomic policies had room for supporting activity and the recession was relatively short. Nevertheless, the recovery is less dynamic than in other economies in the region and further risks are arising from the international slowdown and sovereign debt crises. The government should therefore continue a broad based reform programme to enhance economic growth and make it more robust to economic shocks. It should build on past recommendations to improve the business environment, strengthen the education system, promote innovation and increase labour market flexibility. This *Survey* focuses on challenges in the following areas:

In order to strengthen the **fiscal policy framework** the introduction of an explicit debt target should be considered and an independent fiscal institution should monitor and assess the budget as well as fiscal performance on all levels of government. Budgetary documentation should become more transparent and include performance indicators.

The **pension system** performs well in terms of keeping old age poverty low, but is not providing much diversification. The introduction of a new voluntary defined contribution pillar ("second pillar") is a step in the right direction, which needs to be well communicated and accompanied by regulatory measures to allow the public to make informed choices. In particular, consideration should be given to establishing a central clearing house in order to keep fees low. Payouts in the form of annuities and life-cycle investment strategies should be the default options.

The **health care** system functions well by and large, however, there is scope for improvements. While implementation of a diagnosis-related group payment system should strengthen cost-consciousness among providers, a national capacity plan agreed by the major stakeholders should help to reduce excess capacity, in particular in the hospital sector. Soft gate-keeping and digitalization of patients' documentation can enable better care management. Mandatory active substance prescription as well as implementation of a digital prescription can help to keep costs of pharmaceuticals under control.

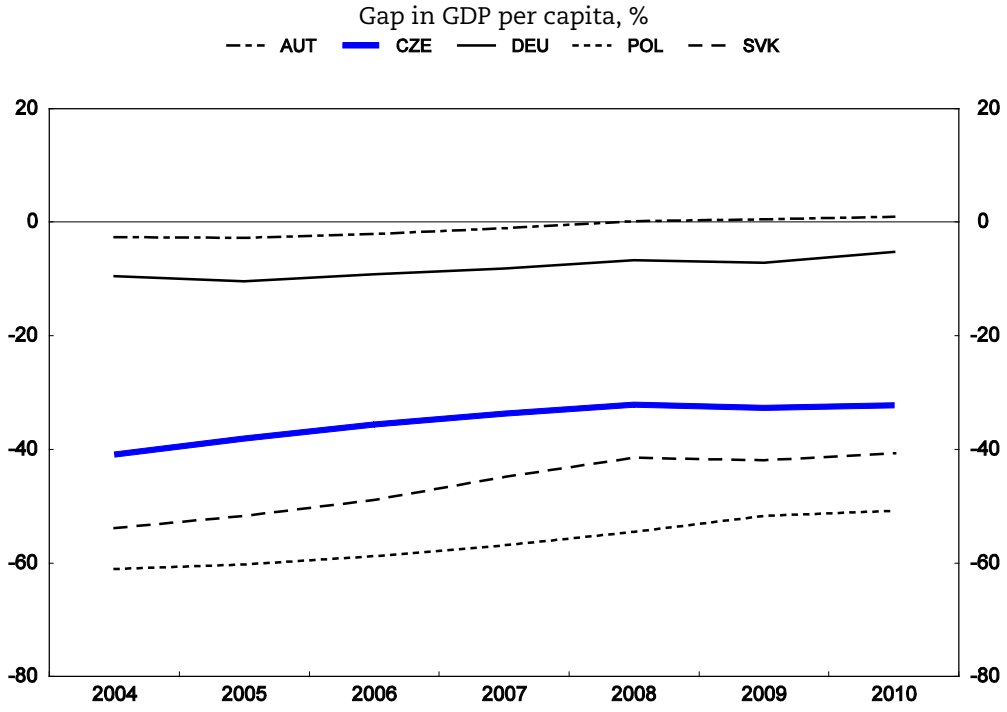
The Czech Republic has an **energy- and carbon-intensive economy**, leaving important energy and emission saving opportunities underutilised due to insufficient incentives. This poses a risk to public health and energy security, increases the burden of agreed emission targets and might also mean foregone opportunities for growth. Instruments promoting energy efficiency need strengthening and should be more rigorously evaluated and better coordinated. To provide the right price incentives, excise tax rates on all fossil energy fuels should be harmonised to complement the EU Emission Trading System, notably by increasing the relative price of diesel. Support for renewable energy needs to be provided in a technologically neutral way to minimise its cost. Upgrading transport infrastructure and the attractiveness of public transport will be essential for containing the growth of emissions in this sector.

# Assessment and recommendations

## Slowing convergence calls for a broad based reform effort

The Czech Republic is the most successful central and eastern European economy, measured in GDP per capita in Purchasing Power Parities and Prague is among the richest capitals in Europe. However, the country is still far behind where it was relative to the region[1] in earlier times and convergence with the top OECD countries has stalled recently (Figure 1). Available estimates of potential growth rates suggest a rather sluggish medium-term real convergence of about 1 percentage point per year, down from about 1½ percentage points before the crisis. This deceleration is attributable to the slowing of trend labour productivity growth in the Czech Republic while there is acceleration in the OECD. The growth bonus linked to the post-communist transition, external opening and EU accession has been largely used up, the population is ageing fast, and increasing international energy and raw material prices will pose a further burden on growth. The economy is already well integrated in regional supply chains, the capital stock seems to be on a par with other EU countries and the FDI stock is above the EU average. Consequently, the share of Czech exports in the EU manufacturing good markets may have effectively peaked (IMF, 2011). Further convergence is therefore dependent on the transition to a more innovative, skill-based and more energy efficient economy producing higher value added goods and services.

**Figure 1. Real convergence has stalled recently**




*Note*: The gap is calculated as GDP per capita in a country minus the simple average GDP per capita in top ranking OECD countries as a percent of the latter. GDP per capita is volume, USD at 2008 purchasing power parity and reference year.

*Source*: OECD, *National Accounts Database*.

This *Economic Survey* recommends reinvigorating dynamism into the economy in four broad areas:

- Strengthening the fiscal policy framework to safeguard consolidation and make fiscal policy less pro-cyclical in good times.
- Revisiting recommendations from earlier *Surveys* on improving the business environment, education reform, innovation and technology adoption, as well as some remaining labour market issues. The government has recently adopted the comprehensive *Competitiveness Strategy* which foresees measures that go a long way in these areas.
- Improving public spending efficiency in order to support the economy with better and/or more affordable public services.
- Lifting the burden on the economy from an inefficient and polluting energy system by improving incentives, removing price distortions and better targeting support measures.

## *The moderate recovery is likely to slow down due to deteriorating external conditions*

A post-crisis recovery has so far been led by exports (Table 1) and has remained relatively moderate compared to regional peers (Figure 2). GDP expanded by 2.7% in 2010, reflecting relatively strong export performance and restocking. However, final domestic demand remained weak, even though domestic imbalances and an excessive credit boom were avoided prior to the global crisis and the Czech Republic did not suffer from a domestic financial crisis. Private consumption was damped by the high unemployment rate and by on-going fiscal consolidation, which was also negatively affecting government consumption. Investment declined in 2010 in the wake of a global reassessment of investment plans. The first months of 2011 showed signs of the recovery becoming stronger and more broadly-based. Since then, however, the picture has been changing again. The Czech economy expanded by 0.9% in the first quarter of this year, but only by 0.1% in the second quarter. Foreign trade slowed down, despite impetus still coming from the automotive industry, and industrial production decelerated. Retail sales stagnated and PMI and confidence indicators deteriorated.

The growth outlook in the Czech Republic is now overshadowed by the sharp deterioration in external conditions, as the recovery almost came to a halt in many OECD economies and world trade is stagnating. In the euro area, the main trading partner for the Czech Republic, recent indicators suggest that activity growth is soft, especially in manufacturing, with output expectations continuing to weaken amidst declines in order books. The growth slowdown is projected to be temporary in the second half of 2011 and in the first half of 2012. In the context of slowing growth and the risk of increasing unemployment, the government should intensify its consultations with social partners about the usefulness of subsidising the current short time work schemes and clearly specify the temporary nature of such interventions. Ideally, such schemes should be coupled with training measures.

**Table 1. Czech Republic: Short-term macroeconomic indicators**

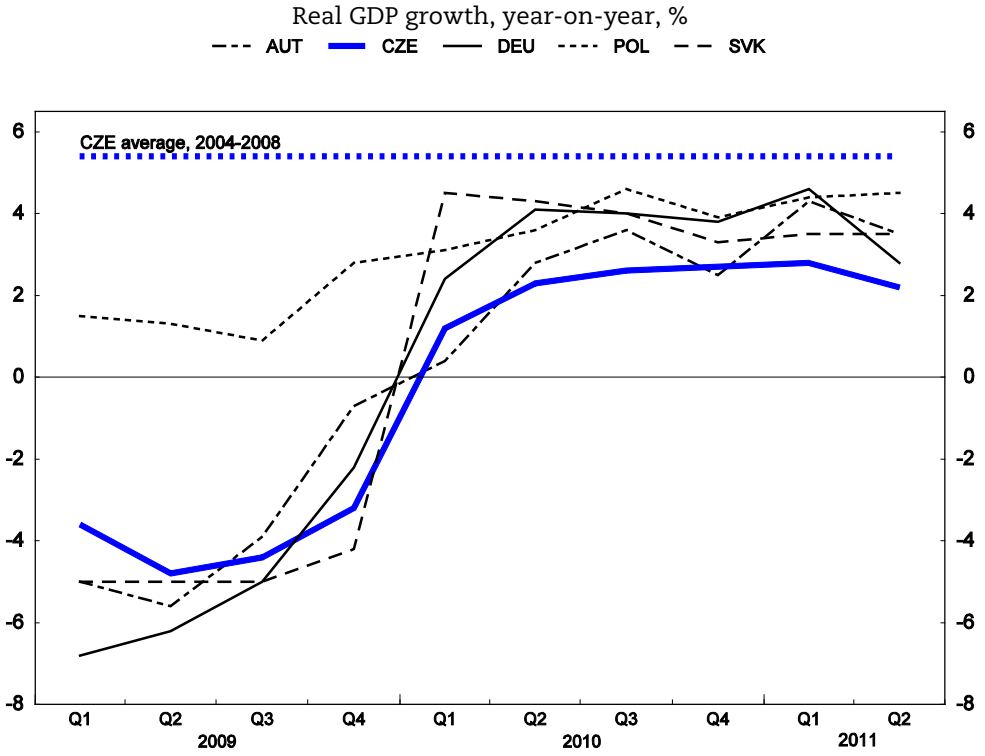
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| | Current prices CZK billion | Percentage changes, volume (2005 prices) | | | | |
| **GDP at market prices** | 3 848.4 | -4.7 | 2.7 | 2.1 | 1.6 | 3.0 |
| Private consumption | 1 883.2 | -0.4 | 0.6 | -0.1 | 0.6 | 2.6 |
| Government consumption | 759.4 | 3.8 | 0.6 | -1.3 | 1.1 | 1.1 |
| Gross fixed capital formation | 1 031.2 | -11.5 | 0.1 | 2.9 | 3.6 | 4.5 |
| Final domestic demand | 3 673.8 | -2.6 | 0.5 | 0.4 | 1.5 | 2.8 |
| Stockbuilding[1] | 82.6 | -3.0 | 1.4 | -0.4 | 0.0 | 0.0 |
| Total domestic demand | 3 756.5 | -5.6 | 1.9 | 0.0 | 1.5 | 2.8 |
| Exports of goods and services | 2 508.1 | -10.0 | 16.6 | 9.2 | 4.2 | 5.9 |
| Imports of goods and services | 2 416.2 | -11.7 | 16.2 | 7.0 | 3.6 | 5.9 |
| Net exports[1] | 92.0 | 0.8 | 0.9 | 1.7 | 0.3 | 0.3 |
| *Memorandum items* | | | | | | |
| GDP deflator | - | 1.9 | -1.7 | 0.0 | 1.9 | 1.2 |
| Consumer price index | - | 1.0 | 1.5 | 1.7 | 3.1 | 2.0 |
| Private consumption deflator | - | 0.2 | 0.4 | 1.7 | 3.1 | 2.1 |
| Unemployment rate | - | 6.7 | 7.3 | 6.9 | 6.7 | 6.4 |
| General government financial balance[2] | - | -5.8 | -4.8 | -3.7 | -3.4 | -3.4 |
| General government gross debt[3] | - | 34.4 | 37.6 | 40.2 | 41.7 | 42.8 |
| Current account balance[2] | - | -2.4 | -3.1 | -3.3 | -2.7 | -4.2 |

