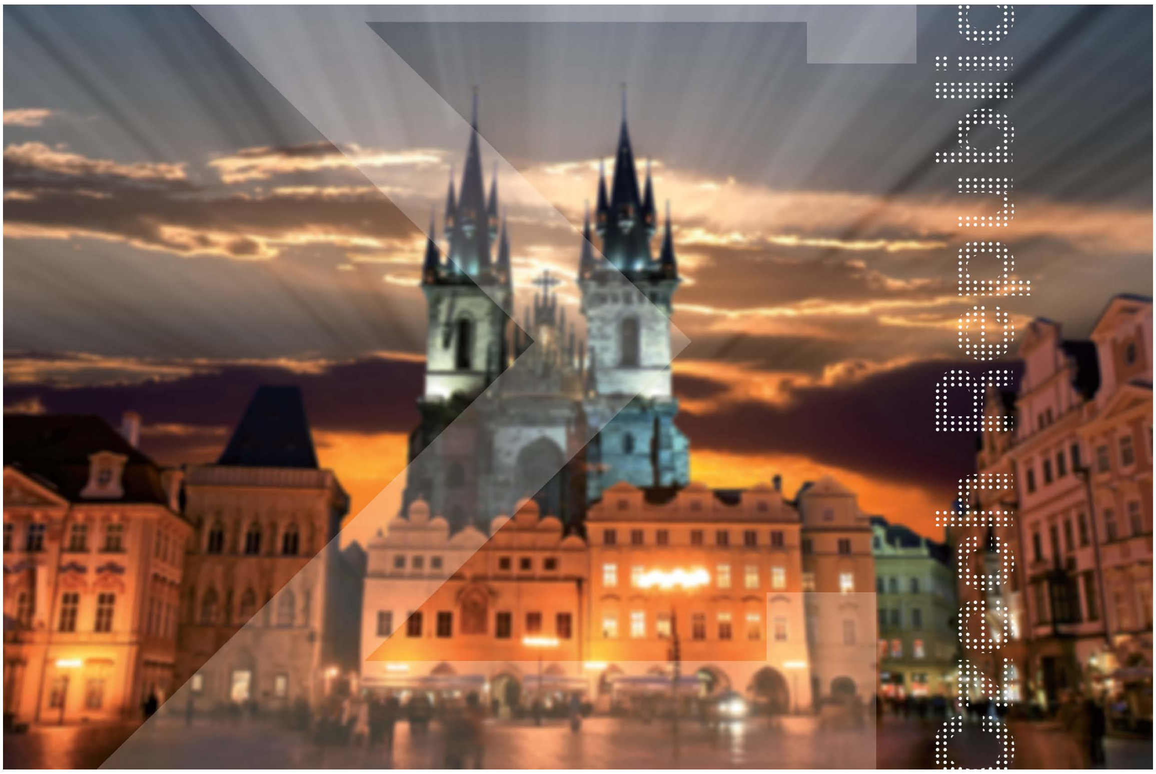
OECD Economic Surveys

Czech Republic

July 2018

OVERVIEW



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BETTER POLICIES FOR BETTER LIVES

This Overview is extracted from the 2018 Economic Survey of the Czech Republic. The Survey was discussed at a meeting of the Economic and Development Review Committee on 5 June 2018 and 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.

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Executive summary

Economic prospects are good.

- *The economy is thriving.*
- *Strong demand and exports are driving growth.*
- *Economic growth will slow due to labour shortages but remain above its potential.*
- *Poverty and inequality wellbeing indicators are good.*

Low productivity is limiting convergence towards OECD living standards.

- *GDP per capita has been increasing but convergence towards OECD living standards is slow.*

Better skilling, R&D and innovation are needed for the upgrading of the economy.

- *Better skilling is necessary to increase labour productivity and innovation to maintain the price competitiveness and to favour upgrading in value chains.*
- *Increasing labour force participation of women with young children would reduce labour shortages.*
- *An acceleration of immigration procedures and facilitation of immigrants' integration could reduce labour shortages.*

The Czech Republic has to address the challenges of an ageing society.

- *Ageing will weigh on public finances.*
- *Retirement age should be tightly linked to life expectancy.*
- *Financing of health and long-term care can be expanded making all types of income contributing.*

There is room to improve the delivery of health care.

- *The Czech health care system performs well along several dimensions but can be improved.*
- *Indicators for the quality of care and outcome performance are missing in the management and regulation of the health care system.*
- *The delivery of health care could be improved through better management of hospitals; and putting more incentives in the remuneration scheme of health providers.*
- *The efficiency of the delivery of primary care is suffering from lack of co-ordination.*

Short-term economic prospects are good…

The economy is thriving. The growth acceleration in 2017 to 4.6% is more balanced than in previous years. Internal demand is led by strong household consumption, supported by income growth, and private investment. Exports also sustained their expansion in 2017 thanks to boosted activity of trading partners. The unemployment rate has continued decreasing throughout 2017 and at below 3% is among the lowest in the OECD. Inflation picked up strongly in 2017 reaching an annual average of 2.5%. This increase in inflation – from around 0.5% during the last three years – was partly driven by an acceleration of wage growth. Exchange rate appreciation will dampen inflation.

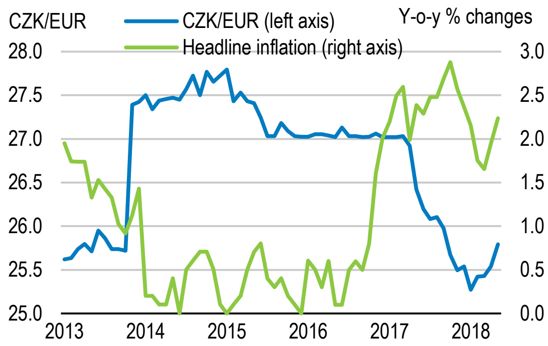
Table A. The economy is projected to grow at above 3% per year in 2018 and 2019

	2017	2018	2019
Gross domestic product	4.6	3.8	3.2
Private consumption	4.0	3.8	3.5
Gross fixed capital formation	5.9	5.2	4.3
Exports	6.9	5.3	5.4
Imports	6.2	6.1	5.7
Unemployment rate	2.9	2.4	2.3
Consumer price index	2.5	2.0	2.1
Current account (% of GDP)	1.1	0.5	0.3

Source: OECD (2018), OECD Economic Outlook 103 (database).

Output growth will slow down on account of labour supply constraints, but will remain above the Czech Republic's 3% potential growth rate in 2018 and 2019. Increasing wages and employment will keep household consumption and internal demand high. Private investment will remain strong thanks to favourable credit conditions. Exports will stay high. Growing wages and strong household consumption are expected to keep annual inflation slightly above the 2% Central Bank's target in 2018 (Figure A). The Czech National Bank (CNB) has started raising its policy interest rate in August 2017 to stabilise inflation at its target level over a medium-term horizon.

Figure A. Inflation will remain around the target



Source: Calculations based on OECD (2018), OECD Economic outlook (database) and Thomson Reuters Datastream (database).

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… but the Czech Republic faces risks, including high housing prices.

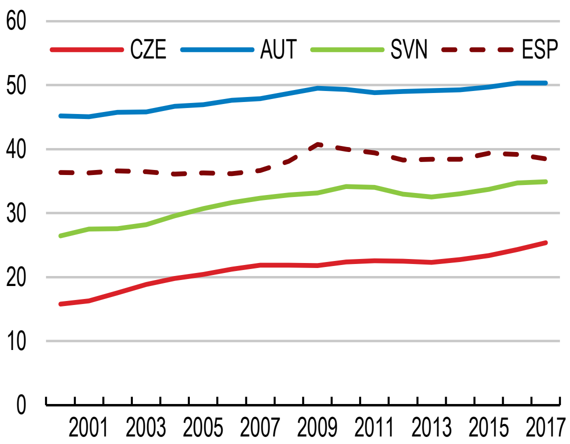
Risks stem equally from internal and external factors. Labour shortages could hamper growth. At around 2.4%, the unemployment rate is hitting a floor. Also, there are signs of overheating as the economy is growing above potential, therefore the rise in inflation and wages may lead to a normalisation of interest rates more rapidly than anticipated. This may create a gap with the rates in the euro area, and therefore further appreciations of the exchange rate. On the external side, the Czech economy is particularly exposed to trade disruptions. Exports in terms of value added contribute to around 45% of GDP. Housing market developments are of rising concern. The loans for house purchase have accelerated in the last two years and are reaching high levels. Price growth in the housing sector was the highest among EU countries in 2017. Therefore, household indebtedness is increasing and banks are exposed to a reversal in household income growth.

The low level of wages is limiting convergence towards OECD living standard standards…

The Czech Republic's growth model of low wage and high reliance on FDI has been successful in increasing GDP per capita but convergence towards OECD living standards is slow (Figure B). Even though wages have accelerated recently, their level remains low in international comparison. Low labour shares are influenced by the gap between GDP per capita and gross national income, which is among the highest in OECD countries (Figure C). Foreign direct investments have benefited the economy through its increasing participation in global value chains. However, there is room to better share the benefits of growth to support inclusive development.

Figure B. Czech wage level is converging slowly

Thousand USD, in 2017 constant prices and constant PPPs



Source: OECD (2018), OECD Labour Force Statistics (database).

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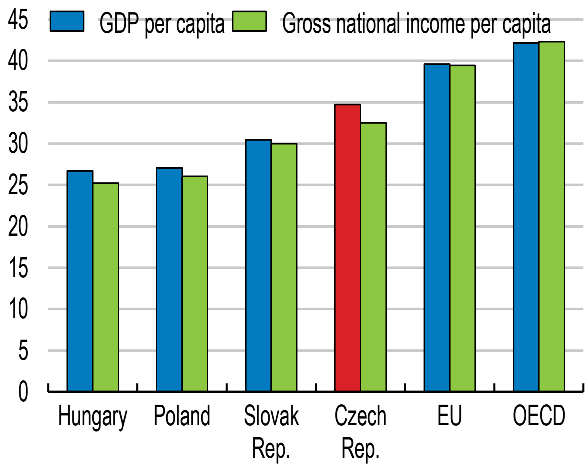
Figure C. The gap between GDP and gross national income is high

Thousand USD PPP per capita, at current prices, 2016



Source: OECD, National Accounts (database).

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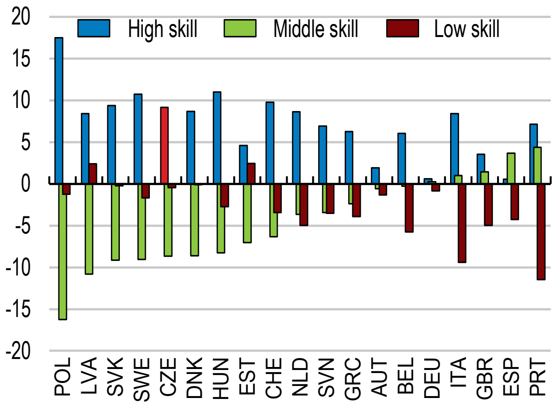
… and better skilling, R&D and innovation are needed for the upgrading of the economy.

Better skilling is necessary to increase labour productivity and innovation to maintain the price competitiveness and to favour upgrading in value chains. The Czech labour market is shifting towards higher-skilled employment. Since the 1990s, the service sector has expanded and manufacturing has become tightly integrated into global value chains; employment shifted from medium-skilled towards high-skilled jobs (Figure D). Sectors such as manufacturing, IT and business services are expected to continue expanding. Providing workers with the right skill set and training to adapt to a changing environment will increase the resilience towards automation. For instance, the demand for a highly skilled labour force, especially the technically educated one, will increase.

Figure D. Employment is shifting towards high skilled jobs

Change in percentage point in share of total employment, 2015 to 2025



Source: European Centre for the Development of Vocational Training (Cedefop) (2017), Forecasting skill demand and supply.

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Preparing the labour market for technological change is high on the political agenda. Policy actions that foster productivity and innovation as highlighted in the last survey (OECD, 2016[1]) should be accelerated.

The skill mismatch is still important. Graduates are lacking in the fields of mathematics, science, statistics, and health and welfare studies. Current developments suggest that the stock of skills in the labour force may not suffice to address emerging shortages in certain sectors, such as health and IT. Providing effective, up-to-date and tailored information, advice and guidance are crucial to address emerging skills gaps. Vocational education should be further developed to play a significant role in overcoming skill mismatch through the involvement of employers in the design of curricula and in developing internships.

Increasing labour force participation of women with young children would limit labour shortages.

Available skills of women are not fully utilised in the labour market. Female graduates form the majority in mathematics and natural sciences (59.6%) and health and welfare studies (83.5%). These skills are often not available to the labour market as one out of three women aged 25 to 34 that graduated in a STEM (Science, Technology, Engineering, and Mathematics) field with a tertiary degree reported being inactive in 2016. Despite recent efforts, female labour force participation tends to fall with childbirth, contributing to gender inequality.

The long break in young mothers' employment is partly due to long parental leave rules. Spending on maternity and parental leave is the highest among OECD countries, reflecting a preference for home care over formal childcare. Conditional on the expansion of affordable and quality childcare, the maximum duration of parental leave should be reduced. Child care facilities should be further developed by redirecting funds from cash transfers and parental leave. Increasing the flexibility of jobs by better enforcement of rights for part-time work, flexible teleworking arrangements and shared jobs can support the re-entering of female labour into the market.

The Czech Republic faces challenges of an ageing society.

Ageing will weigh on public finances. The Czech population is ageing more rapidly than in most European countries; the dependency ratio will rise from 28.1% in 2016 to 49.7% in 2070 with a peak at 56.1% in 2058.

Pension spending as share of GDP should be stable up to 2030, but will then rise steeply by more than 2.5 percentage points of GDP over 20 years. In 2017, the Czech government withdrew the perpetual increasing of the statutory retirement age and instead put a ceiling at the age of 65. However, the retirement age ceiling is worsening the effect of pension spending on public finances (Table B).

Also, the recent changes in the pension indexation rule are pushing up pension spending by approximately 0.3 percentage points over the projection horizon.

Health care and long-term care expenditures are also projected to rise in the upcoming decades. In comparison with other countries, the Czech

Republic is going to face one of the biggest spending increases as share of GDP.

Financing of pensions, health care and long-term care currently requires more than 43% of the government budget. Assuming that the size of the budget in relation to GDP remains constant (at around 35%), the projected social expenditures in 2060 would take more than 75% of the budget (Table B). As in many OECD countries, the Czech Republic could consider linking retirement age tightly with life expectancy. Improving the efficiency of health care delivery could help cushion the impact of ageing on health spending.

Table B. Impact of ageing on public finance

Pension expenditure projections, % of GDP

	2016	2030	2040	2050	2060	Peak year
Total public pensions	8.2	8.2	9.2	10.8	11.6	2059
linked to life expectancy		8	8.5	9.7	10.2	2059
Expenditure projections as shares of the government budget						
	% of GDP			% of govt. budget		
	2017	2060		2017	2060	
Pensions	8.2	11.6		32.4	45.7	
Old age pensions	6.8	10.2		26.8	40.2	
Health care	6.2	9.6				
financed by social security contributions	4.1	3.3				
financed by the government budget	2.1	6.3		8.4	24.7	
Social long-term care	0.7	1.4		2.8	5.5	

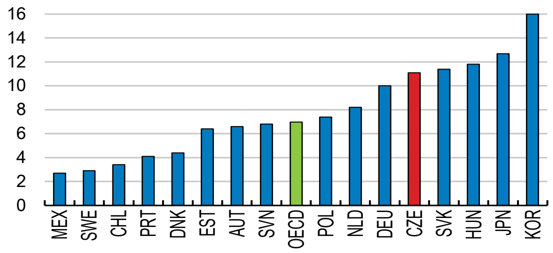
Source: EC (2018), Ageing Report: Economic and budgetary projections for the 28 Member States (2016-2070), OECD projections of health spending.

Improving the health care system

The Czech health care system performs well along several dimensions but can be improved. Life expectancy rose by 2.6 years to 78.7 years between 2005 and 2015, just below the average of 80.6 years in the OECD. Spending on health care at 7.2% of GDP in 2016 is relatively low compared with OECD peers. However use of health services is among the highest in the OECD (Figure E).

Figure E. Number of physician consultations

Per inhabitant, 2015 or nearest year



Source: OECD (2017) Health Statistics (database).

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Indicators for the quality of care and outcome performance are missing in the management and regulation of the health care system. Moreover, the health system is heavily regulated by the government through the Reimbursement Decree which sets most prices and volume limitations of activities of health providers. Having a genuine negotiation process between health care providers and insurance funds would help reduce some of the inefficiencies in service delivery.

Overall, there is a need to rebalance the system towards more competition between health providers and insurance funds and private funding to improve quality, efficiency and reduce the reliance on public funding.

The delivery of health care could be improved through better management of hospitals; and putting more incentives in the remuneration scheme of health providers. In hospitals, optimising outpatient care and day surgery should reduce the length of stay and lower spending. The new diagnostic related group (DRG) system should be used for setting the prices of health services but also to incentivise or reform underperforming hospitals. The DRG system should be based on a group of best-performing hospitals.

The efficiency of the delivery of primary care is suffering from lack of co-ordination. Patients' ability to access specialist care without a prior general practitioner (GP) consultation, poorly defined mutual responsibilities of outpatient specialists and GPs and current payment systems mean that primary care's potential to lead for instance chronic disease management is not being fulfilled. GPs should be entrusted with a greater gate-keeping and co-ordination role to ensure that patients are better directed to the most appropriate place for their treatments, which also allows diminishing the overuse of hospital facilities.

Ageing will account for roughly half of the future rise in health-care spending and pushes for broadening the financing of the health system. While total health spending is low, the share of public spending in total spending at 82.4% is among the highest in the OECD. The heavy reliance on public financing is a weakness in the context of an ageing society. Over the last 15 years, voluntary and out-of-pocket payments increased, reaching 17.6% of health care expenditure in 2016, remaining below the OECD average of about 20%. The main sources of revenue for the health insurance system are compulsory contributions that are levied primarily on wages. To increase revenues and allow more spending on health care in the future, the tax base needs to be broadened. Within the current scheme, contributions by the self-employed could be increased gradually. More generally, all kinds of income sources could be taxed to contribute to social security financing. Moreover, introducing smart cost sharing can steer patients' behaviour and promote cost-efficient consumption of health care

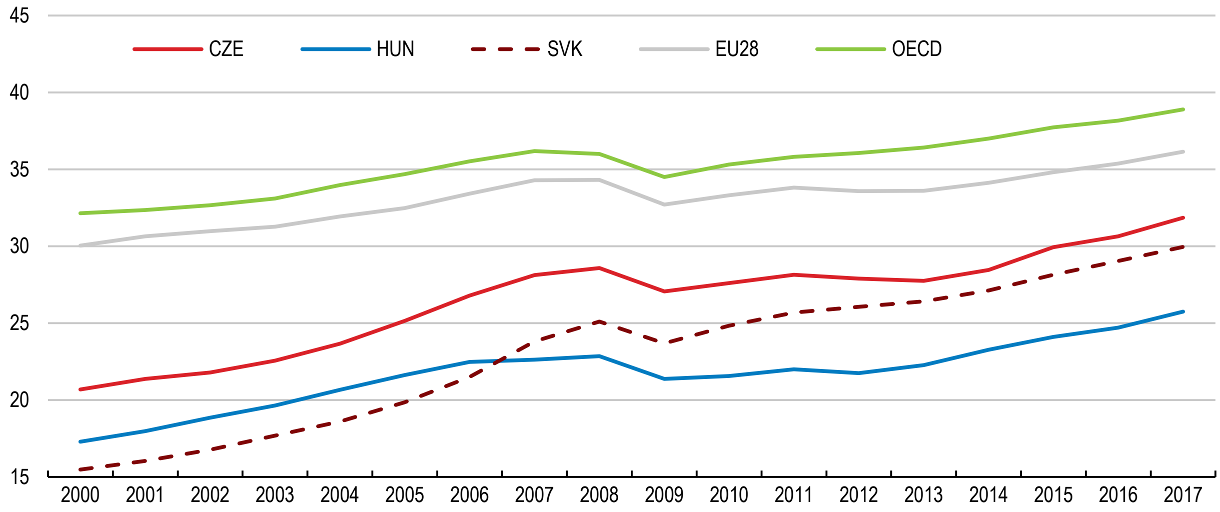
MAIN FINDINGS	KEY RECOMMENDATIONS
Macroeconomic and financial policies	
Average annual inflation at 2.5% in 2017 was above the target. There are signs of overheating in the economy that could affect the inflation.	Gradually raise the policy interest rate and stand ready to fasten the pace if needed.
Banks are exposed to increasing loans for house purchase following rising house prices.	Allow the CNB to set binding prudential rules applicable to individual loans.
The fiscal position is strong.	Keep some fiscal space to cope with future ageing-related spending.
Tackling long run challenges, including the impacts of ageing	
The structure of government revenues relies heavily on social security contributions. The tax wedge is the 6th highest across the OECD.	Rebalance tax revenues by reducing social security contributions and raising indirect taxes (VAT compliance and environmental taxes).
The population is ageing rapidly. The financing of ageing-related spending count already for more than 43% of the government budget.	Link tightly retirement age to life expectancy. Broaden the financing of health care and long-term care by expanding the base of contributions to all types of income.
Need for stronger price incentives to green the economy.	Introduce a carbon component in energy taxation for carbon emissions outside the EU system.
Addressing labour shortages	
Labour shortages are the main bottleneck to economic growth, as the 15-64 year old population declines. Many are inactive because they have poor skills or their skills are mismatched to job vacancies.	Increase resources to education, skilling, reskilling and upskilling. Accelerate immigration procedures and facilitate immigrants integration, including language classes.
Female labour force participation tends to fall with childbirth, contributing to gender inequality.	Keep expanding the supply of affordable childcare facilities. Reduce the maximum duration of parental leave as planned and incentivise fathers to take some of the parental leave. Increase the flexibility of jobs by better enforcement of rights for part-time work, flexible teleworking and shared jobs.
Improving the health care system	
A harmonised monitoring system to evaluate health services is lacking. The decree that sets prices for health care services (Reimbursement decree) undermines the negotiations between health care providers and insurance funds.	Gradually introduce a pay-for-performance scheme for hospitals and doctors based on a broad set of performance indicators. Reduce the scope of the reimbursement decree by limiting its coverage and leave room for negotiations between insurance funds and health providers.
The number of hospital beds is still above the OECD average. The remuneration for GPs is dominated by capitation fees and less by fee-for-service rendering it less profitable than for specialists.	Continue reducing hospital beds by encouraging regions and municipalities to restructure capacities of health services and facilities. Strengthen the role of primary care through gate-keeping and further shift towards a better mix of capitation fees and fee-for-service for GPs.
The average age of doctors is high and may limit health access in the future. Nursing graduates are too few. Adverse lifestyle factors such as smoking, alcohol consumption and the prevalence of obesity are close or above the OECD average.	Increase the capacity of medical faculties and the number of students through scholarships and ensure the sustainable financing of universities. Increase taxes on tobacco, alcohol and consider introducing taxes on unhealthy food and beverages. Promote a healthier lifestyle and further develop education, disease prevention and screening programmes.
Differences in the funding of health care provided in hospitals and long-term care facilities create perverse incentives to use hospitals.	Align payment schemes for long-term care in health and social care setting by co-ordinating the use of user fees.

Key policy insights

Since the early 1990s, the Czech Republic has progressed successfully towards the average OECD incomes. Building on its geographical location and strong industrial base, the country has opened its markets and attracted foreign direct investments. Following the Velvet Revolution in 1989, the economy has become highly integrated in global value chains. Growth has been strong, though volatile. Following slow growth in the wake of the 2007 financial crisis, the Czech Republic has resumed its convergence towards OECD and EU average incomes. The economy is thriving, driven by internal and external demand. Per capita GDP reached 82% of the OECD average in 2017 or 88% of the EU average (Figure 1).

Figure 1. GDP per capita is converging to the OECD average

2010 prices, thousand USD PPP



Source: OECD (2018), OECD Productivity (database).

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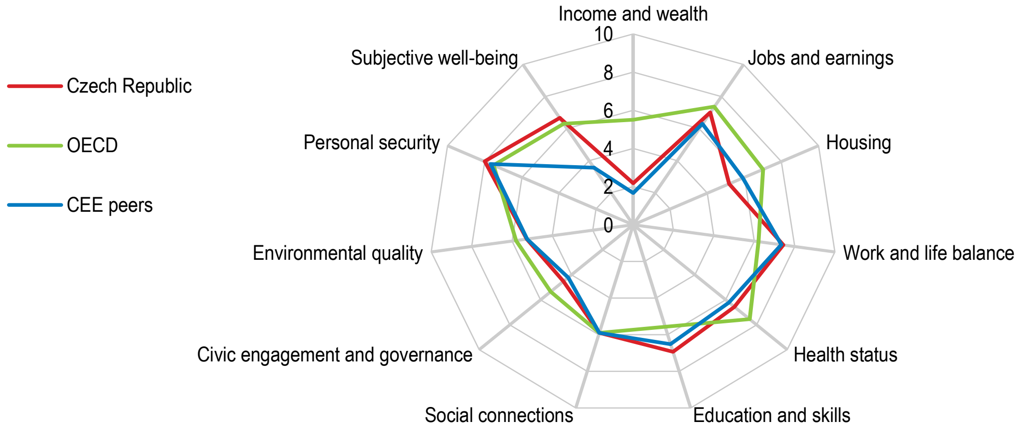
The Czech Republic has adopted many best policy practices in macroeconomic and structural policy areas. A sound macroeconomic policy mix, in particular prudent debt policy, has laid the ground for strong institutions that contribute to high business and consumer confidence. As such, the country is an attractive location for investment. The Czech Republic shows continuous efforts to improve its business environment, for example, by implementing reforms towards broadening access and competition of its markets (as highlighted in Annex A).