*Note*: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook Sources and Methods*, available at *www.oecd.org/eco/sources-and-methods*.

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of GDP.
3. Maastricht criterion.

*Source*: *OECD Economic Outlook 90 Database*.

**Figure 2. The post-crisis recovery is moderate**



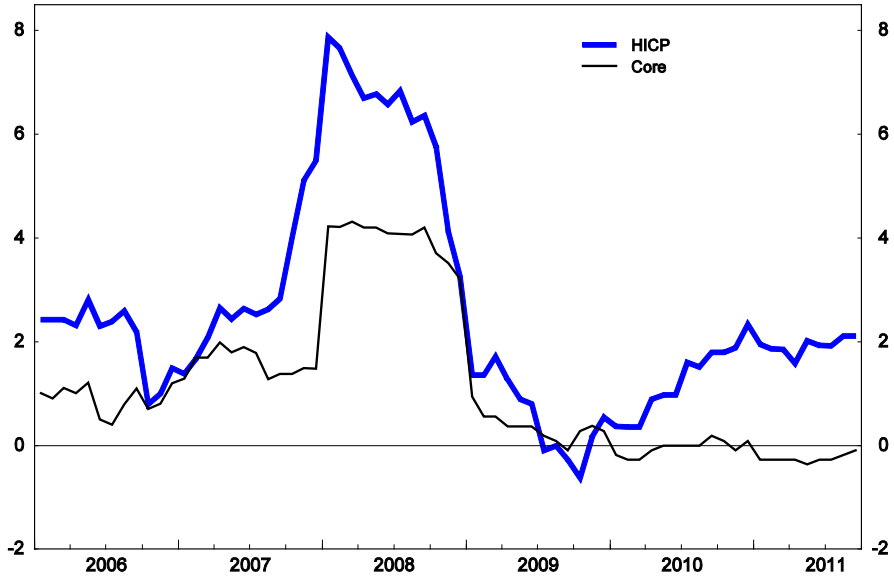

*Source*: OECD, *National Accounts Database*.

## *Monetary policy should be ready to act*

Although inflation picked up during 2010, this was mainly due to increases in indirect taxes and regulated and commodity prices. This year the headline rate has been close to the central bank's target of 2%, while core inflation remained close to zero (Figure 3). Since May 2010 the central bank has maintained the policy interest rate (2 week repo rate) at a historically low level of 0.75%, ½ percentage point below the main ECB rate. Inflation will further accelerate temporarily in 2012, due to the scheduled hike in the lower VAT rate and ongoing rent deregulation, but core inflation and monetary-policy relevant inflation that excludes first-round effects of tax and administrative prices changes will remain moderate. Inflationary expectations also remain firmly anchored. At the current juncture, monetary policy should be ready to react as downside risks for the domestic economic outlook stemming from economic conditions in the euro area materialise. In this context, it is welcome that the Czech National Bank has expressed its preparedness to move its interest rates in either direction.

**Figure 3. Core inflation remains low**

Annual growth, %




*Note*: Core refers to the harmonised index of consumer prices (HICP) excluding food, energy, alcohol and tobacco.
*Source*: Eurostat.

## *The financial sector is stable but post-crisis credit growth is only moderate*

The mostly foreign-owned financial sector did not require public support from the Czech government, although some parent banks received support from their home authorities. As Czech subsidiaries have had a strong domestic capital base and inward retail orientation, contagion from parent banks has not materialised. Capital and liquidity ratios remain comfortable, and the recent stress tests performed by the Czech National Bank confirmed the resilience to severe negative shocks. The deterioration of credit quality has stopped, and the share of non-performing loans has recently stabilized at 6.6%, which is in line with the euro area average and below regional peers. Credit growth that had stalled in the crisis, continues to be only moderate in the recovery, constrained by low demand, cautious lending practices, and lending rates that did not fall by the full amount of monetary policy rate reduction. In particular, corporate credit continues to grow only modestly, reflecting and contributing to the sluggishness in investment. While the Czech Republic avoided pre-crisis asset bubbles, house prices continue to decline, if only moderately, which complicates balance sheet repair.

## *Having an independent currency played some positive role in the post-crisis adjustment*

The koruna depreciated strongly at the peak of the crisis, but promptly resumed its long-term trend of strengthening. The real exchange seems to be currently close to its fundamental value. Compared to neighbouring Slovakia, the depreciation provided some, but not decisive, support to the export sector in the downturn, and the subsequent appreciation partly offset externally driven upward price pressures (Jevcak, 2011). On the other hand, interbank rates fell more rapidly in the euro area in response to central bank policy actions, so that Slovakia, as a member of the euro area, benefited from lower lending rates than the Czech Republic for several quarters. The effect on credit growth of not being in the euro area is however unclear: credit growth was weaker than in Slovakia, but stronger than in Germany, a euro-area country. Long-term bond yields in the Czech Republic have been below those of Slovakia for about a year now, suggesting a low or perhaps even negative interest premium due to remaining outside the euro area. Standard & Poor's upgraded the Czech Republic's credit rating by two

notches to AA- in August, citing the authorities' commitment to fiscal consolidation and a prudently managed economy.

### *Fiscal consolidation is under way and would be supported by strengthening the policy framework*

The 2010 general government deficit of 4.8% of GDP turned out better than originally budgeted due to lower debt servicing and administrative costs. In the 2009 recession, public finances were in a position to allow discretionary counter-cyclical policies of around 2% of GDP. However, the debt to GDP ratio - at around 38% according to the Maastricht definition - has doubled over the past 10 years and a balanced budget was not achieved even during the period of strong growth prior to the crisis. Without consolidation in both 2010 and 2011, the general government deficit would have stayed above 5%, leading to deteriorating debt dynamics. However, the authorities are pursuing budgetary tightening, with an emphasis on expenditure restraint in 2011, limiting its medium-term negative impact on growth. In particular, cuts in the central-government wage bill are underway. Planned consolidation measures for the following years of the medium-term outlook are mainly revenue based. The consolidation in the draft state budget for 2012 relies primarily on tax increases, notably an increase of the preferential rate of VAT, in a two-step move to unify the two existing rates. The authorities plan to reach a deficit of 3.7% of GDP this year, 3.5% in 2012 and a balanced budget in 2016. With deteriorating growth prospects, the authorities should be prepared to allow automatic stabilisers to work, while accelerating the strengthening of the fiscal framework and maintaining the commitment to prudent medium-term fiscal targets.

Czech fiscal policy has been relatively prudent in bad times but showed only a weak ability to reduce debt in good times, suggesting gains to adopting a rules-based fiscal framework (Kopits, 2011). The Czech Republic introduced medium-term expenditure ceilings in 2004, but they were regularly increased. Further strengthening the framework has been on the agenda of the current government for some time. On-going discussions about a fiscal rule have not yet come to a final conclusion but the government plans to enshrine a fiscal rule in the constitution to increase its credibility. A general principle – such as requiring the government to issue a debt target for its period in office – should be considered. This could then be supported by medium-term nominal expenditure ceilings, formulated taking into account the cyclical position of the economy as well as future growth prospects. Moreover, such a framework should account for tax expenditures in order to avoid the temptation of pro-cyclical fiscal loosening during times of cyclical revenue upswings. Given the constitutional independence of municipalities, the fiscal rule needs to be backed by an internal stability pact, clarifying in which way the different layers of government will contribute to adherence to the rule.

An independent fiscal institution assessing the adherence to the rule, would complement the reformed fiscal framework. Such a body needs to have a clear mandate and adequate resources. It should focus on the macroeconomic dimensions of fiscal policy and should report to the parliament, in order to strengthen its independence and reduce perceived partisanship of the budgetary process. The budgetary council that is currently planned would assess the fiscal costs of new legislation and be located in the prime minister's office. This might help fulfil the existing requirement of including budgetary costs of any new legislative proposals, but the narrow focus and lack of independence might hamper its efforts to decisively enhance broader aspects of fiscal policy making in the Czech Republic.

## Past reforms went a long way, but further reform effort is needed to support growth

Structural policies can raise medium-term growth (OECD, 2011a). Indeed, significant recent improvements are making the economy more flexible. However, more can be done in areas that are important for maintaining and eventually raising medium-term economic growth (Box 1) such as the business environment, promoting innovation, facilitating the transfer of domestic and foreign knowledge into economic activity and broadening the base for life-long learning as discussed in the previous issues of *Economic Surveys of the Czech Republic* and *Going for Growth* recommendations (OECD, 2006, 2008, 2010a, 2011a). As the Czech population is ageing at one of the highest rates in the OECD, continued growth will be conditional on further improvements in labour productivity while maintaining the traditionally high labour force participation.

The *Competitiveness Strategy,* adopted recently by the government, responds to the medium-term challenges faced by the country, which is highly commendable. *The Strategy* offers a whole-of-

government and comprehensive approach to structural reforms. Its overall aim is to advance the economy's competitiveness so that by 2020 it ranks among the top 20 countries according to the global competitiveness index compiled annually by the World Economic Forum. This is to be done by a broad scope of action in the following areas: institutional framework, infrastructure, macro economy, healthcare, education, labour market, financial markets, business environment and innovation. In each area there are from three to six specific project proposals with clear goals, time-lines, responsible institutions (such as a ministry or other government agency) and assessment criteria. All in all, there will be some 43 projects. Consistency with the national pro-export and cohesion strategies is also advocated.