To remain sustainable in the long term, economic growth should translate into an environment that creates opportunity for all parts of the population and where the benefits of prosperity are distributed fairly across society. Relative to the OECD average, the Czech Republic improved on many aspects of well-being. In particular, indicators of overall personal security, environmental quality, work-life balance, and education and skills are high. Despite having low inequality, the Czech Republic lags behind the average OECD country in terms of income and wealth (Figure 2). Improvements are also needed in civic engagement and governance, and health. Further, the country is one of the most equal societies in the OECD in terms of disposable income (Figure 3).

Figure 2. Measures of well-being outperform the CEE peers, but lag behind the OECD average

Better life index, index scale 0 (worst) to 10 (best)



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

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

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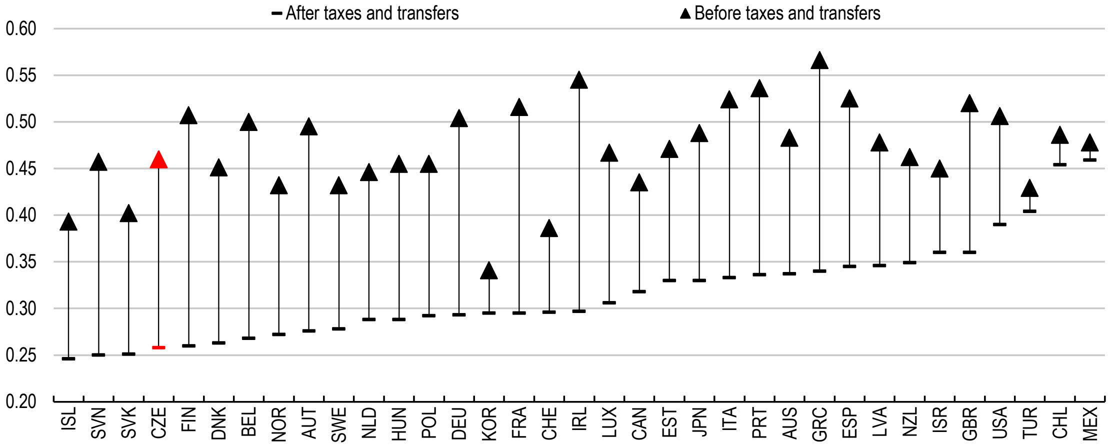
Figure 3. Redistribution reduces inequalities

Gini coefficient, 2015 or latest year



Source: OECD (2018), OECD Income Distribution (database).

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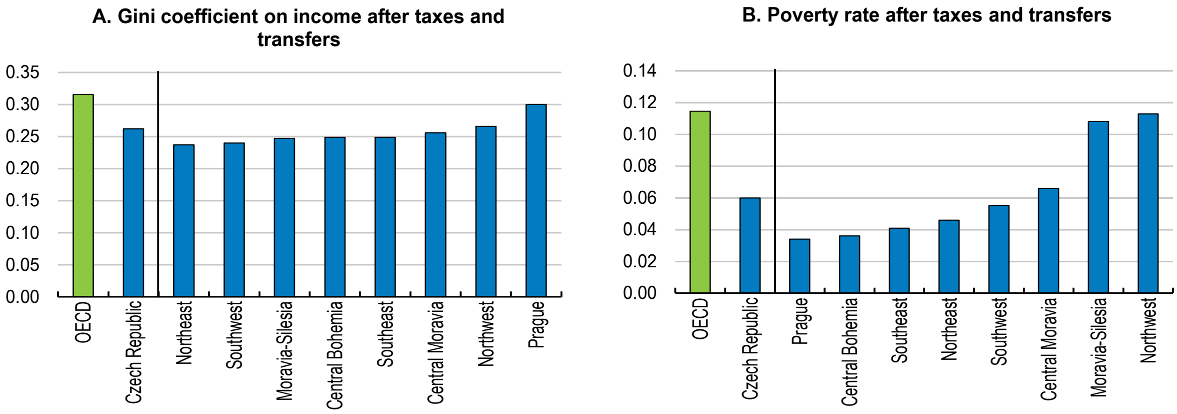
Inequality and poverty have stayed remarkably low in the last decade. However, there are large regional differences in poverty rates, which are high in the Northwest and Moravia-Silesia regions (Figure 4). Inequality is highest in Prague. As the poverty rate is relatively low, this reflects a high dispersion of wages due to differences in skills and productivity between sectors. At the same time, even low-income earners in Prague do better than those in more “peripheral” regions. In the Northwest, the higher poverty rates are driven by low wage/income for most workers.

Figure 4. Inequality and poverty are relatively low but vary across regions

Ratio, 2013



Note: The Gini coefficient is zero if everyone had the same income and is one if a single person had all the income. The poverty rate shows the share of the population with an income of less than 50% of the respective national median income. Income is after taxes and transfers, adjusted for differences in household size.
Source: OECD Regional Well-Being database, http://dotstat.oecd.org/Index.aspx?DataSetCode=RWB and OECD Income Distribution database.

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To sustain further improvements in living conditions, the Czech Republic will need to move up the value chain and improve the skills of its workforce. In the short run, it needs to respond to labour shortages, e.g. by increasing female workforce participation, while preparing for the impact of an ageing society in a longer-term perspective. The key messages of this *Economic Survey* are:

- The economy is booming, but growth needs to be more inclusive. Labour and skills shortages risk becoming main constraints to higher growth. Skilling is a win-win for more inclusive growth as apart from growth it would raise job quality, wages and well-being.
- The fiscal position is strong but spending related to ageing, such as pensions and health, will weigh on public finance. Restraining increases in pensions and other ageing-related spending in the long run is still necessary.
- The health sector works well but will be challenged by an ageing population. Efficiency and quality of service delivery have room to improve.

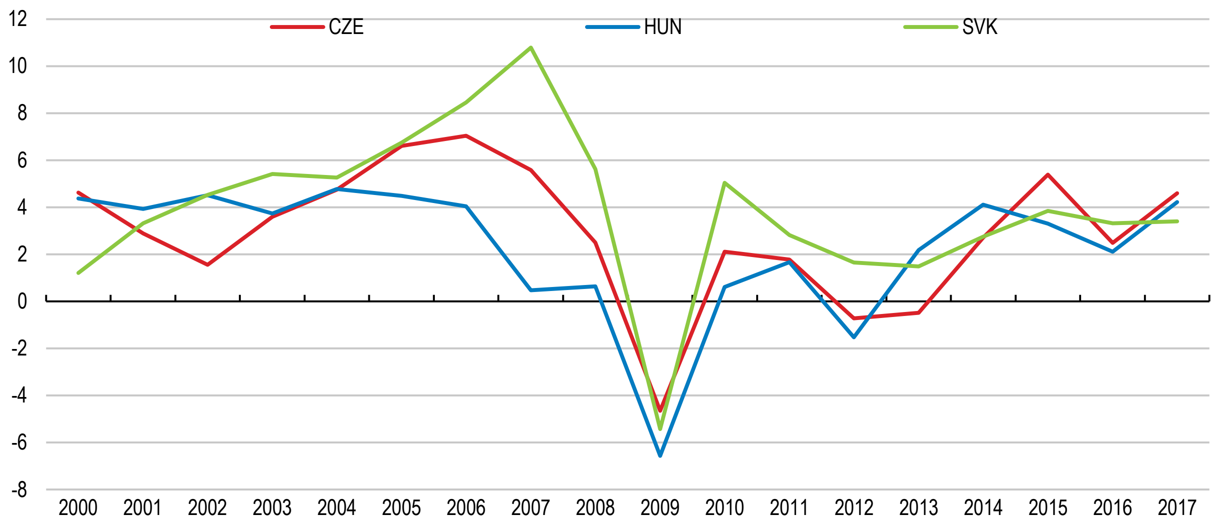
Recent macroeconomic developments and short-term prospects

Growth has picked up strongly

Since 2013 growth has accelerated (Figure 5). The main driver has been EU-financed public investment, especially in 2015. In 2016, growth slowed down to 2.6% as public investment slumped. By contrast, private investment became the engine of growth, supported by rising profits and credit, together with stronger household consumption boosted by rising wages and employment.

Figure 5. Growth is accelerating as in neighbouring countries

Real GDP growth, year-on-year per cent changes



Source: OECD (2018), OECD Economic Outlook (database).

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Table 1. Macroeconomic indicators and projections

Annual percentage change, volume (2010 prices)

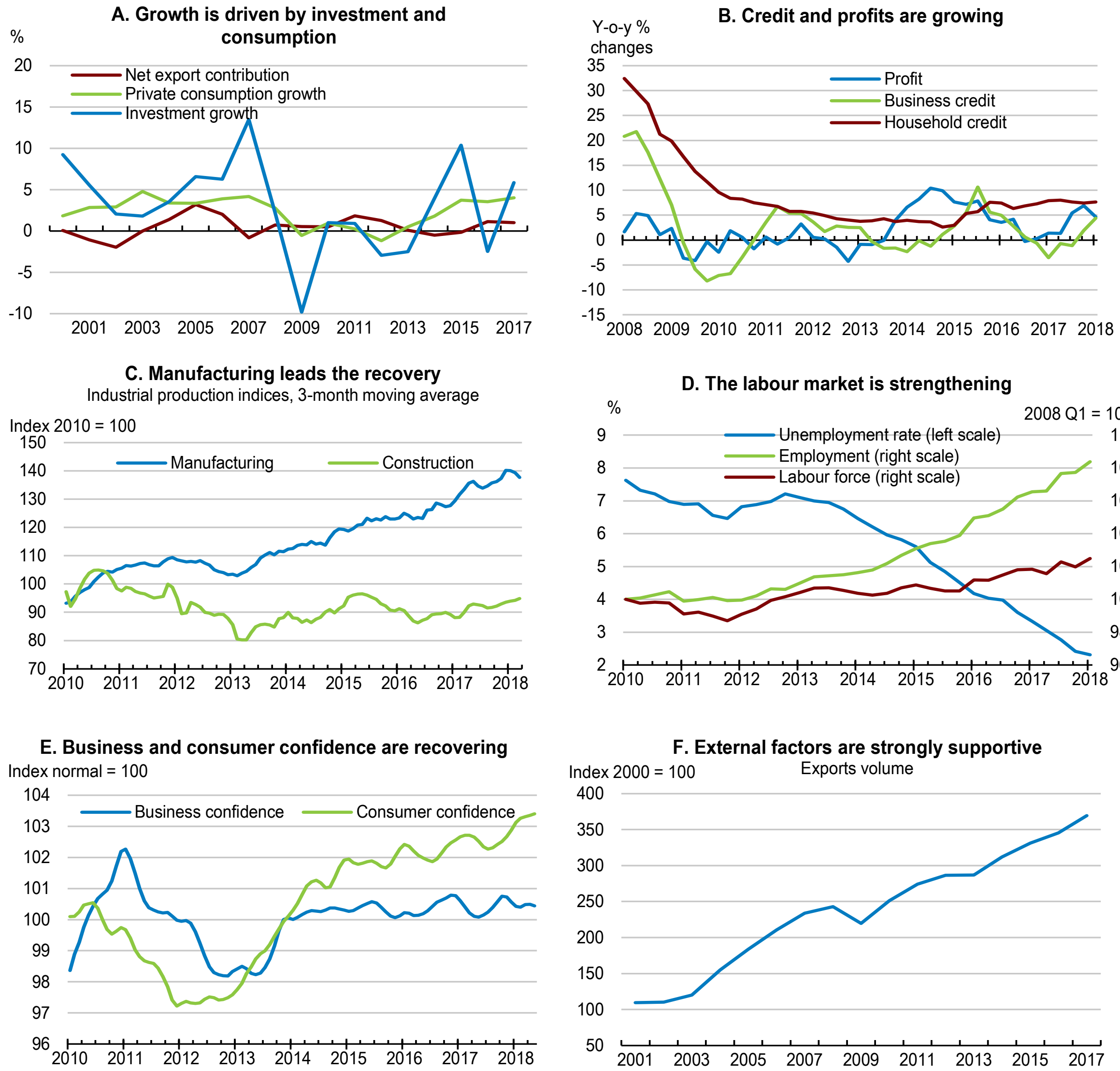
	2014 Current prices (billion CZK)	2015	2016	2017	2018 (projected)	2019 (projected)
GDP[1]	**4,313**	5.4	2.5	4.6	3.8	3.2
Private consumption	**2,073**	3.7	3.5	4.0	3.8	3.5
Government consumption	**849**	1.9	2.0	1.5	1.8	1.6
Gross fixed capital formation	**1,083**	10.4	-2.5	5.9	5.2	4.3
Housing	**145**	22.7	8.9	7.2	5.6	4.9
Final domestic demand	**4,006**	5.1	1.5	4.0	3.8	3.4
Stockbuilding[2]	**32**	0.8	0.0	0.0	0.5	0.0
Total domestic demand	**4,038**	5.9	1.4	3.9	4.3	3.3
Exports of goods and services	**3,559**	6.2	4.3	6.9	5.3	5.4
Imports of goods and services	**3,284**	7.0	3.1	6.2	6.1	5.7
Net exports[2]	**274**	-0.2	1.1	1.0	-0.2	0.1
Other indicators (growth rates, unless specified)						
Potential GDP	. .	2.4	2.7	2.7	2.9	3.1
Output gap[3]	. .	0.4	0.2	2.0	2.9	3.1
Employment	. .	1.4	1.9	1.6	0.8	0.3
Unemployment rate	. .	5.0	3.9	2.9	2.4	2.3
Wage bill	. .	4.8	5.8	8.3	7.0	5.8
Unit labour cost	. .	-0.4	3.3	3.6	2.8	2.4
GDP deflator	. .	1.2	1.2	1.4	1.2	1.4
Consumer price index	. .	0.3	0.7	2.5	2.0	2.1
Core consumer prices	. .	1.3	1.6	2.0	2.0	2.1
Household saving ratio, net[4]	. .	6.8	6.0	5.4	4.8	3.9
Current account balance[5]	. .	0.2	1.6	1.1	0.5	0.3
General government fiscal balance[5]	. .	-0.6	0.7	1.6	1.6	1.4
Gross government debt (Maastricht definition)[5]		40.0	36.8	34.6	32.4	30.5
Three-month money market rate, average	. .	0.3	0.3	0.4	0.9	1.4
Ten-year government bond yield, average	. .	0.6	0.4	1.0	2.0	2.5

1. All GDP components are working day-adjusted.
2. Contributions to changes in real GDP, actual amount in the first column.
3. As a percentage of potential GDP.
4. As a percentage of household disposable income.
5. As a percentage of GDP.

Source: OECD (2018), OECD Economic Outlook 103 (database).

The growth acceleration in 2017 to 4.6% was more balanced than in previous years. It was driven by both internal and external demand. Private consumption remained high in 2017 (Figure 6, Panel A) as household consumption was supported by income growth, declining savings rate as confidence went up and by rising credit (Figure 6, Panel B). Private investment also increased markedly, driven by manufacturing and ICT investment on the back of a continued recovery in profits (Figure 6, Panel B and C). Industrial production increased, particularly in the automotive sector, which benefited from both demand from abroad and domestic orders of machinery and equipment. Exports also kept their expansion in 2017 thanks to accelerating growth in trading partners. But imports were also strong due to the high import component of exports and investment.

Figure 6. Czech economic developments



Source: OECD (2018), OECD Economic Outlook (database); Czech National Bank; OECD (2018), OECD Quarterly National Accounts (database) and OECD Main Economic Indicators (database).

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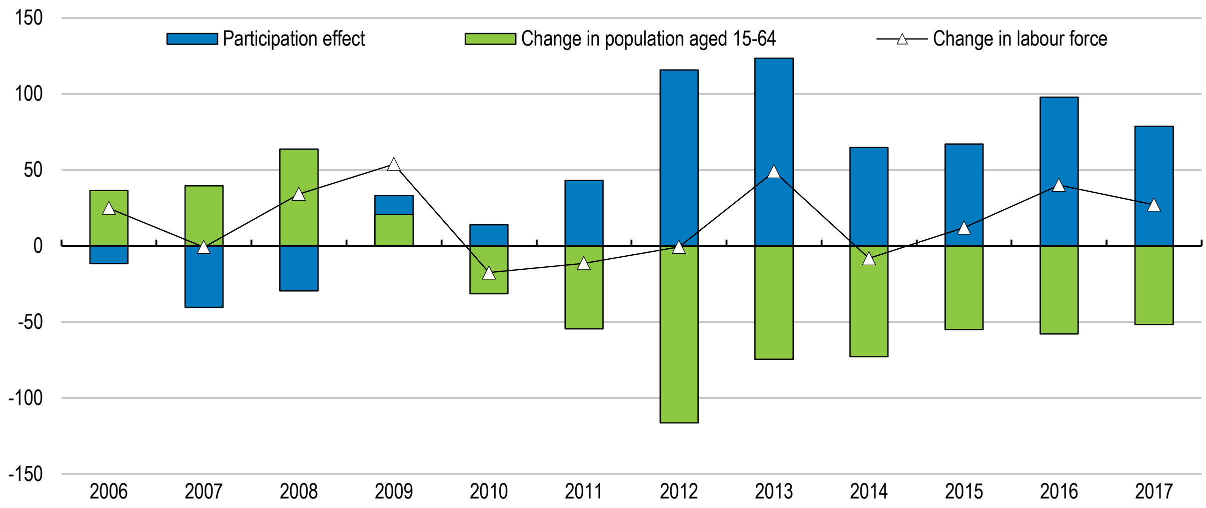
The unemployment rate fell further in 2017 and at below 3% is among the lowest in the OECD (Figure 6, Panel D). Robust job creation pushed up wages by around 6% and the wage bill by 8.3% in 2017, helping to reduce inequalities. The wage bill has been growing strongly in the last three years and at a higher pace than GDP (Figure 10).

The lack of workers is becoming the main bottleneck to higher economic growth. Until recently, labour shortages driven by demographic changes and high employment were partly offset by higher economic activity rates. The ageing process has resulted in a continuous decline of the population aged 15-64 since 2010 (see Figure 7). Nevertheless, this negative effect on the labour force was mitigated in most years by a higher participation rate of persons that have not been economically active in the past, attracted by job vacancies and growing earnings. However, the economy is facing constraints on the labour market and vacancies registered at employment offices increased more than seven folds, from 30 803 in December 2010 to almost 267 000 in April 2018.

Figure 7. Higher participation in the labour market has offset the effect of ageing

Change in 1 000 persons



Source: OECD (2018), Labour Force Statistics (database).

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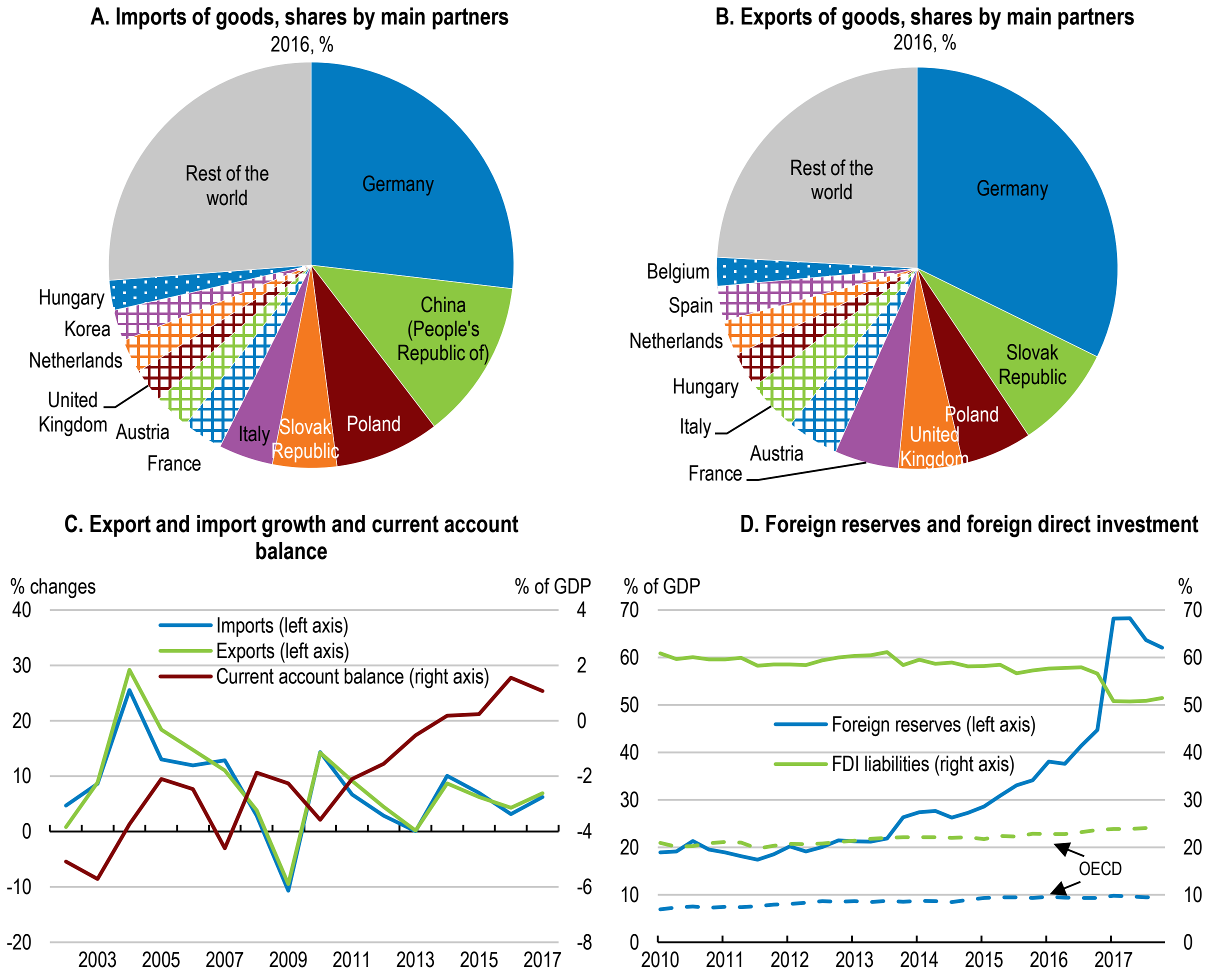
At 3% in 2017, the growth rate of labour productivity is above the post-crisis trend but still below the pre-crisis trend (Figure 9). The level of labour productivity remains relatively low compared to advanced economies due to significant skills mismatches, a low transformation of R&D in innovation and the size of low-skilled intensive manufacturing industries (OECD, 2016[1]).

Exports remain an important source of demand, growing by around 6% in 2017 (Figure 8). Much of this, however, can be thought of as re-exports of imported intermediate goods and ICT technology. Germany is the main partner in this two-way traffic as the Czech industry is closely integrated into German value chains (Figure 8, Panels A and B). The Czech industry is also well integrated into Central and Eastern European value chains.

The current account has been positive in the last four years (Figure 8, Panel C) contributing to foreign reserves accumulation. In addition, the Czech National Bank's exchange rate policy led to further accumulation of foreign reserves to prevent the koruna appreciation from 2013 to 2017. Following the exit from this exchange rate policy in April 2017, reserves started to decrease as a percentage of GDP and the koruna to appreciate.

Figure 8. EU countries are the Czech Republic's main trading partners



Source: OECD (2018), OECD International Trade by Commodity Statistics (database); OECD Economic Outlook (database) and OECD Resilience (database).

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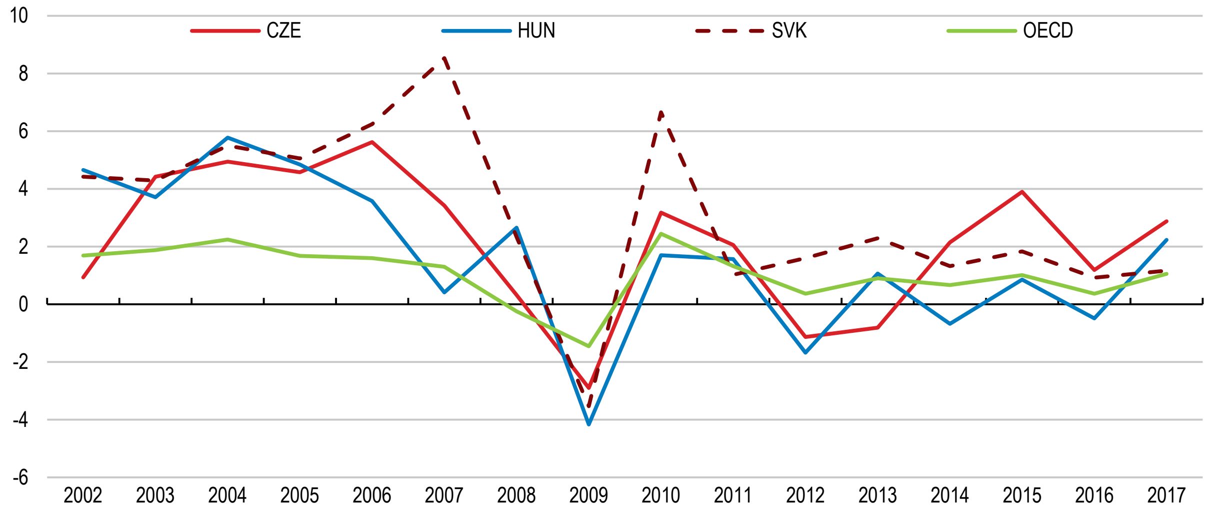
Figure 9. Labour productivity is picking up

Year-on-year per cent changes



Source: OECD (2018), OECD Economic Outlook (database).