The identified policy areas correspond to many recommendations provided in recent years by the OECD. A focus on improving framework conditions is welcome. Increasing competition in network services is one of the areas that could warrant additional attention. Prioritisation would be welcomed to ensure implementation of projects of crucial importance for overall success. Actions leading to early visible gains should also be clearly identified and promptly implemented to generate increasing support for the *Strategy*. A regular and widely published assessment of implementation, with strong political backing, would help to maintain the necessary reform momentum. The choice of indicators and adequate monitoring, which should not become just a bureaucratic exercise, is therefore essential. A wider non-partisan ownership, based on discussions and consultations with social partners, is necessary so that the *Strategy* continues to guide structural policies independent of the composition of government, and thereby minimising the risk of reform reversals.

The government continues to consult structural policy issues with the National Economic Council of the Government (NECG). The NECG has produced a number of policy oriented documents looking at various aspects of the Czech economy that have fed into important government policy decisions and have stimulated a broader public debate. This practice is commendable and should be continued in order to examine key policy areas and perform competitiveness-impact assessments. For instance, the Australian Productivity Commission was instrumental in the process of structural reform in that country (OECD, 2009a). Another example is the Netherlands Bureau for Economic Policy Analysis (CPB). Recently, New Zealand decided to establish a similar institution, confirming that not only bigger countries see benefit from such institutional innovations.

**Box 1. Past recommendations are still relevant for boosting future growth**

**Much achieved …**

*Increasing labour market flexibility*

The 2007 Labour Code contributed to higher employment flexibility, allowing, in particular, more flexible working hour schemes, with a view to reducing frictional unemployment. This has proved useful during the early phase of the downturn. Regional mobility was supported through a phased liberalization of the rental market. A number of parametric reforms of the defined-benefit pension system increased the sustainability of old-age income replacement and incentives to remain active longer. The reform of sickness benefits greatly reduced widespread misuse. Current reforms of severance pay schemes are welcome and link entitlements to tenure. The low use of fixed-term and other non-standard contracts has motivated further legislative proposals. Reforms are planned in order to better reconcile work and family responsibilities.

*Making the tax structure more growth and employment friendly*

Several rounds of tax reforms shifted taxation from labour and entrepreneurial activity to consumption by introduction of a flat personal income tax rate, reducing the corporate income tax and phasing out tax exemptions and reducing the application of the lower VAT rate. Remaining issues that merit a comprehensive review include excessive tax expenditures for self-employed, high and bumpy average and marginal tax rates as a consequence of uncoordinated tax and benefit choices for employees and a relatively low contribution from property taxation, in particular real estate, for which the tax base should be replaced by market values.

*Reforming financial supervision under the roof of the central bank*

All financial sector activities have been brought under the supervision of the central bank. Monitoring, risk assessment and regulatory activity are all in one hand, greatly reducing the organizational complexity of the task.

**… and still much to do**

*Improving the business environment*

Further progress expanding the range of services offered by Czech Points (one-stop information and formalities shops for business entities and individuals), unifying tax and social security collections, as well as aligning closer their tax

base, is under way. Nevertheless, increasing the speed and reducing the cost of judicial proceedings, strengthening regulatory impact assessment of legislative proposals, and fighting corruption are priority areas as recommended in the *2010 Economic Survey* and the latest *Going for Growth* structural policy priorities (OECD, 2010a, 2011a). The *Anti-corruption Strategy* was adopted by the government in January 2011. It addresses two broad areas: functioning and oversight of public administration, including public procurement, and criminal investigation of corruption cases. The *Strategy* includes more than 50 wide-ranging measures with deadlines for implementation, and a regular monitoring exercise. The success in implementing these measure would have a crucial importance for enhancing the business environment. In addition, ensuring access to capital (for example, by pursuing initiatives to develop a venture capital market) remains a challenge, and strengthening competition in electricity and telecommunications progresses only slowly.

***Further education reform to promote human capital development***

A nation-wide school-leaving exam, carried out for the first time in 2011, is a positive step towards fairer and more credible evaluation of students. However, education outcomes for 15 year-olds, as assessed by PISA scores, have worsened, and no action has been taken on the past recommendation to phase out streaming at the age of eleven, which hampers social mobility and human capital accumulation as analysed in the *2008 Economic Survey* (OECD, 2008). Despite considerable progress, tertiary education graduation rates remain below the OECD average. The governance and quality in the higher education sector also remain an issue. A plan for university fees with publicly guaranteed student loans in line with recommendations from the 2009 *Review of Tertiary Education of the Czech Republic* (OECD, 2009b) has been prepared, but it has not yet been approved. Finally, the *2008 Economic Survey* showed that more needs to be done to promote lifelong learning through better access to secondary and tertiary courses for adults and a more systematic approach to funding mechanisms, quality assurance, information and guidance. Several measures are now being implemented under the *Action plan for National Strategy on Life-long Learning and Further Education of Adults*, or are envisaged in the *Competitiveness Strategy*.

***Supporting innovation and the adoption of new technology***

While the Czech Republic performs well in terms of science and research, there is a room for improvement in terms of commercialising scientific progress. Innovation is overly dependent on foreign patents and researchers, making production vulnerable to relocation. Framework conditions for innovation should include enhancing cooperation between enterprises and universities, a task that was delegated to the Czech Technology Agency. Innovation policy remains highly fragmented being channeled through several different institutions. Despite recent emphasis on indirect funding, such as loan guarantees and tax credits, direct support (partly financed by EU structural funds) remains the main policy tool to foster R&D spending, limiting efficiency gains (OECD, 2010b). More systematic evaluation of public support effectiveness and tighter cooperation between different public bodies is warranted to use fully remaining efficiency improvement opportunities. The current work on a new innovation strategy to consolidate and prioritise support measures is therefore highly welcome, although picking-the-winner measures should be avoided. Finally, the *2010 Economic* Survey argued that promoting competition in ICT infrastructures and services, particularly in the rapidly expanding broadband sector, would also contribute to innovation and technology adoption (OECD, 2010a).

## Enhancing public spending efficiency would make the public sector less burdensome

Fiscal consolidation, spending pressures and a still relatively high average tax burden necessitate public sector efficiency improvements. Early reforms established the medium term spending framework and a treasury system is under implementation. As a result, macroeconomic fiscal indicators tended to undershoot budgeted targets. Together with the surge after the accession to the European Union however, fiscal principles started to give way to extra pro-cyclical spending. While fiscal indicators look good in comparison with a number of OECD countries and regional peers, it is nevertheless worrying that the government finds it very difficult to rein in spending programmes and associated expectations in the population about the size of publicly financed services, subsidies and transfers.

With growth expected to slow down in the medium- to long-term, due to the diminishing opportunities for real economic convergence and an ageing of population, it becomes even more essential to contain the burden of the public sector on the real economy through efficiency improvements. As mentioned above, the fiscal policy goal is to reach a balanced budget by 2016 and to set the debt ratio on a declining trajectory as of 2013, conditional upon sustained economic growth. With the tax burden already on a par with high-income countries, a substantial effort is planned on the expenditure side of the budget. Unlike in past consolidation episodes, efficiency savings now form a significant share of the current consolidation plan. Long-term expected increases of public spending on pensions and health care linked to ageing are estimated at 6.4% of GDP by 2060[2]. This underscores the need for expenditure control in these sectors and elsewhere. Indeed, major reform

efforts in health care and pensions are under way and have to some extent already been legislated (see below). The *Survey* reviews the main areas of ongoing reform efforts; budgetary management framework that is essential for ensuring efficiency, and the two main spending sectors, pensions and health care.

## *Budgetary management and control should promote efficiency*

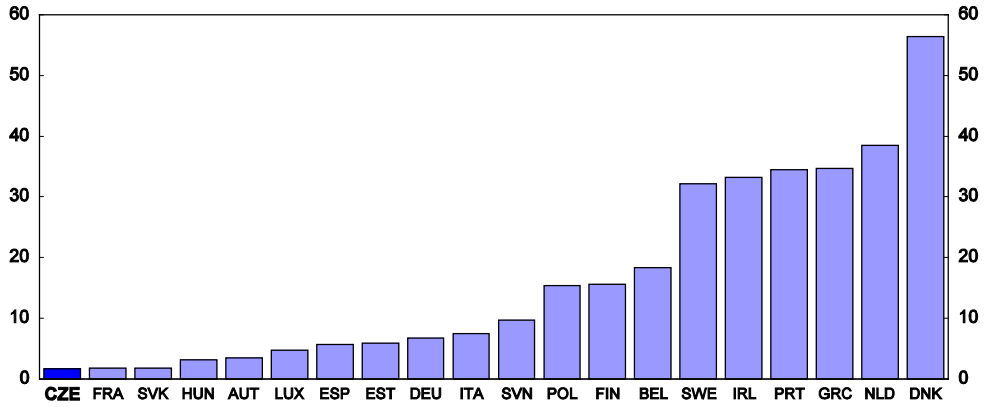
Improvements in budget management and control are essential for spending efficiency and containing overspending. There has been long-standing criticism of the budgetary documentation, mainly for its complexity and lack of comprehensiveness (Transparency International, 2006) and further improvements in this direction are needed. Potentially, the publication of an overall assessment of the budget by an independent fiscal institution would be helpful in enhancing transparency and accountability. The Czech budgetary process is one of the very few in OECD not to use any performance indicators that offer a better understanding of efficiency of various government policies and spending programmes during the formation of a new budget. Once the technical implementation of the treasury system is in place and human resources are freed, the authorities should draw on the experience of other OECD countries to implement performance oriented budgeting for the Czech state budget and extend such an approach to sub-central governments. Also, a regular tax expenditure report should be part of the annual draft budget proposal in order to increase transparency and evaluation of this claim on public resources, as recommended in previous *Surveys* (OECD, 2010a). First estimates suggest that 3.1% of GDP is spent annually in this form.

Improvements in public procurement are crucial and have been singled out as the main area for efficiency savings under the current consolidation plan (Ministry of Finance, 2011, NECG, 2011b). The purchases of goods, services and works by government and state owned-utilities accounted for over 25% of GDP in 2008, second highest in the OECD after the Netherlands. Anecdotal evidence, reports on selected spending programmes by the Supreme Audit Office, and comparisons of costs of big infrastructure projects all point to considerable scope for improvement in procurement practices. An amendment to the existing public procurement law, currently being debated in the parliament, proposes substantial changes, notably lowering the limits for tenders, streamlining procedures, and bringing more transparency into the process. These plans should be implemented as soon as possible, together with proposals for centralising government purchases. The progress in implementing the *Anti-corruption Strategy* can play an important role in increasing efficiency of public procurement, leading to potentially large savings.