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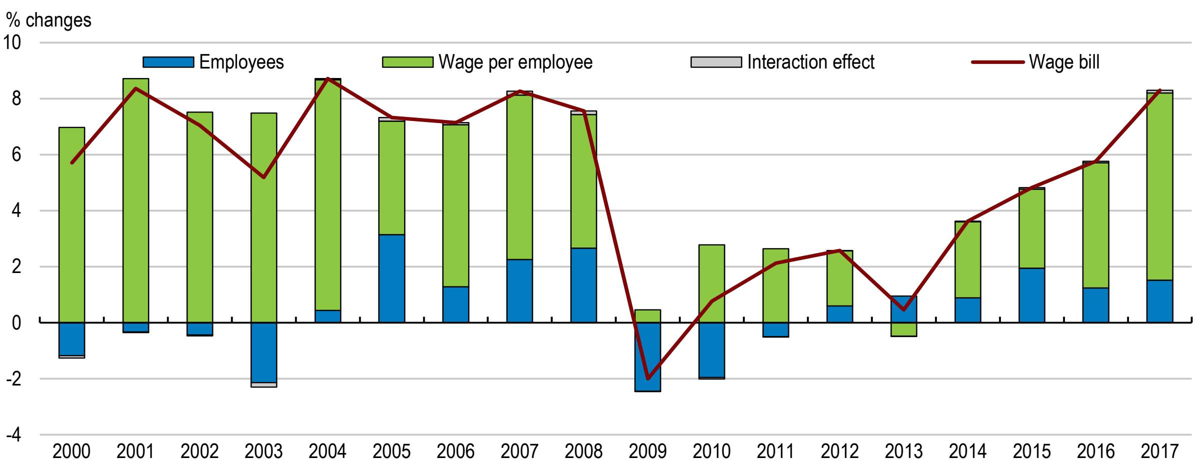
Figure 10. The wage bill is rising

Decomposition of wage bill growth



Source: OECD (2018), OECD Economic Outlook (database).

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Inflation picked up strongly in 2017 reaching on average 2.5% after three years of being around 0.5% (Figure 11). On the supply side, low unemployment combined with high job vacancies led to an acceleration of wage growth, which in turn prompted increases in unit labour cost. In addition, increasing oil prices contributed to inflation. On the demand side, strong household consumption drove up inflation. Food and non-alcoholic beverage prices are the key contributors to inflation.

Prospects and risks

Economic growth is projected to slow in 2018 mainly due to labour supply constraints. However, even at 3.8%, growth will be hovering above its estimated potential (Table 1). Increasing wages and employment will keep household consumption and internal demand high. The increase in public sector wages by 10% on average in 2018 will contribute to higher demand. Private investment is also projected to increase thanks to favourable credit conditions, and greater withdrawal of European Structural and Investment Funds. Moreover, the relative higher cost of labour than capital should stimulate physical capital investment. Also, high housing demand and prices will continue to drive housing investment. The net contribution of the external sector to growth should be more limited as imports and exports grow in parallel. Growing wages and strong household consumption are expected to keep annual inflation slightly above the 2% target of the Central Bank in 2018.

Risks stem equally from internal and external factors. Labour market developments could limit growth or even drive a bigger slowdown of growth than expected. First, the unemployment rate is hitting a floor as the seasonally adjusted unemployment rate in the age group 15–64 declined to 2.3% in April 2018 (CZSO, 2018[2]). The number of job vacancies exceeds 267 000 in April despite increases in participation rates. Also the rise in inflation and wages and slower appreciation of exchange rate may lead to a normalisation of interest rates at a speedier pace than anticipated, increasing the gap with the euro area's rates. That would accelerate the appreciation of the koruna and impact negatively exports and growth (Table 1). The rapid rise in house prices poses a further risk.

Also, there are signs of overheating as the economy is growing above potential, wages are increasing rapidly and the labour market is tight. These dynamics pose a risk of inflation picking up strongly and calling for early interventions of the Central Bank and stronger appreciations of the exchange rate than expected.

On the external side, the Czech economy is particularly exposed to trade disruptions given its high inclusion in global value chains (Table 2, Box 2). Exports in value added terms contribute to around 45% of GDP (OECD, 2017[3]). The United States and the United Kingdom are the second and third destinations respectively in terms of value added exports of the Czech Republic. Therefore, escalation in import tariff hikes would be damaging for growth. As well, a disorderly Brexit would hit the growth prospects.

Table 2. Potential vulnerabilities of the Czech economy

Shock	Potential impact
Limits on the free movement of goods and services after Brexit.	The Czech economy is landlocked and very integrated into European value chains and would be struck by major changes affecting the flow of goods and services across Europe.
Rising protectionist pressures in trade and investment	Tariff increases affecting intermediate goods for the manufacturing sector would have damaging impacts.

Monetary, financial and fiscal policies to promote stability and well-being

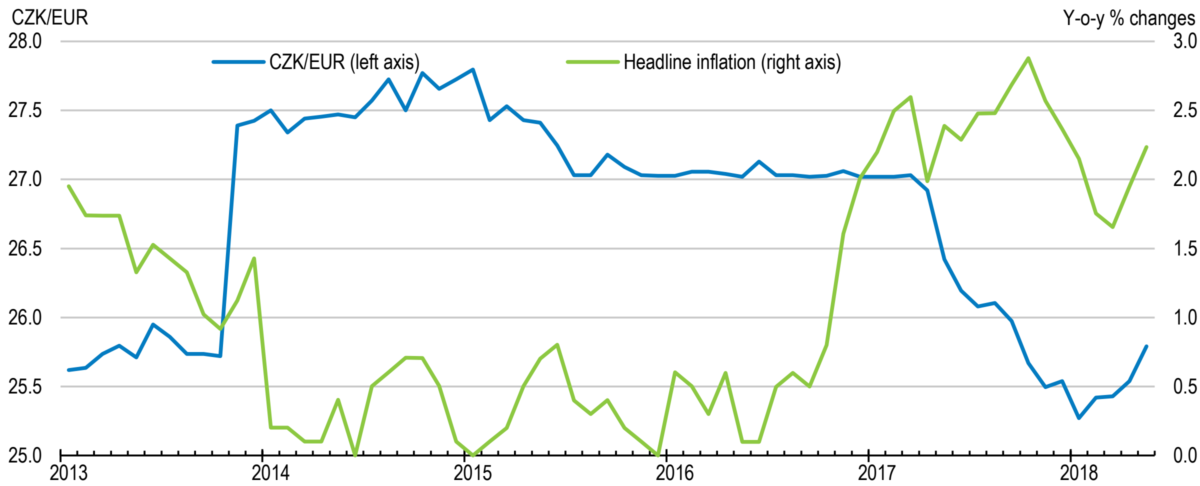
Monetary policy and exchange rate developments

The Czech National Bank (CNB) is committed to an inflation-targeting framework and a floating exchange rate. Confronted with a persistent deflationary risk, in November 2013 the CNB used the exchange rate as a further policy instrument within its inflation-targeting strategy. In particular, the CNB intervened in the foreign exchange market to maintain the koruna above a floor set at CZK 27 to the euro, accumulating foreign reserves (70% GDP in April 2017). In April 2017, the CNB announced the exit from the exchange rate floor policy. In the following months the koruna gradually and continuously appreciated, reaching CZK 25.5 to the euro by the end of 2017. The exit from the exchange rate floor policy is a welcomed development.

As inflation rebounded strongly over the course of 2017, the CNB raised interest rates for the first time in five years in August 2017. Two more hikes followed afterwards, setting the base rate at 0.75% (March 2018). The increase of the interest rate is needed to prevent increasing inflation.

As wages and inflation are rising, monetary policy should raise interest rates further at a gradual pace as inflation remains within the neighbourhood of the target and monitor closely the inflation impact of the developments in the labour market. Should the economy show inflationary signs of overheating, the CNB should stand ready to raise rates accordingly. A faster pace of rising interest rates in the Czech Republic will increase the gap vis-à-vis euro area interest rates and contribute to the appreciation of the koruna. However, an appreciating exchange rate will tend to dampen economic activity and temper inflationary pressures, particularly for imported goods and services (Figure 11).

Figure 11. The exchange rate is appreciating and inflation is around the target



Source: Calculations based on OECD (2018), OECD Economic outlook (database) and Thomson Reuters Datastream (database).

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Financial sector vulnerability

The financial sector is benefiting from the economic boom. Its robustness and resilience have increased throughout 2017 despite increasing exposure to the housing sector. Indeed, the profits of banks, which represent 80% of the financial sector, have been increasing. The return on assets stands at 1.1% compared to 0.5% in the European Union (Czech National Bank, 2017[4]).

The good profits of the banking sector are driven by increasing loans to households at a comfortable interest rate margin (Figure 12). In particular, the margin for consumer loans at 8.6 percentage points remains high. Moreover, non-performing loans have receded markedly in all categories, to 3% of the total in 2017 (Figure 12). The structure of banks' finance appears robust as the ratio of loans to deposit remains low and overall indebtedness is low compared to most OECD countries. Liquidity ratios do not show high exposure risk in the short run as bank assets are high (Figure 12).

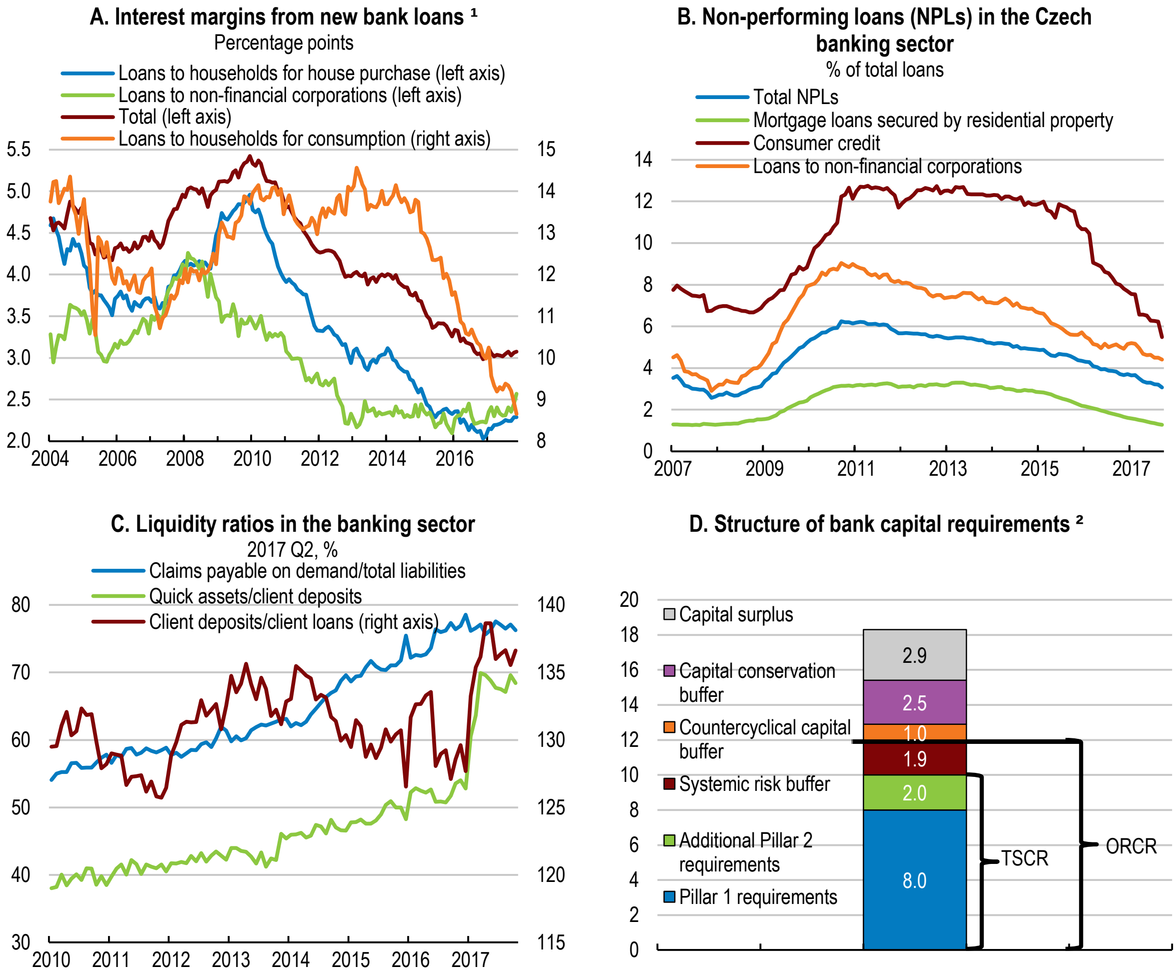
Banks also have strong buffers compared to capitalisation requirements. In addition to the overall capital requirements, the Czech National Bank added two more capital requirements: the capital conservation buffer and the counter-cyclical capital buffer. Banks in the Czech Republic exceeded these requirements by 2.9 percentage points by the end 2017 (Figure 12, Panel D). As the cost of risk remains low due to low interest rates and credit is increasing rapidly, the CNB introduced in January 2017 a 0.5% counter-cyclical buffer. The cyclical component of systemic risk posed by rising credit is persistent, as such the announced increase in the counter-cyclical capital buffers to 1.5% effective from 1 July 2018 appears necessary. Moreover, the counter-cyclical buffer is not affecting so far the availability of credit or the cost of capital. These prudential rules are in line with best practices in OECD countries.