The Czech Republic stands out among OECD countries in terms of the number of sub-central governments. While there is no conclusive evidence on the ideal size of a municipality, the average size of Czech local governments, at just over 1600 inhabitants, is extremely small by international comparison (Figure 4). Many of them are probably too small for the efficient provision of public services (OECD, 2006), although no indicators are available at the central level on cost and quality of municipal service provision. Compiling and publishing such indicators would help to benchmark the municipal performance in providing public services and identify the potential for efficiency improvements across the country. Ideally, small municipalities should be merged, although their constitutional independence and current societal preference for such wide municipal network make mergers difficult. The authorities should continue to foster inter-municipal cooperation and joint provision of services. Some public services are already concentrated in bigger municipal units and the planned shift of the social benefits administration to a network of newly centralized Labour Office is welcome as it takes advantage of economies of scale. Previous incentive schemes for mergers among the small municipalities had only a limited impact. Changes in the tax-sharing formula strengthened revenues for the smaller municipalities in the past and a currently proposed amendment reduces the revenues for four largest cities, but continues to offer only small incentives for mergers. The formula is also not transparent in distinguishing between the tax raising capacity of a municipality and the transfers it needs to receive from the central level. To make sub-central governments more accountable to their electorates, they should be assigned greater tax autonomy and the degree of earmarking should be reviewed. To balance this out and to further strengthen the fiscal responsibility of sub-central governments, the authorities should introduce an "internal stability pact" that sets borrowing limits on local budgets and ensures that the local fiscal policy is in line with the overall national goals.

**Figure 4. Municipality size is very small**

Average number of inhabitants per municipality, 2009-10, thousands



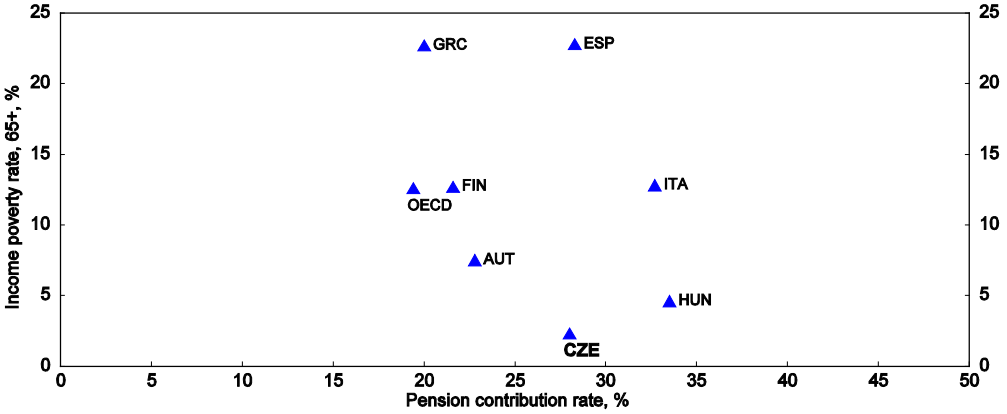

*Source*: CEMR (The Council of European Municipalities and Regions)-Dexia, *EU Subnational Governments*, 2010/2011 edition.

There are still over 100 state-owned or controlled enterprises (SOE) in the Czech Republic that employ over 3% of total workforce, including the post office, railways, airports and the national airline, the incumbent energy producer and the national forestry manager. As SOEs are vulnerable to the risk of soft budget controls and inefficiencies, ensuring their accountability and the quality of corporate governance is crucial (OECD, 2011e). Partial privatisation and listing on the stock exchange, as recently suggested by the NECG, would improve transparency of company accounts, but full privatisation (alongside regulation where necessary to protect consumers) should be considered. Careful consideration should be also given to the oversight of SOEs within the public sector. The authorities should consider consolidating all corporate state holdings and stakes under one roof. This centralised governance should be exercised at arm's-length. The government should act as a major shareholder, but shift responsibility and accountability for operational decisions to firm-level management. If appropriate, such institution could also be charged with the privatisation of SOEs. Useful conclusions can be drawn from the experiences of similar institutions in Finland, Germany and Austria. Slovenia recently established such a central authority (see OECD, 2011f).

## *Planned reforms should improve the sustainability and diversification of the pension system*

The public pay-as-you-go defined-benefit (DB) system, which provides the overwhelming majority of retirement income with expenditures of 8% of GDP, has so far performed well in terms of preventing pensioners' poverty (Figure 5). The contribution rate is high and poverty alleviation is brought about by a considerable degree of redistribution within the entitlement scheme, resulting in a replacement rate of around 90% for a worker with half of the average wage, while higher income earners can expect replacement rate of only about a half of that.

**Figure 5. The pension system protects well against poverty**




*Note*: The income poverty rate, 65+ is the percentage of persons aged 65 and over with incomes less than 50% of the national median household disposable income in the mid-2000s. The pension contribution rate is pension contributions (by employer and employee) as a percent of employee gross earnings in 2009. Selected countries have similar contribution rates to the Czech Republic. OECD is the average of the 21 members for which data is available.
*Source*: OECD, *Pensions at a Glance*, 2011.

A tentative summary assessment of the current, modified, and a newly legislated retirement income systems is possible based on five broad criteria outlined in a previous *Survey* (OECD, 2006): poverty-prevention function, benefit/contributions link, diversification, fiscal sustainability and retirement incentives. Such an assessment confirms the generally positive direction of changes in public pension provision, although it underlines the importance of securing adequate funding for a transition to the multi-tier system that is currently under way (Table 2).

**Table 2. Assessment of the evolution of the pension provision system**

| | Poverty prevention | Benefit/ Contributions link | Retirement incentives | Retirement income diversification | Fiscal sustainability |
|---|---|---|---|---|---|
| Current public DB | xxx | x | xx | x | x |
| Parametric changes of the DB | xxx | xx | xx | x | xxx |
| Parametric changes of the DB and DC carve-out* | xxx | xxx | xxx | xx | xx |

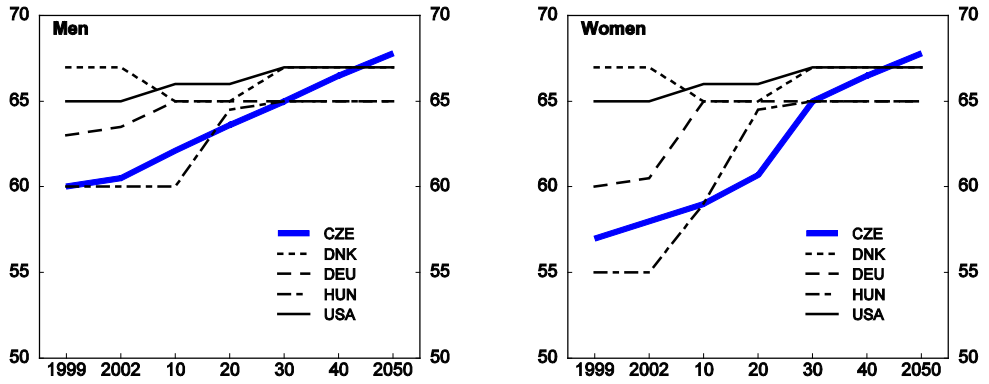
* Note that fiscal sustainability assessment does not include extra revenues from VAT and other sources that have been identified to finance the immediate fall-out of social contributions.
*Source*: OECD analysis.

A set of parametric changes entered into force in September 2011 modifying the public part of the pension system. These include adjustment of the benefit formula and extension of earnings' coverage, changes of indexation of pensions and increasing the statutory retirement age (Figure 6). The statutory retirement age will be unified for men and women reaching 66 years and 8 months by 2041, and it will continue to increase two months per year up to a not yet specified ceiling. The new legislation also smoothes the penalisation formula for early retirement. These changes go a long way towards improving the sustainability of the public scheme, and strengthen the link between benefits and contributions. In particular, the increase in the statutory retirement age significantly improves the balance of the defined-benefit tier. The authorities estimate that projected deficits will be reduced by over 4% of GDP in the long term, with a maximum deficit of the public DB tier of just over 2% between 2046 and 2066, when the impact of population ageing is projected to be the strongest. Moreover, the increases in the retirement age would keep remaining life expectancy at the pensionable age broadly constant at around 20 years beyond 2030. However, the announced path of retirement age increases might need adjustment if developments in life expectancy change. One way of doing so would be to link the pensionable age

explicitly to life expectancy. As the retirement age rises, it will be increasingly important to strengthen policies tackling barriers to working longer, such as excessive seniority premia, low participation in life-long learning activities, and ageist attitudes (OECD, 2011d).

**Figure 6. Statutory retirement age will increase fast**

Legislated pensionable age, years




*Note*: Pensionable age is defined as the age at which people can first draw full age-pension benefits (that is, without actuarial reduction for early retirement). The definition is designed to be comparable across countries and may be below the pension age set in national legislation. Refer to the source for more details. Selected countries have broadly similar life expectancy to the Czech Republic.

*Source*: OECD, *Pensions at a Glance*, 2011.

A voluntary defined contribution (DC) component will be added to the mandatory public scheme as of 2013 by carving-out 3 percentage points from the current contribution rate, combined with a mandatory 2 percentage points top-up of contributions for those deciding to make use of this option. This proposal is in principle welcome as a first step to diversify old age income provision, improve expected replacement rates across the income-profile (although at the cost of higher risk) and to reduce the public commitment for future pension payments. The introduction of the carve-out, together with lowering of ceilings on contributions to the DB pillar from six to four times the average wage, would strengthen the link between benefits and contributions, and reduce the degree of redistribution within the system. This would help to address tension highlighted by a Constitutional court decision that the public scheme does not provide adequate pensions for higher income earners given the size of their contributions. However, it would not significantly alter poverty prevention features of the DB tier, provided that revenue loss does not lead to a change in the benefit formula.

However, it is difficult to assess the impact of the carve-out on the financing requirements of the DB pillar in the transition period. Since participation in the DC tier is voluntary, the number of people who will take it up and the resulting fall in revenues to the DB tier are unknown. The authorities have adopted a cautious approach of choosing a relatively small carve-out. Based on their estimates, assuming that only the upper half of the contributors will choose the DC option, revenues to the DB pillar would fall by less than 1% of GDP. The government will finance this revenue loss by a scheduled increase of the preferential VAT rate, constituting a first step in overall VAT rate unification, and by dividends of state-owned enterprises. However, the issue of financing the transitory revenue loss of the DB component needs to be addressed with caution. Experience elsewhere highlights the importance of appropriate communication of the rates of return in the two pillars and management of such reform, including replacement of revenue losses in the DB tier, in order to make sure that informed decisions can be made by the population and reform reversals can be avoided by governments.

Financial literacy is important for ensuring adequate savings for retirement. It is low in the Czech Republic (CNB, MoF 2010), as in most other OECD countries, but it is receiving increasing attention. The OECD recommendations on financial education are being implemented; in particular, financial literacy is becoming a part of the school curriculum. Such efforts should continue. The design of the new DC tier should maximise the likelihood that individuals make decisions consistent with their long-term interest. Among various strategies, the DC tier will offer life-cycle plans. Also, by default 10 years prior to

retirement assets will be gradually transferred to more conservative investment strategies. However, more should be done. Investment in higher-return assets in the early pension saving phase should be encouraged by making the life-cycle strategies an explicit default option. Annuities should become the default option for the pay-out phase. Last but not least, an appropriate public campaign explaining the DC tier to the public is crucial and regular reports on pension prospects should be prepared to inform the public about their prospective retirement incomes.

The management costs of a DC pillar have been an issue in a number of countries. In the Czech Republic, there will be caps on management fees at 0.3-0.6% of total assets, on fees on returns at 10% and on remuneration bonuses for the acquisition of new clients. However, contrary to earlier expert proposals, no centralized Swedish-style institution to negotiate rebates with assets managers is foreseen, as opposed to direct individual contracts between pension plan mangers and participants. A centralized, cost-efficient account administration of individual pension fund contributions should be considered; as it brings clear cost advantages and the current disclosure-based approach is likely to have only a limited impact given the generally low level of financial literacy.

### *Expected increases in health spending should be kept in check by improving efficiency*

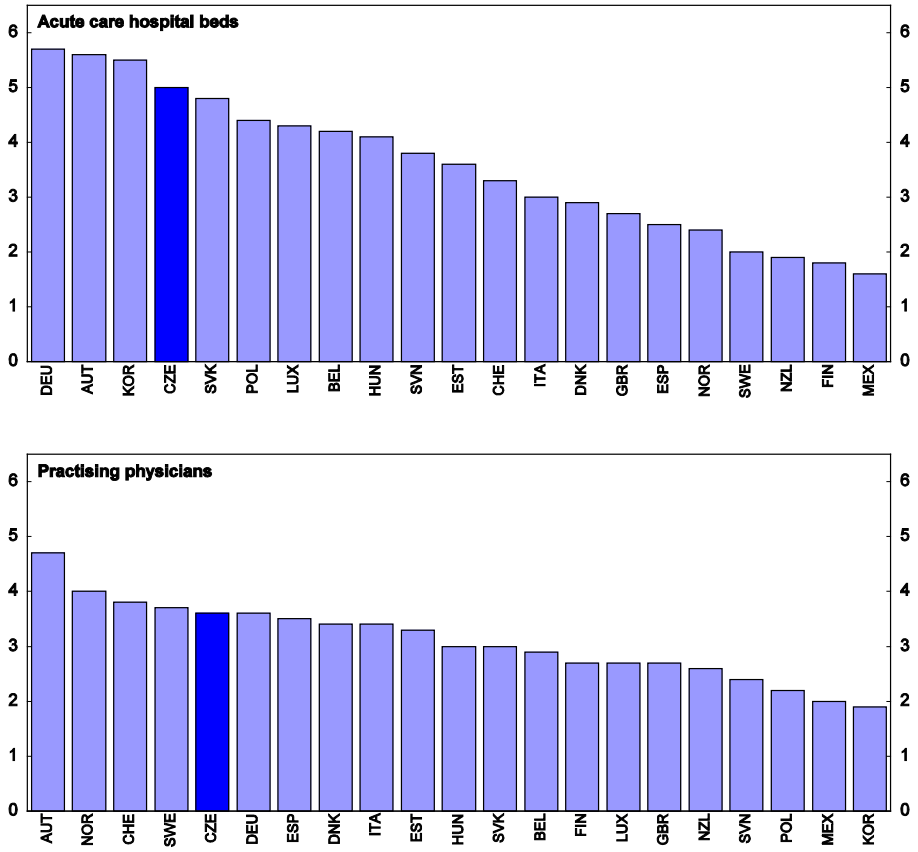
The Czech Republic is facing current and future spending pressures in the healthcare sector. Total health care expenditure at 8.2% of GDP, is still below the OECD average, but has been rising over the last 10 years. There is an immediate need to find available resources within the system since remuneration for salaried staff is set to increase during the current fiscal consolidation period, as agreed in a well publicised labour dispute. In the long term, cost pressures will continue to mount since rising income levels are associated with higher healthcare expenditures and population is ageing. The opportunities for efficiency improvement are, however, substantial. A cross country OECD analysis points to considerable potential life expectancy and amenable mortality gains in the Czech Republic, if the system was moved to the OECD efficiency frontier (Joumard *et al.*, 2010). Exploiting potential efficiency gains could also result in large savings, estimated for the Czech Republic at around 1.5% of GDP by 2017, which could take the form of cost savings or service improvements.

The existing multi-insurer model comprises not-for-profit institutions, which have to reimburse all publicly certified health services and compete in terms of quality of administrative services for members. Insurers can also offer additional services, free of charge. As this system works well overall, the authorities' agenda is focused on incremental efficiency improvements. A number of welcome measures, including advances in drugs price setting, streamlining of co-payments, tightening the regulatory framework for insurers as well as codification of patients and providers rights and obligations, are currently in the parliament and should take effect as of next year.

The Ministry of Health should play a stronger regulatory and supervisory role both in health insurance and the health provider sector. An initiative to review the structure of in-patient care could help to rationally reshape hospital capacity, together with economic pressures created by implementation of a more comprehensive provider pay system (diagnosis-related groups). The number of beds remains high despite considerable progress in reducing the capacity over time (Figure 7) and the occupancy rate is low, while the rate of hospital discharge is high. The review of in-patient capacities needs to include major stakeholders, such as regional authorities and insurance funds, as well as central government agencies, like the military and universities, and result in an agreed nation-wide plan, which aims for a reduction of excess capacity. This measure would be very timely, since medium-term framework contracts between providers and insurers expire next year. Compliance with such a plan could be linked to negotiations about a new remuneration system of the providers and used also for planning of new equipment. A co-operation agreement between the Ministry of Health and Ministry of Social and Labour affairs to jointly review the health and social care capacities is under way with a view to turning spare bed capacity into long-term care, where bottlenecks have been identified before. The cost-efficiency of such moves should be carefully examined.

**Figure 7. The existing network offers scope for streamlining**

Number per 1 000 population, 2009




*Note*: Practising physicians are university graduates in medicine who provide services directly to patients. Data refers to year indicated or an adjacent year. Refer to source for details of concepts and comparability.

*Source*: OECD, *Health Database*.

Another route to address inefficiencies in the sector is to manage health care demand. The Czech system has a wide range of consumer choice as patients are free to choose both their insurer and the provider of services. While this has obvious advantages, in the absence of any gate-keeping function the number of consultations in the Czech Republic is high. In 2007, only Japan had a higher number of doctors' consultation per capita (OECD, 2010c). So far the efforts to contain excessive healthcare demand have focused mainly on out-of-pocket fees for consultations, hospitalization and drugs consumption. Soft gate-keeping, based on financial incentives for referrals, as in France and Germany, would more effectively rationalize health care consumption, without deterring necessary treatment. The authorities see insurance funds as the main actors for care-coordination, but so far there is no legislative basis for it. Indeed, care management has recently been proposed for the chronically ill (NECG, 2011). Better care management and an increased role of GPs, both in terms of prevention and adequate follow-up, can also help to alleviate a high disease burden in the Czech Republic. Moreover, implementation of the planned e-Health system for sharing patients' electronic documentation can be conducive for better care management and help to address existing inefficiencies. Hence, the implementation of missing ICT systems needs to be a clearly identified policy priority while ensuring that private data protection is not compromised.

Pharmaceutical costs, although still below the EU average in terms of share of GDP, were rising fast prior to the downturn. To contain this increase, generic and positive lists of pharmaceuticals

(determined by tenders organised by insurers) should bring savings in drugs spending. Mandatory active substance prescription should be introduced to contain out-of-pocket expenditures and exemptions should be subject to tight medical justification. Also, a digitalized prescription system is planned and the authorities can take inspiration from recent initiatives in this area in other OECD countries, such as Estonia and Sweden.

Emphasis needs to be put on getting the underlying incentives in the multi-insurance system right. It is crucial to prevent cream-skimming by insurers by refining a risk-equalisation scheme that reflects medical characteristics. This should be achieved through introduction of so-called pharmaceutical cost groups, which are a good indicator of health care costs of specific groups of patients. Another crucial feature of a competitive health insurance market is the ability of insurers to select and contract with providers. Currently, only 7% of in-patient services are contracted in this way, compared to 20% in the Netherlands. The diagnosis-related group payments system is to become the main remuneration feature for in-patient care. It should facilitate more competitive contracting and improve incentives for more efficient care provision. The authorities see the role of insurers as a cornerstone in these efforts.

The authorities plan to exclude some types of health care services and above-standard services from the basic insurance package. This would contain health-care expenditure increases, but definition and implementation of the basic benefit package will require systematic analytical work (OECD, 2010c). As medical technology advances, there will also be a need to periodically review coverage. In the medium term, a health insurance market may offer standard and above-standard service packages. Eventually, since the Czech authorities have opted for a multi-insurer model, there is a plan to introduce competition on nominal premiums among insurers, which has been recommended by the healthcare working group of the NECG.

**Box 2. Summary of main recommendations for improving public spending efficiency**

**Strengthening fiscal framework**

- Establish a responsibility for government to announce a debt target that is translated into medium-term expenditure ceilings broken down to individual ministries' targets. Establish an independent fiscal institution to assess the budget in light of the cyclical position and medium-term objectives.

**Promoting spending efficiency through budgetary management and control**

- Improve transparency of budgetary documentation.
- Introduce performance oriented indicators, extending such an approach to sub-central governments.
- Consider the introduction of an 'internal stability pact' that sets borrowing limits on budgets of constitutionally independent municipalities.
- Implement plans for substantial changes to the public procurement law. Improve corporate standards and transparency of state owned enterprises.

**Reforming the pension system**

- Make sure the reforms of the defined benefit pillar and the introduction of a voluntary defined contribution pillar are well communicated and accompanied by appropriate regulatory changes.
- Pace of retirement age increases should be kept in line with changes in life expectancy.
- For the defined contribution pillar: consider a centralized clearing house for pension plans to keep down the administrative costs; make a life-cycle investment strategy the default plan for participants. Offer annuities as the default instrument in the pay-out phase.
- Improve the financial literacy and awareness. Prepare regular reports on pension prospects to inform the public about their future retirement incomes.

**Improving health spending efficiency**

- Implement a diagnosis-related group payment system to strengthen cost-consciousness among providers.
- To help reduction in number of acute-care beds prepare a national capacity plan agreed by the major stakeholders that would guide medium-term contracts with providers, as well as coordinate investments and

equipment purchases.