Housing market developments are of some concern. Low interest rates combined with improving economic prospects and rising incomes have resulted in increasing demand for houses. The loans for house purchases have accelerated in the last two years (Figure 13, Panel A) and are reaching historically high levels. The increases in the loan growth rate and supply constraints are mirrored in rising housing prices. The housing sector experienced the highest price growth rate among EU countries in 2017 (Figure 13, Panel C). Moreover, housing prices are growing at a faster pace than wages, though they decelerated moderately in the first quarter of 2018. Therefore, household indebtedness is increasing and banks are exposed to a reversal in household income progress.

Increasing house prices are also the result of constraints on the supply side. Regulatory burdens to receive a construction permit are high and requires on average the fulfilment of 21 procedures compared to about 12.5 across OECD countries (World Bank, 2018[5]). As such, time between planning and finalising a construction project may take several years (OECD, 2017[6]).

To limit banks' exposure to the housing market and ensure that borrowers are creditworthy, the CNB introduced in 2015 and 2017 various prudential measures, in particular loan-to-value (LTV) ratios. For instance, it is recommended that the LTV ratio of no retail loan secured by residential property exceeds 90%. Banks are also encouraged to limit loans that have an LTV ratio between 80-90% at 15% of their portfolio on a quarterly basis. Banks and loan providers are also recommended to prudently assess the loan request of clients whose debt-to-income ratio exceeds eight or whose debt (service)-to-income ratio exceeds 40%. From October 2018, debt should not exceed nine times the net annual income of borrowers and the debt service-to-income ratio should not exceed 45%. These prudential ratios are only recommendations and are not binding, limiting their effectiveness. The CNB can only use the aggregate prudential instruments, in particular additional capital requirements, to influence banks' lending behaviours.

Figure 12. Exposure to financial vulnerabilities is low



1. Interest margin is the difference between the borrowing and lending rates of banks.
2. TSCR is for Total Supervisory Review and Evaluation Process Capital Requirement or Total SREP Capital requirements. "Overall capital requirements" is the sum of TSCR and all buffers. OSCR means "Other relevant capital requirements" and is the sum of the TSCR and the systemic risk buffer.
Source: Czech National Bank.

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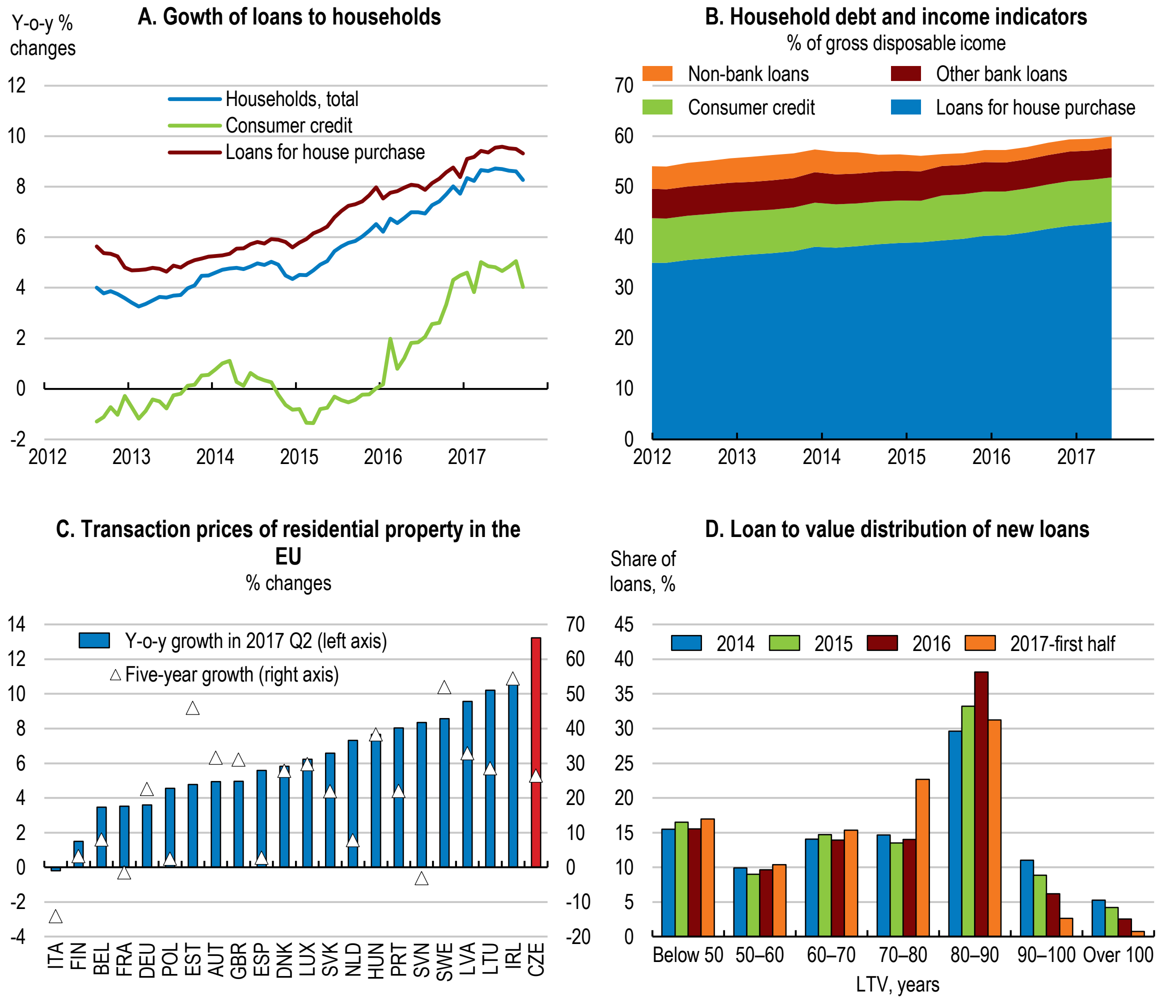
So far, banks are not fully compliant with these recommendations. The share of loans with LTVs of 80-90% stood at 31% in the first half of 2017, and almost 3% of the loans provided had LTVs of over 90% (Figure 13, Panel D), though in June 2017 the compliance significantly improved. Moreover, the valuation of collateral tends to be higher to respect the LTV norm (Czech National Bank, 2017[4]), which is increasing banks' exposure to changes in the economic situation of borrowers.

The CNB could be given the power to set prudential rules applicable to individual loans. However, to avoid overly restricting credit to individuals, the borrowing limits should be judged with regard to borrowers' capacities, in particular their level of income.

Figure 13. Credit and housing market developments raise some concerns



Source: Czech National Bank; Czech Statistical Office and Eurostat.

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Fiscal policy

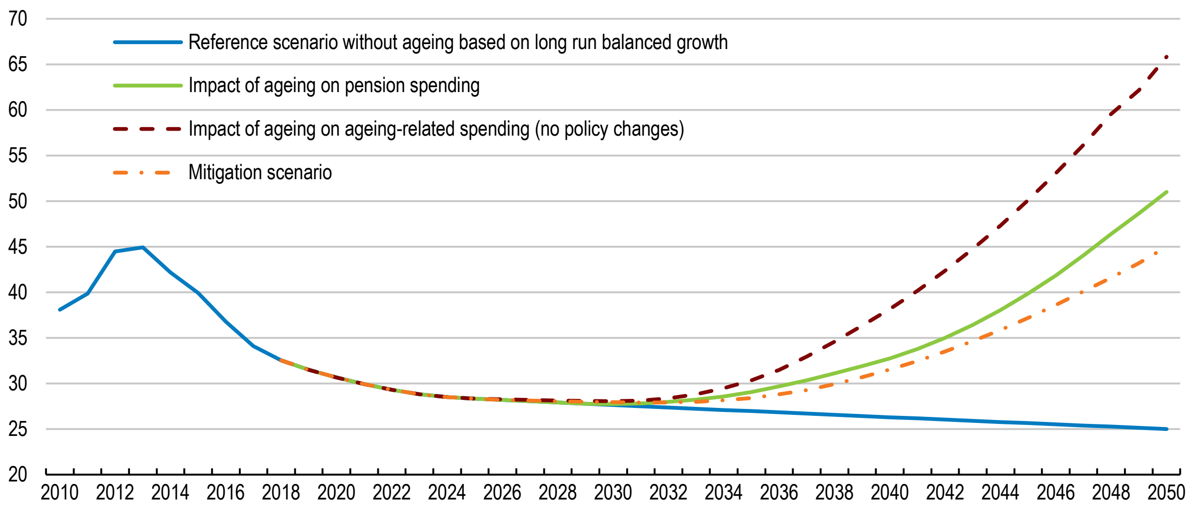
The fiscal position is strong but will be challenged by an ageing population. At 2.3% of GDP in 2017, the primary balance increased compared to 2016 and has been in surplus for three years in a row. Therefore, debt-to-GDP is decreasing rapidly and is one of the lowest in the OECD in 2017 at 35% (Maastricht definition). The primary balance is expected to remain positive in the next two years, further bringing government debt down. At below 30% of GDP, gross debt is considered sustainable for the Czech Republic (Fournier and Fall, 2015[7]). Moreover, fiscal buffers needed to cushion adverse shocks are estimated at 10% of GDP (Fall et al., 2015[8]).

However, ageing will weigh on public finances in a longer-term perspective. If pension policy is not adjusted to cushion the impact of ageing, the debt-to-GDP ratio will increase by more than 20 percentage points by 2050 (Figure 14). Moreover, if no action is taken in any ageing-related spending domain, the debt-to-GDP ratio would double by 2050 and further deteriorate by 2059 – the peak year of ageing impacts on spending.

The Czech Republic is committed to strengthening its fiscal framework to guarantee sustainability in the long run. In line with European Union and past OECD recommendations, fiscal institutions are being set up (Table 3).

Figure 14. Some fiscal space is available to address future needs

General government gross debt, Maastricht definition, in per cent of GDP



Note: The baseline consists of projections for the Economic Outlook until 2019. Thereafter, assumptions are: real GDP grows progressively closing the output gap and from 2025 growing by 2.5%; a balanced budget from 2025; and an average real effective interest rate converging to 2% by 2025. The “impact of ageing on pension spending” scenario assumes increases on pension spending are financed through the deficit which reaches 2.6% of GDP in 2050. The “impact of ageing on ageing-related spending” scenario adds together the impact of ageing on pensions, health and long-term care and assumes the deficit reaches 4% of GDP in 2050. The “mitigation” scenario assumes that half of the ageing-related spending is financed by increasing revenues and limiting spending increases.
Source: Calculations based on OECD (2018), OECD Economic Outlook (database).

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Table 3. Past recommendations to strengthen the fiscal framework

Recommendations in previous *Surveys*	Action taken
Implement the new fiscal framework and the fiscal council.	Acts on budgetary responsibility entered into force in February 2017. A medium-term budgetary objective is set to ensure long-term sustainability of public finances. Two independent institutions are put in place to monitor the respect of fiscal rules: • National Budgetary Council (members appointed on 25 January 2018): surveillance of the respect of fiscal rules and assess the impact of governmental actions on long-term sustainability of public finances • Committee for Budgetary Forecasts (members appointed on 30 April 2018): verify the plausibility of macroeconomic and fiscal forecasts used in the budgetary process.
Reduce the advantages of self-employment in terms of social contributions and personal income tax.	Since January 2018 there has been a 50% reduction of the flat-rate expenditure limit (to CZK 1 million) for entrepreneurs. This measure reduces the fictitious reporting of employment as a self-employment activity and approximates the level of taxation of self-employed to workers.