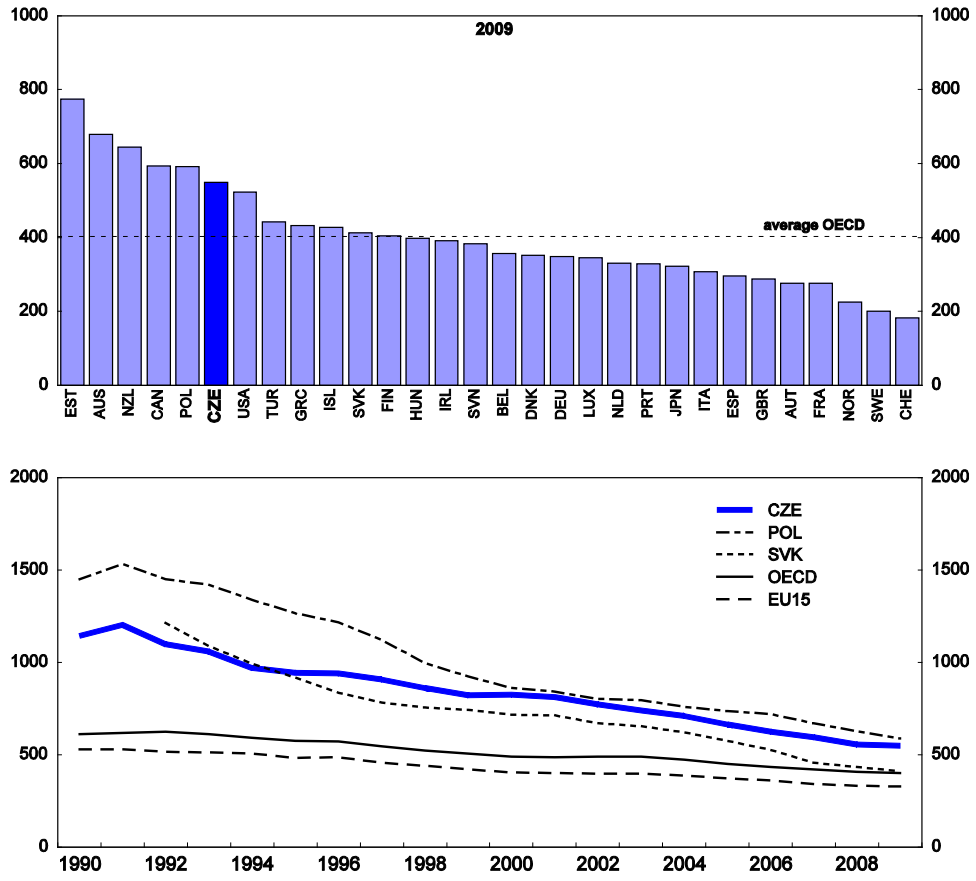
- Introduce soft gate-keeping and e-Health to improve care management.
- Stimulate coordinated purchases and auctions of drugs and other supplies. Introduce mandatory active substance prescription and electronic system to contain drug expenditures.
- Improve the risk-adjustment formula.

## Improving energy system efficiency to support growth and meet greenhouse gas emission objectives

The Czech Republic has one of the highest ratios of greenhouse gas (GHG) emissions per unit of output in the OECD notwithstanding the substantial reductions that have been achieved in the last two decades (Figure 8). This is due to the high energy intensity of economic activity and an unfavourable - emission intensive - fuel mix (Table 3). These characteristics provide a major policy challenge but also scope for further improvements of the energy system that can reconcile environmental, energy security and public health objectives with sustainable economic growth to achieve convergence.

**Figure 8. Emission intensity is high in the Czech Republic**

Tonnes of $CO_2$ equivalent per million USD of GDP




*Note*: Greenhouse gas emissions in physical units (such as tonnes) are converted to $CO_2$ equivalent by multiplying the number of physical units by the global warming potential conversion factor for a given emission and country. GDP used is in 2005 constant prices at purchasing power parity. OECD is the average of countries in the top panel.

*Source*: United Nations Framework Convention on Climate Change (UNFCCC); OECD, *National Accounts Database*.

**Table 3. Decomposition of GHG emissions level in 2009**

| | GHG/GDP | Energy consumption /GDP | GHG/ energy consumption |
|---|---|---|---|
| Poland | 590.9 | 100.8 | 5.9 |
| **Czech Republic** | **549.3** | **106.4** | **5.2** |
| OECD average | 424.1 | 99.7 | 4.3 |
| Slovakia | 412.5 | 102.9 | 4.0 |
| Hungary | 398.0 | 106.5 | 3.7 |
| Germany | 349.0 | 85.0 | 4.1 |
| EU27 average | 340.5 | 85.2 | 4.0 |
| Austria | 276.0 | 90.6 | 3.0 |

*Note*: GDP is in thousand 2005 USD using PPP exchange rates, GHG in Mt $CO_2$ equivalent and energy consumption in ktoe.

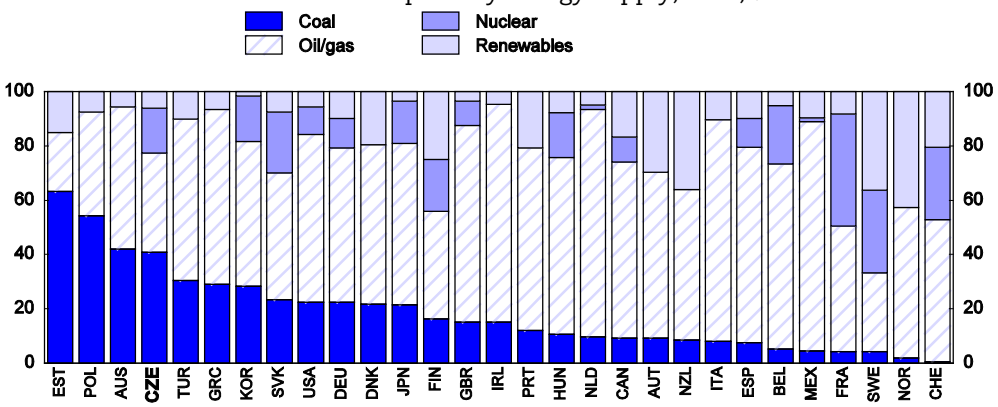
*Source*: IEA and OECD calculations.

## *High emissions are due to high energy intensity and an unfavourable fuel mix*

Despite steady improvement, energy intensity, which declined by 2.5% on average between 1990 and 2008, remains higher than in Poland and Slovakia, and significantly above the OECD and the EU averages. This is explained by structural features, including high share of energy-intensive sectors, outdated power stations and heat supply units, road-based transport, and the large stock of relatively inefficient buildings. An unfavourable energy mix also contributes strongly to carbon emission intensity with coal accounting for more than 40% of total primary energy supply in 2009 (Figure 9). As a result, $CO_2$ emissions per kWh produced from different energy sources are substantially higher than OECD and EU averages, although lower than in nuclear-free Poland.

**Figure 9. Share of coal in energy supply is high**

Distribution of primary energy supply, 2009, %




*Note*: Renewables are hydro, geothermal, solar/wind/other and combustible renewables and waste.

*Source*: OECD/IEA, *Energy Balances of OECD countries* (2011 edition) and OECD *Dotstat Database*.

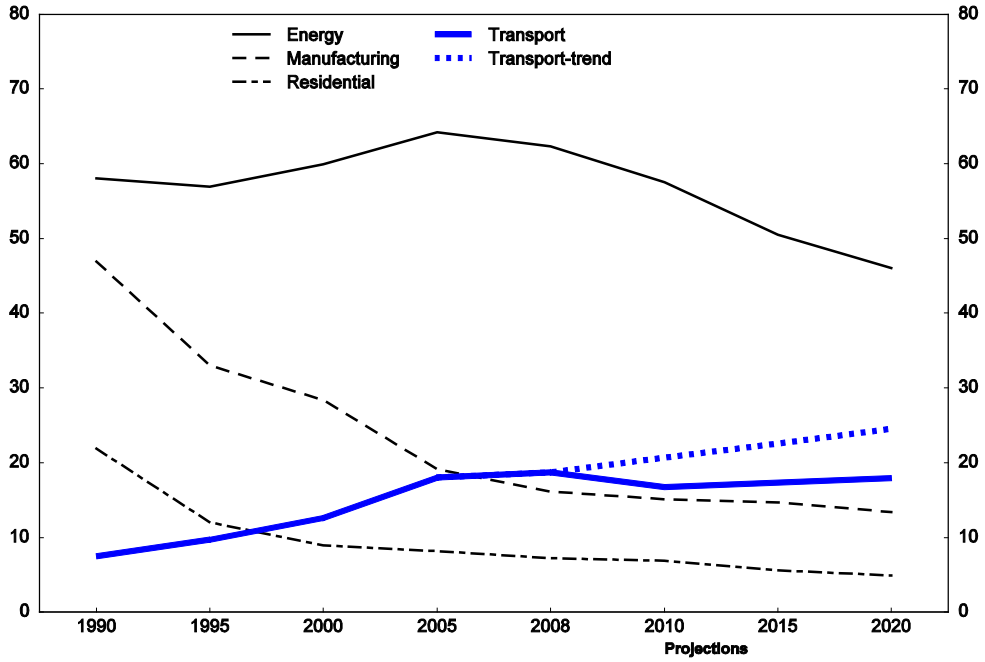
## Meeting EU emission objectives will be challenging

While the Czech Republic will meet its Kyoto targets without additional measures, the EU Energy and Climate Package agreed in December 2008 sets more ambitious objectives to be achieved by 2020. Specifically, this legislation requires the Czech Republic to implement the EU Emissions Trading Scheme (ETS); limit increases in its GHG emissions to 9% in the sectors not covered by the ETS; increase the share of renewable energy in final energy consumption to 13%, including a specific 10% target in the transport sector; and achieve a national indicative target consistent with the target of a 20% improvement in energy efficiency at the EU level.

Meeting the targets will require a comprehensive transformation of the Czech energy system (Figure 10), embracing energy efficiency improvement across all sectors of the economy together with a substantial shift in the fuel mix towards less emitting energy sources and technologies. Neither of these changes will happen without further coordinated policy intervention. Market based instruments, such as carbon pricing should play a central role in the overall framework, while non-market based instruments should be used sparingly in case of well-identified market failures. While the ETS cap will enforce compliance with the emission target for large installations, the design of national policy will determine its broader economic cost. Meeting the non-ETS emission objective could also prove difficult, as emissions in the transport sector continue to increase rapidly (apart from a temporary slowdown due to the crisis). Finally, meeting the objective of renewable energy sources and biofuels will be costly, as the Czech Republic faces unfavourable sunshine, wind and hydropower conditions, and large-scale subsidised use of biomass and biogas for energy generation poses a risk to other sectors of the economy dependent on the same raw materials (IEA, 2010).

**Figure 10. GHG emission from selected sectors: past trends and national projections**

Mt of $CO_2$ equivalent




*Note*: Greenhouse gas (GHG) emissions in physical units (such as grammes) are converted to $CO_2$ equivalent by multiplying the number of physical units by the global warming potential conversion factor for a given emission and country. One Mt = one million tonnes. Manufacturing includes construction.

*Source*: Czech government, *Reporting of policies and measures under Article 3(2) of Decision 280/2004/EC*, March 2011.

## Moving to a less energy intensive economy will yield benefits

Energy security concerns are an important motivation for designing a transformation strategy towards a low-emission energy system, as reflected in the draft State Energy Policy. An improvement in energy efficiency that reduces domestic demand for energy sources is the least expensive way to enhance energy security and cut emissions. While coal is produced domestically, its reserves are diminishing and production cannot cover demand in the long run, especially for heating purposes. At the same time, replacing old and inefficient coal-powered power plants provides an opportunity to shift to less emitting energy sources. Apart from the further development of renewables, given the limitation of their potential, expanding nuclear capacity while ensuring strict safety regulations and standards is an important strategic option. However, full life cycle costs of different fuel mix options should be considered, taking into account all externalities.

Energy system transformation would also have a positive public health impact. Burning fossil fuels is not only a primary driver of GHG emissions, but it is also linked to local air pollution, leading to problems such as smog, acid rain and indoor air pollution with a significant impact on human health, ecosystems, buildings and crops (Bollen *et al.*, 2009). A significant share of the Czech population lives in areas where the concentration of small particulate matter, which cause lung and heart disease, exceeds EU limits (IEA, 2010). In the case of the transport sector, negative local externalities include health-damaging noise pollution and accidents (Persson and Song, 2010). GHG emission reduction thus has important co-benefits in terms of public health improvements.

### Negative economic and social impacts can be controlled

Manufacturing plays an important role in the Czech economy and contributes strongly to economic growth, exports, investment and employment. It is also relatively energy-intensive, and its competitiveness is thus sensitive to increases in energy prices which will be linked to emission abatement (Czech Industry and Transport Union, 2008). The risk of carbon leakage due to European abatement commitments is therefore a key concern of the authorities, even though there are factors that mitigate the risk to the Czech economy, and OECD model-based calculations suggest that the output losses in energy-intensive European industries due to the EU unilateral carbon abatement would not exceed 1% by 2020 (Burniaux *et al.*, 2010). To minimise this risk, the authorities need to concentrate on policies to reduce the sensitivity to energy prices through the more efficient use of energy and materials. Efficiency improvement is therefore not only essential for lowering emissions and energy security but also crucial for the growth and competitiveness of the Czech economy, as recognised by the 2011 *National Reform Programme*. Similarly, energy efficiency needs to ensure that emission objectives do not translate into constraints on growth in living standards. For example, the higher emissions from road transport can reflect increasing mobility and household energy consumption can reflect an increasing number of domestic appliances. Promoting less emission-intensive transport modes or more energy efficient equipment would therefore help to achieve higher future living standards on a sustainable basis.

## *A comprehensive policy framework needs to be based on carbon pricing*

The policy framework leading to a cost-efficient and growth-friendly energy system transformation needs to be comprehensive, stable and consistent, with carbon pricing at its core, providing appropriate incentives for emission reductions (de Serres *et al.*, 2010). An important benefit of carbon pricing based on ETS auctions and carbon taxation is that it will generate additional fiscal revenues. The earmarking of these revenues should be avoided, in order to allow the government flexibility in financing policies with the highest marginal benefit across the full policy spectrum. All environmentally oriented public spending should be subject to *ex ante*, on-going and *ex-post* evaluations, based on a common methodology.

### Free allocation of ETS permits should be carefully monitored and evaluated

The Czech Republic is among the countries that are allowed an optional and temporary derogation from the rule that no allowances are to be allocated free of charge to power plants as from 2013. The authorities decided to use the derogation on the assumption that providing permits for free constitutes an efficient and necessary mechanism for supporting energy system transformation, given the scale of investment in the energy-generation sector, a very long-term horizon and energy security concerns. Granting free allowances would imply large costs for governments due to foregone fiscal revenues estimated at EUR 1.9 billion (or almost 1.2% of GDP in 2011) cumulatively between 2013 and 2020, according to the national authorities. The authorities should therefore carefully monitor and evaluate the implementation of the investment programmes. To inform future decisions, the efficiency of the free distribution of permits should be evaluated as most of the highly concentrated energy-generation sector in the Czech Republic enjoys high profitability and a good access to credit markets.

### *Carbon taxation needs to be harmonised*

Existing excise taxes implicitly yield carbon prices that vary considerably across different fossil fuels (Table 4). While taxation of energy products reflects considerations beyond environmental externalities, notably fiscal objectives that call for higher taxation of consumption of less price-sensitive products, such excise rate disparities lead to perverse incentives. In particular, diesel is favoured compared to gasoline, as in several other EU countries (Egert, 2011). Despite high nominal rates, taking non-GHG

externalities (such as local air pollution noise, congestion and accidents) into account, the implicit carbon price is negative in the case of diesel (and probably also for LPG - liquefied petroleum gas), even though uncertainty about the size of externalities is large (Persson and Song, 2010). An increase in diesel taxation could therefore be justified.

Several tax reliefs distort the existing energy taxation system and should be phased out. Among them, gas used for heating by households is exempted from excises, thus providing a wrong price signal and encourages switching out of district heating. Likewise, a very low tax rate on coal encourages its use for heating purposes. While increased excise taxes could lead to social hardship, this should be managed via the existing social assistance system. The current general exemption in excise taxes for fuels used in electricity generation introduces an inappropriate advantage for small installations that are excluded from the ETS and should be removed.

While excise tax rates should be realigned to provide a more uniform carbon price, the Czech government should support the recently proposed amendment to the EU Energy Taxation Directive that would set a minimum rate for taxes on fuels based on their energy and $CO_2$ content. The proposed changes will not only contribute to improving the tax incentives in the Czech Republic, but will also minimise competitiveness risks related with meeting the overall EU non-ETS emission objective.

**Table 4. Implicit taxes on fossil energy sources, EUR for kg of $CO_2$**

| Petrol | Diesel | LPG | Natural gas (households) | Natural gas (industry) | Light fuel oil | Coal |
|---|---|---|---|---|---|---|
| Implicit taxes (EUR/(kg of $CO_2$)) | | | | | | |
| 227 | 160 | 50 | 0 | 6 | 10 | 2 |
| Implicit taxes if the costs of local negative externalities are taken into consideration (EUR/(kg of $CO_2$) | | | | | | |
| 49 | -62 | n.a. | n.a. | n.a. | n.a. | n.a. |

*Note*: The external costs of local air pollution are based on CE DELFT (2008, Handbook on estimation of external costs in the transport sector), and the external costs of noise pollution, accidents and congestion are taken from Persson and Song (2010).

*Source*: Energy Regulatory Office and International Energy Agency. OECD calculations based on Egert (2011).

## Rebalancing renewable energy support, improving the grid and strengthening competition

Support for renewable sources is provided mainly to meet the EU renewable share objective, which would not be ensured by carbon pricing itself. The 2010 share of renewable electrical energy in total gross electricity production reached 8.4%, a doubling compared with 2004. However, one fifth of the increase was due to a solar panel boom spurred by overly generous feed-in tariffs, which absorbed substantial resources that could have been used to promote more economical sources such as biomass, biogas and wind (IEA, 2010). These incentives have been withdrawn. Although it is important to allow more flexibility in setting feed-in tariffs in the future for all types of renewable energy sources, uncertainty should be avoided by setting clear rules regarding future changes in feed-in prices and volume constraints. Germany provides a good example of a policy framework allowing tariffs to be adjusted on a regular basis to reflect developments in the installed capacity of renewable energy. More generally, the structure of feed-in tariffs reveals very high GHG abatement costs linked to solar panel energy (Table 5). Support should therefore be rebalanced in a technologically neutral way by lowering the dispersion in feed-in tariffs, so as to equalise marginal abatement costs and thus promote the highest-potential and lowest-cost technologies. Setting targets for specific technologies should therefore be avoided. Tradable renewable certificates could be considered as a replacement for feed-in tariffs.

Investments in improved management of the grid, quick-start peak power generation and energy storage would increase room for decentralising renewable electricity production (IEA, 2010). Smart grids could ensure a more efficient use of electricity and energy savings. For example, smart meters could provide accurate and real-time information on electricity prices and consumption at the customer level, providing incentives for reducing demand with a view to reducing electricity bills and switching suppliers to benefit from lower prices. Also, increasing currently low competition at the retail level could increase the opportunities for energy service companies to enter the market and promote

innovation at the customer level (Jamasb and Pollitt, 2008). Competition at the retail level should be therefore actively promoted.

**Table 5. Feed-in tariffs and implied producer subsidies (2010)**

| Solar | Wind | Biogas | Biomass | Geothermal | Hydro |
|---|---|---|---|---|---|
| The ratio of feed-in tariffs to average market price of electricity production | | | | | |
| 10.5 | 1.9 | 3.2 | 3.1 | 3.9 | 2.6 |
| Direct producer subsidies implied by feed-in tariffs (EUR million) | | | | | |
| 268.6 | 14.1 | 51.8 | 144.4 | 0.0 | n.a. |
| Abatement costs (EUR/tonne of $CO_2$ equivalent) | | | | | |
| 436 | 42 | 102 | 96 | 132 | 36 |

*Source*: Energy Regulatory Office and Power Exchange Central Europe; OECD calculations based on Egert (2011).

## Policies to promote energy efficiency

The *National Energy Efficiency Action Plan 2008–2016* provides a non-binding target of energy savings of 9% in 2016 and several policies promoting energy efficiency are being implemented. Energy intensity remains among the highest in the OECD and the unused potential for energy savings is substantial. According to one study, buildings could account for roughly half and transport and industry for a quarter of an estimated 16 Mt of economically profitable $CO_2$ abatement potential due to energy savings (McKinsey & Company, 2008). The IEA study on *Implementing Energy Efficiency Policies* identified several opportunities for improvement in the policy framework, particularly regarding buildings and the transport sector (IEA, 2009). Thus the government should continue providing support for retrofitting the existing stock of buildings, although it is important that they be rigorously and regularly evaluated.

Considerable funds will be necessary to finance energy saving and emission reducing efforts. The use of EU structural funds for the support of energy efficiency under the next EU financial framework would be justified. Loans and loan guarantees should be used more often than direct subsidies for supporting projects that are cost-effective, but require high upfront investments. While the evolution of the State Environment Fund towards an environmentally oriented bank is being considered, deepening its cooperation with the Czech-Moravian Guarantee and Development Bank might be more appropriate to build on existing competence and experience. Various support programmes, notably the Green Investment Scheme and PANEL, should be better coordinated with different government institutions given clearly defined roles and competencies. At the very least, standardized methods are needed for processing and evaluating the effectiveness of the administration of grant programmes aimed at similar goals (Supreme Audit Office, 2011).