The stance of fiscal policy has been restrictive for the last two years (Table 4). While more public spending would have contributed to maintain growth momentum in 2016 and push inflation up, the fiscal stance was appropriate in 2017 in the context of strong growth and inflation. As there are signs of overheating, fiscal policy should avoid beeing procyclical. Public investment has fallen from the peak of 5.1% of GDP in 2015 to around 3.3% of GDP in 2016 and 2017. Public investment should increase again in 2018 with the acceleration of the EU funds withdrawal. Government spending, though stable relative to GDP (Table 4), is increasing in volume at a pace slightly higher than GDP. Government spending increased by 5% in 2017 and is expected to grow by 6% in 2018.

The main drivers of increases in government spending are:

- Pension benefits, which went up by 4% partly due to the changes in the indexation formula.
- Benefits for people with disabilities and long-term care.
- Benefits for families with children in particular to support the return of mothers to the labour market and for introducing paternity leave.
- The salary scale of civil servants, which will increase by 10%, excluding teachers, whose scales increased by 15% from November 2017, and health care workers whose scales have increased by 10% as of January 2018. The government wage bill should increase by at least 7% in 2018 (Ministry of Finance, 2018[9]).

These measures are partly in line with past OECD recommendations to help women with children to further participate in the labour market by increasing family benefits. They also confirm that public expenditure is tilted towards social spending and less in investment in infrastructure, R&D and education. The dynamics of public investment remains closely driven by investment co-financed with EU resources, which implies high volatility and can delay investment in important infrastructure such as highways and railways. Future increases of public sector wages should be linked to labour productivity growth in the economy.

Table 4. The fiscal situation is robust

Per cent of GDP

	2015	2016	2017[1]	2018[1]	2019[1]
Spending and revenue					
Total revenue	41.1	40.2	40.3	40.2	39.8
Total expenditure	41.7	39.4	38.8	38.6	38.4
Net interest payments	0.9	0.8	0.6	0.6	0.5
Budget balance					
Fiscal balance	-0.6	0.7	1.6	1.6	1.4
Cyclically adjusted fiscal balance[2]	-0.8	0.7	0.8	0.4	0.1
Underlying fiscal balance[2]	-0.6	0.7	0.8	0.4	0.1
Underlying primary fiscal balance[2]	0.4	1.4	1.4	1.0	0.7
Public debt					
Gross debt	52.0	47.7	43.9	41.7	39.8
Gross debt (Maastricht definition)	40.0	36.8	34.6	32.4	30.5
Net debt	20.0	17.2	12.2	10.0	8.1

1. Projection
2. As a percentage of potential GDP
Source: OECD (2018), OECD Economic Outlook 103 (database).

Government revenue is booming thanks to the expanding economy. Revenue collection increased by 6.5% in 2017 compared to 1.5% in 2016 (Ministry of Finance, 2018[10]) and is projected to remain high in 2018. Increasing household consumption and the introduction of electronic recording of sales and VAT declarations are boosting VAT revenues, which increased by 9.5% in 2017. This has also started to have an effect on VAT evasion, which has decreased recently (European Commission, 2018[11]). Revenues from personal income tax and social contributions have increased notably in 2017 and are projected to remain high in 2018, driven by growing employment and wages.

The Czech Republic has made significant efforts to increase the collection of VAT. Estimates of the VAT Gap conducted for all EU Member States show a downtrend of revenue losses in the Czech Republic during the last 4 consecutive years. However, the estimates have to be interpreted carefully with respect to VAT fraud and tax evasion. While the VAT Gap presents a measure of VAT revenue losses from fraud and non-compliance expressed as the difference between the amount of VAT revenue actually collected and the theoretical amount that is expected to be collected, it can also be influenced by bankruptcies and tax arrears, as well as reporting problems in national accounts. However, the Czech Republic's VAT Gap (at 16.48%) remains above the EU average (12.77%), and continued vigilance and efforts to further reduce this gap are therefore warranted. Consideration should notably be given to further reducing possible complexities from rate differentiation and exemptions, as these are generally known to have a negative impact on compliance.

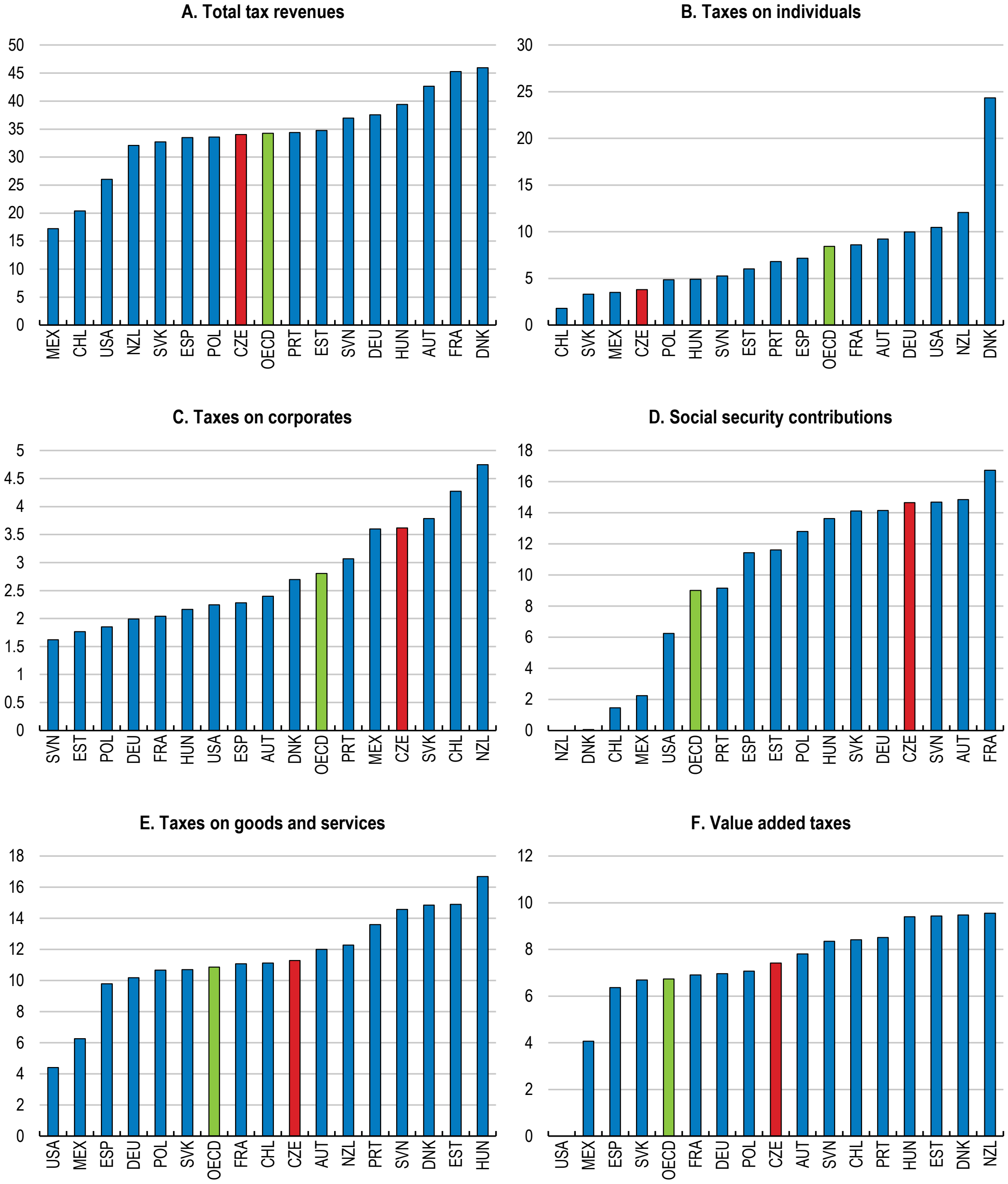
The Czech Republic is also advised to carefully target anti-fraud measures at the sectors and taxpayer profiles that present the highest risk, in accordance with modern compliance risk management strategies, and to avoid that such measures create undue compliance burden for bona fide business. Moreover, regular changes to the tax system are creating uncertainties and compliance costs. The tax system should move towards more simplicity and fewer exemptions or reduced rates and more stability.

The structure of government revenues is unbalanced, with a heavy reliance on social security contributions. While government tax revenues were almost 35% of GDP in 2016, social security contributions were 14% of GDP (Figure 15). In terms of collected social security contributions, the Czech Republic ranks among the highest countries across the OECD. At the same time, personal income tax revenues are low (Figure 15, Panel B). VAT revenues are above the OECD average, but the revenues on goods and services are more similar to the OECD average, indicating that the Czech Republic raises relatively fewer excise duties (possibly on fuels, environmentally related taxes).

Imbalances in the structure of government revenues contribute to relatively high cost of labour. The tax wedge is the 6th highest across the OECD and the average rate of employers' social contributions is the second highest (Figure 16). Up to now, this has not been detrimental to labour market performance, in particular to employment, only because the average wage is low compared to other EU countries. Indeed, the Czech Republic has built its comparative advantage by holding wages low to attract foreign direct investment, in particular in manufacturing industries.

Figure 15. Government fiscal revenues rely heavily on social contributions

2016 or latest, % of GDP



Source: OECD (2017), Revenue Statistics (database).

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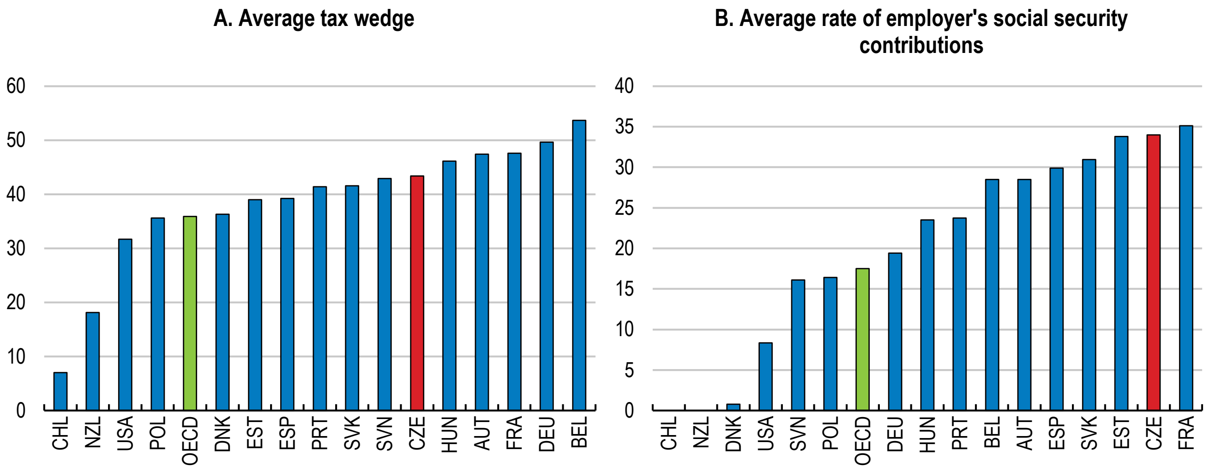
However, as wage convergence towards OECD and EU averages is continuing and given the recent acceleration of wage growth, the high level of wage taxation could become burdensome. To maintain wage competitiveness, the government should consider shifting part of the financing of social protection from wages towards taxes on goods and services or on all kinds of income (e.g. capital and property income) and environmental taxes. For instance, there is room to shift one percentage point of GDP of social contributions collected towards VAT revenues and/or environmental taxes (Table 5). Also, indirect taxes are less harmful for growth than taxes on wages.

Figure 16. The fiscal burden on labour could be lowered

2017, percentage



Note: The tax wedge is the sum of personal income tax and employee plus employer social security contributions together with any payroll tax less cash transfers, expressed as a percentage of labour costs for a single person on average earnings.
Source: OECD (2018), "Taxing Wages: Comparative tables", OECD Tax Statistics (database).

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Table 5. Scenarios of VAT rates to offset lowering social security contributions

VAT rates to offset a decrease of one percentage point of GDP of social contributions collected.

	Actual	Scenario 1	Scenario 2	Scenario 3	Scenario 4
basic %	21	25	24	24	21
reduced %	15	15	18	15	21
2nd reduced %	10	10	13	15	21

Note: Based on 2016 GDP and VAT collected from the different rates. These simulations do not take behavioural responses to tax rate changes into account.
Source: OECD calculation.