An increasing number of companies across different countries now perceive environmental challenges not as a barrier to economic growth but as a new opportunity for increasing competitiveness (OECD, 2011c). A new legal framework promoting Energy Performance Contracting (EPC, a method of contracting of a broad range of energy services, including designing, implementing and maintaining energy savings projects, based on in-depth analysis of a customer's energy system) and specialised Energy Service Companies (ESCOs) would be particularly useful in diffusing best practices in energy efficiency using market based instruments. The government intends to promote EPC and ESCOs among small and medium sized companies as part of the *Competiveness Strategy*. Unclear legislation and rules, as well as perverse incentives among public sector managers, are major obstacles to realising EPC within this sector (SEVEn, 2011). The government is now preparing legislation facilitating the use of EPC in public sector, which is a step in the right direction.

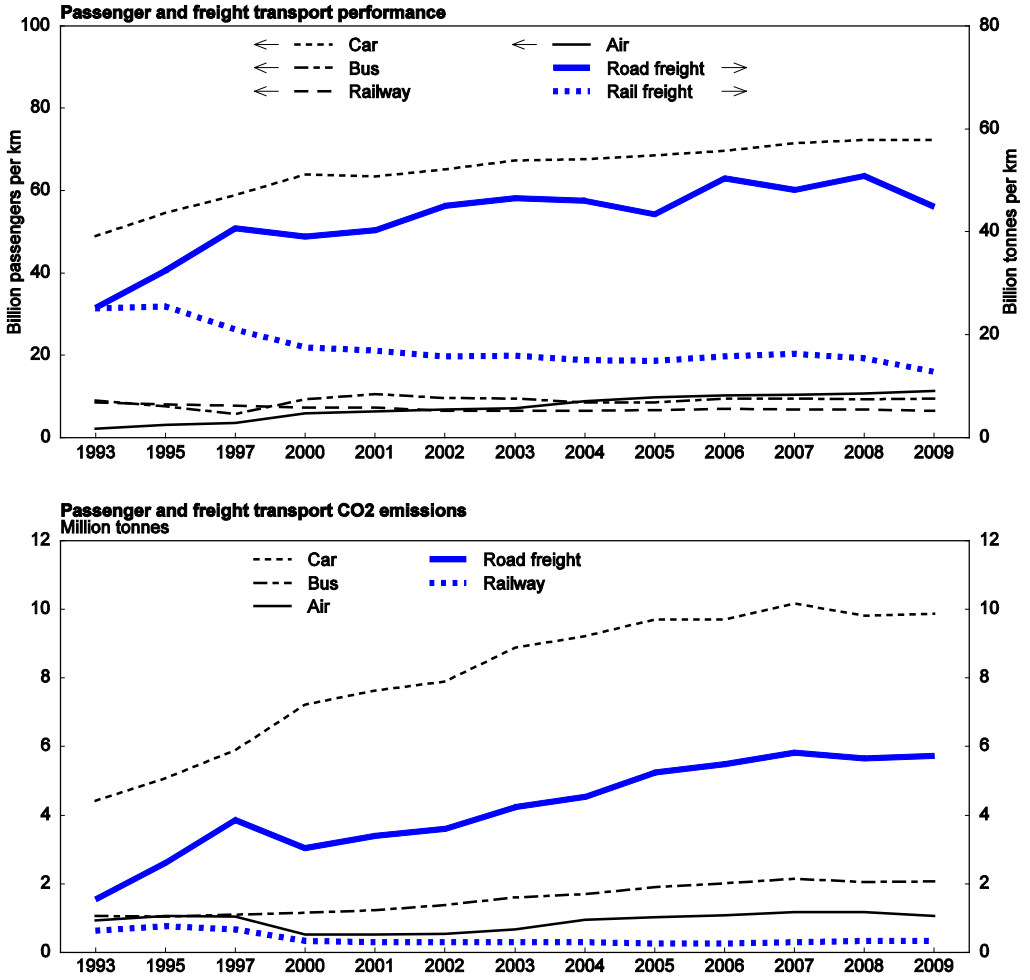
Energy providers could also play a more active role in promoting energy savings. While pilot initiatives undertaken by ČEZ on smart metering and smart grids in the town of Vrchlabí are a good first step (CENIA 2010), it should be encouraged to utilise its capacity to provide energy saving services more broadly. Indeed, the introduction of energy saving certificates should be considered. Under such a scheme, energy providers would be required to undertake energy efficiency measures for their final users achieving a pre-defined percentage of their annual energy deliverance. As certificates are tradable, energy providers can either achieve savings on their own or purchase certificates, encouraging the

development of energy service companies and bringing down the effective cost of energy savings (IEA, 2011).

## Preventing emission increases in transport will be challenging

While carbon taxation should provide the basic incentive for emission abatement, additional measures need to be implemented in the transport sector, whose share of total emissions increased from 6% in 1990 to 15% in 2008, just as its share in total final energy consumption increased from 7% to 22%. This increasing trend was linked primarily to the rapid increase in passenger car and road freight transport (Figure 11).

**Figure 11. Growth in road transport outputs and emissions is rapid**




*Source*: Transport Centre, *Study on transport trends from environmental viewpoints in the Czech Republic 2009*, Brno, August 2010.

In order to limit emissions growth without constraining the mobility of citizens and freight services, which are essential for economic growth, it is important to increase the consistency between transport infrastructure investment programmes and environmentally sustainable transport objectives, notably by strengthening environmental impact assessments. When deciding about transport investments sufficient priority should be given to their potential contribution to the improvement of the transport network as a whole. Opening railways further to competition, particularly in freight transport, could lead to lower prices and a better quality of services, shifting transport back to rail. Traffic management in

urban areas should involve traffic restrictions in city centres, parking fees and incentives to commute by public transport. It should also include an expansion in the infrastructure for cycling, as well as the implementation of a congestion charge for Prague and, if appropriate, other cities. Better integration of urban and suburban public transport, in particular concerning flat tariffs is needed to improve the efficiency and attractiveness of public transport, and requires a better coordination between national authorities, who are responsible for railway transport, and municipalities, who are responsible for buses and other public transport elements. Obstacles for private companies to run own transport networks for their employees should be eliminated.

The country has an old car fleet and its modernisation is relatively slow. The Czech Republic was one of only two EU countries with a higher average level of emissions of newly registered cars in 2008 than in 2004 (European Commission, 2009). The country continues to import a high number of used cars with weak emission performance, despite import duties on used cars and registration fees. Hence, to better control emissions from older vehicles and stimulate the renewal of cars, lorries and bus fleets, vehicle inspection and maintenance obligations need to be strengthened, to complement the stronger price signal from enhanced carbon taxation.

**Box 3. Summary of main recommendations on energy system efficiency**

**Ensuring a comprehensive, consistent and stable policy framework**

- Ensure full consistency among strategic policy documents to anchor private sector expectations about future policies. Implement comprehensive, standardised ex-ante, on-going and ex post evaluations for all policy instruments.

**Providing the right incentives for abatement and raising revenues through the ETS and carbon pricing**

- Support implementation of carbon taxation at the EU level. Realign the excise tax rate on all fossil energy sources and products, based on their carbon content and other environmental externalities, notably by increasing the relative taxation of diesel. Remove several excise tax reliefs on fuel use. Monitor and evaluate the efficiency of free ETS permit allocations to inform future decisions.

**Rationalising sectoral policies**

- Use the opportunity given by the natural retirement of coal-fired power and heating plants to plan a strategic switch to low-emission sources and technologies. Rebalance support for renewables to promote the lowest cost sources in a technologically neutral way. Enhance competition in the energy sector and stimulate emission-reducing innovations, including the development work of smart grids and meters.

- Continue investing in energy efficiency measures. Use loan support instead of investment subsidies for projects that require high upfront investments, although being cost-effective overall. Increase the role of energy providers in promoting energy savings. Promote Energy Performance Contracting and the development of Energy Service Companies.

- Increase consistency between transport infrastructure and environmentally sustainable transport objectives. Improve the institutional co-ordination of transport and land use plans among the State, regions and municipalities. Further develop traffic management in urban areas, including traffic restrictions in city centres, parking fees and incentives to commute by public transport. Strengthen vehicle inspection and maintenance obligations to better control emission from older vehicles and stimulate the renewal of cars, lorries and bus fleets.

## Notes

1. Between 1900 and 1950 the income per capita in what is now the Czech Republic is estimated to have been about 20% above neighbouring regions, which are now Austria (Benáček, 2001), while currently the Czech Republic trails Austria by about 40 % of the EU27 average GDP per capita in purchasing power parities.

2. The European Commission is currently updating long-term projections of member states' pension systems. Estimations including the newly legislated changes should be available during the first half of 2012.

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# Chapter summaries

## Chapter 1. Enhancing public spending efficiency

The Czech fiscal position is generally sound and policy making is prudent. However, the fiscal framework was not strong enough to contain spending in the upturn and it would benefit from independent budget oversight. An anchor for the fiscal policy would be helpful, in the form of an explicit debt target coupled with corresponding spending ceilings and deficit targets.

The ongoing fiscal consolidation, spending pressures and an already relatively high average tax burden necessitate public sector efficiency improvements. There is scope for improvement in the management of government spending, mainly by enhancing transparency, introducing performance-oriented budget indicators at both central and local levels, improving the management of state-owned enterprises and developing the procurement practices of the public sector.

Legislated increases in the retirement age will improve pension system sustainability. A new defined contribution tier is being introduced which should help to diversify future retirement income. At the same time, there is uncertainty about the number of participants who will decide to divert their contribution to the new tier and hence about the implications for revenues in the existing defined benefit pension tier. Also, attention should be taken regarding administrative costs of the new tier, since these can have a significant impact on future replacement rates and therefore public support for it. With more emphasis on private savings, the financial literacy of the population also needs to be stepped up.

In healthcare the authorities plan to continue improving the multi-insurer model through incremental reforms such as limiting pharmaceutical costs and improving provider-payment system. The potential for efficiency improvement in healthcare network planning and better care management should be explored, while ensuring that insurers and health providers are given the correct incentives.

## Chapter 2. Improving energy system efficiency

A carbon intensive energy system in the Czech Republic contributes to one of the highest ratios of greenhouse gas (GHG) emissions in the OECD. While EU emission reduction commitments provide the most visible and binding motivation for changing the way in which the country produces and uses energy, action is also required to improve energy security and public health and to avoid an adverse impact of emission reduction on economic growth and living standards.

Energy system transformation requires ensuring a comprehensive, consistent and stable policy framework with stronger *ex ante* and *ex post* evaluation. A single carbon price should be achieved through the Emission Trading System (ETS) and carbon taxation. Excise tax rates on all fossil energy sources and products should be realigned, based on their carbon content and other environmental externalities, notably by increasing the relative taxation of diesel. The authorities should support implementation of carbon taxation at the EU level. Sectoral policies that complement carbon pricing in promoting greener energy sources, energy efficiency and less fuel intensive transport need to be strengthened. The most important measures include rebalancing support for renewable energy, streamlining energy efficiency support programmes, upgrading the transport infrastructure, increasing the attractiveness of public transport and stimulating the renewal of the road fleet.

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