Table 6. Financial assessment of fiscal recommendations

Fiscal recommendations	Impacts on fiscal balance
Shift 1 percentage point of GDP of social contributions collected towards indirect taxes and/or environmentally related taxes.	Neutral almost
Keep expanding the supply of affordable childcare facilities by redirecting funds from family related transfers	Direct 0.8 pp of GDP from the 3.3% of GDP family benefits spending.
Favour higher participation of inactive persons through special training and vocational training.	-0.7% of GDP
Link retirement age to life expectancy	+0.2 pp of GDP in 2030 and +0.7 pp in 2040

Source: OECD

Taxes on self-employed remain lower than for employees creating loopholes in the tax system. The Czech Republic has a large number of self-employed compared to OECD countries due to incentives created by the tax system. The assessment base for social contributions is set at 50% of profits, effectively lowering the overall contributions of self-employed people compared to employees. However, recent reforms of self-employed taxation in addition to high job creations and strong wage growth may have contributed to the small decline in the number of self-employed. Some self-employed people have shifted towards limited liability companies or became secondary self-employed (meaning their business activity is not the primary source of income, they have other sources of income). Indeed, a cap on the use of lump-sum expenses has already been tightened over the past few years. The cap was further reduced since January 2018. However, for self-employed people with revenues up to CZK 1 million (around EUR 40 000) the tax system remains advantageous.

The lower assessment base for social contributions for self-employed has direct consequences on the contribution of self-employed to health care and pension schemes and their benefits. While self-employed benefits from the health care system are the same as for employees, their pensions are on average about 13% lower (Šatava, 2017[12]). The risk of falling below the poverty line is higher for retired self-employed individuals, which would increase the burden on public finances through future social transfers.

The current framework incentivises self-employed to under-declare their income. For example, health care contributions of self-employed are defined as the maximum between the minimum contribution level and 13.5% of half of their profits. The marginal effective tax rate for those who declare an income above the minimum contribution level jumps from 0 to 6.75%. Therefore, self-employed are incentivised to declare a revenue so that they contribute the minimum contribution level, which about 90% of self-employed people do. Different options could be considered to raise the contributions of self-employed:

- The government could consider gradually increasing the assessment base for health contributions for self-employed or the minimum contribution level.
- In addition to increasing the minimum contribution level, self-employed would pay a lower contribution rate on their revenues above the threshold. While such design would not increase their health care benefits, it would imply higher pensions in the future as an incentive.

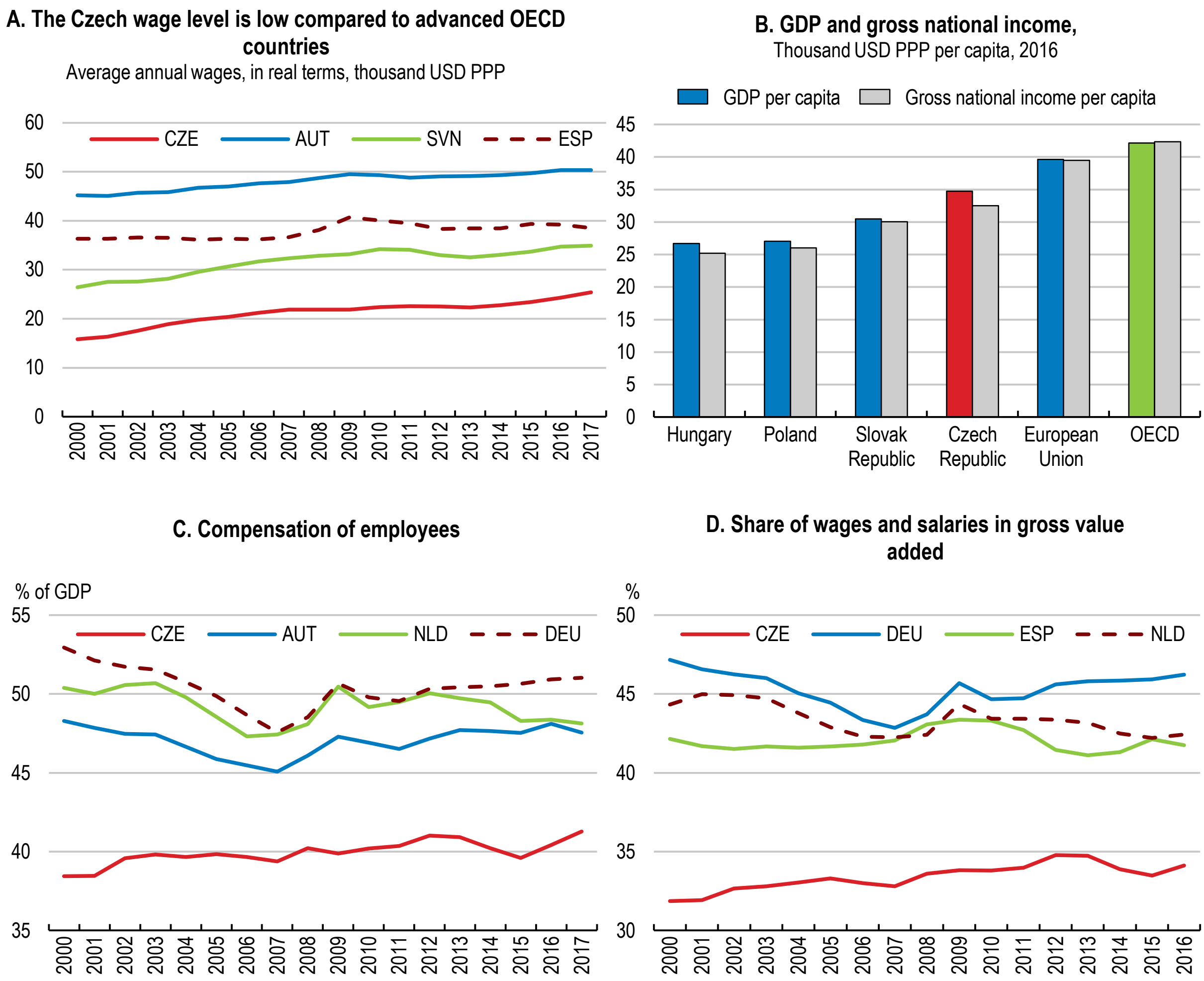
Addressing longer-run challenges to well-being

Sharing growth benefits and convergence

As discussed above, GDP per capita is converging towards the OECD average (Figure 1). However, the convergence in terms of household income is lagging behind (Figure 17). Indeed, compensation of employees represents 41% of GDP compared to 45% for most advanced economies and 51% in Germany (Figure 17, Panel C). Moreover the share of wages and salaries in value added is only 34% compared to 42% in Spain and the Netherlands and 46% in Germany (Figure 17, Panel D).

Low labour shares are influenced by the gap between GDP per capita and gross national income, which is among the highest in OECD countries (Figure 17, Panel B). It is the result of large profit outflows related to foreign direct investments that has benefited the economy and its insertion in global and regional value chains. However, it also means that there is room to improve the sharing of value added to foster a greater convergence to OECD standards (OECD, 2015[13]).

Figure 17. Czech wage levels are not converging to OECD standards



Source: OECD (2018), OECD Labour Force Statistics (database); OECD Economic Outlook (database) and OECD National Accounts (database).

StatLink https://doi.org/10.1787/888933790581 (figure 17)

Box 1. Simulations of the potential impact of structural reforms

Simulations based on historical relationships between reforms and growth in OECD countries allow gauging the impact of structural reforms recommended in this Survey (Table 1). The estimates assume swift and full implementation of reforms. Reforms include a reduction in social security contributions, an increase in training spending and other measures to increase labour supply, notably childcare. Results in Table 7 are not fully comparable to results presented in Table 6 due to differences in methodology.

Table 7. Potential impact of structural reforms on GDP per capita after 10 years

Structural policy	Policy change		Total effect on GDP per capita
	2018	After reform	
Fiscal policy			
A. Reduce social security contributions	34%	31%	1.3%
Labour market policies[1]			
B. Increase spending on activation/Training (2)	7%	14%	0.8%
C. Increase family benefits in kind	0.7%	1.0%	2.1%
D. Increase family benefits in kind (3)	0.7	1.5	5.6%
Total			
A+B+C:			4.2%
A+B+D:			7.7%

1. Table 2 presents the detailed measures.
2. Percentage of GDP per capita
3. Percentage points.
Source: OECD calculations based on Balázs and Gal (2016[14]), "The quantification of structural reforms in OECD countries: A new framework", OECD Journal: Economic Studies, Vol. 2016/1 and Balázs (2017[15]), "The quantification of structural reforms: taking stock of the results for OECD and non-OECD countries", OECD Economics Department Working Papers, forthcoming.

Table 8. Type of reforms used in the structural reform simulations

Structural policy	Structural policy changes
Fiscal policy	
Reduce social security contributions	Reduce social security contributions, which fund pensions, health care and unemployment benefits, from 34% of gross wages to 31%.
Labour market policies	
Increase spending on vocational training and activation.	Increase expenditure per unemployed as a percentage of GDP per capita.
Increase family benefits in kind	Increase family benefits in kind, such as childcare services, from 0.7% of GDP to 1% or 1.5% by shifting family cash benefits.

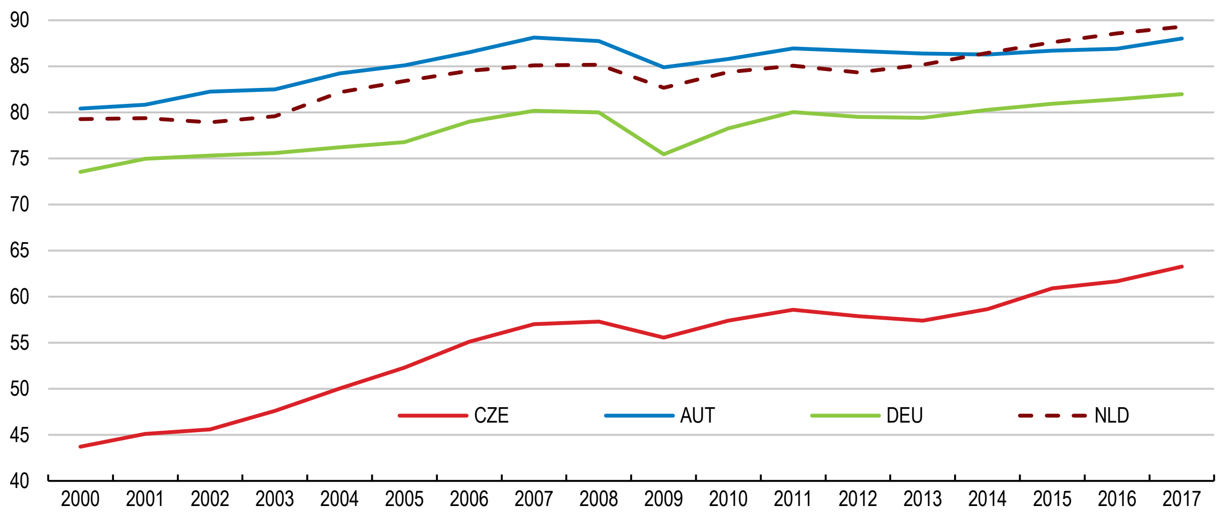
The low level of labour productivity explains the differences in wage levels compared with advanced OECD economies, which, however, allows for an increase in wages without immediately hurting firms' competitiveness (Figure 18). Over the past two decades, low labour costs have contributed to a large inflow of FDI, which has been fundamental for the Czech integration in European production networks (Pavlínek and Ženka, 2015[16]). Recent wage developments are welcomed, but further increases should be backed by corresponding labour productivity growth. To boost productivity and provide a basis for sustainable wage growth, the economy should better leverage its integration in global value chains (GVCs) and move up the value chain towards knowledge and technology-intensive activities (Box 2).

In the Czech Republic, product and process upgrading prevail (Antal, De Castro and Vlčková, 2015[17]; Pavlinek and Zenka, 2011[18]). To achieve economic upgrading, the Czech economy has to shift from low-skilled activities to higher-skilled activities (Barrientos, Gereffi and Rossi, 2011[19]), increasing the value added that is created and improving the position of firms in GVCs (Humphrey and Schmitz, 2002[20]). To facilitate functional and chain upgrading, innovation capabilities have to be strengthened, and a wide range of knowledge-based capital including superior managerial know-how has to be built up to identify new profitable products (OECD, 2013[21]; OECD, 2016[1]). Endowing workers with the right skill sets – through education and lifelong learning – is also crucial.

Benefits from economic upgrading could encompass spillover effects into the local economy extending beyond firms participating in GVCs. For example, local firms can increase productivity by learning about advanced technologies or good organisational and managerial practices even when not taking part in GVCs (Saia, Andrews and Albrizio, 2015[22]). For local firms to be able to benefit from knowledge diffusion and technological adaptation, the workforce has to be equipped with the right skill-set (OECD, 2017[23]; Morrison, Pietrobelli and Rabellotti, 2008[24]; OECD, 2015[25]). These measures could support more inclusive growth.

Figure 18. The gap between the Czech productivity level and that of advanced economies remains large

Real GDP per person employed, thousand USD PPP



Source: OECD (2018), OECD Productivity (database).

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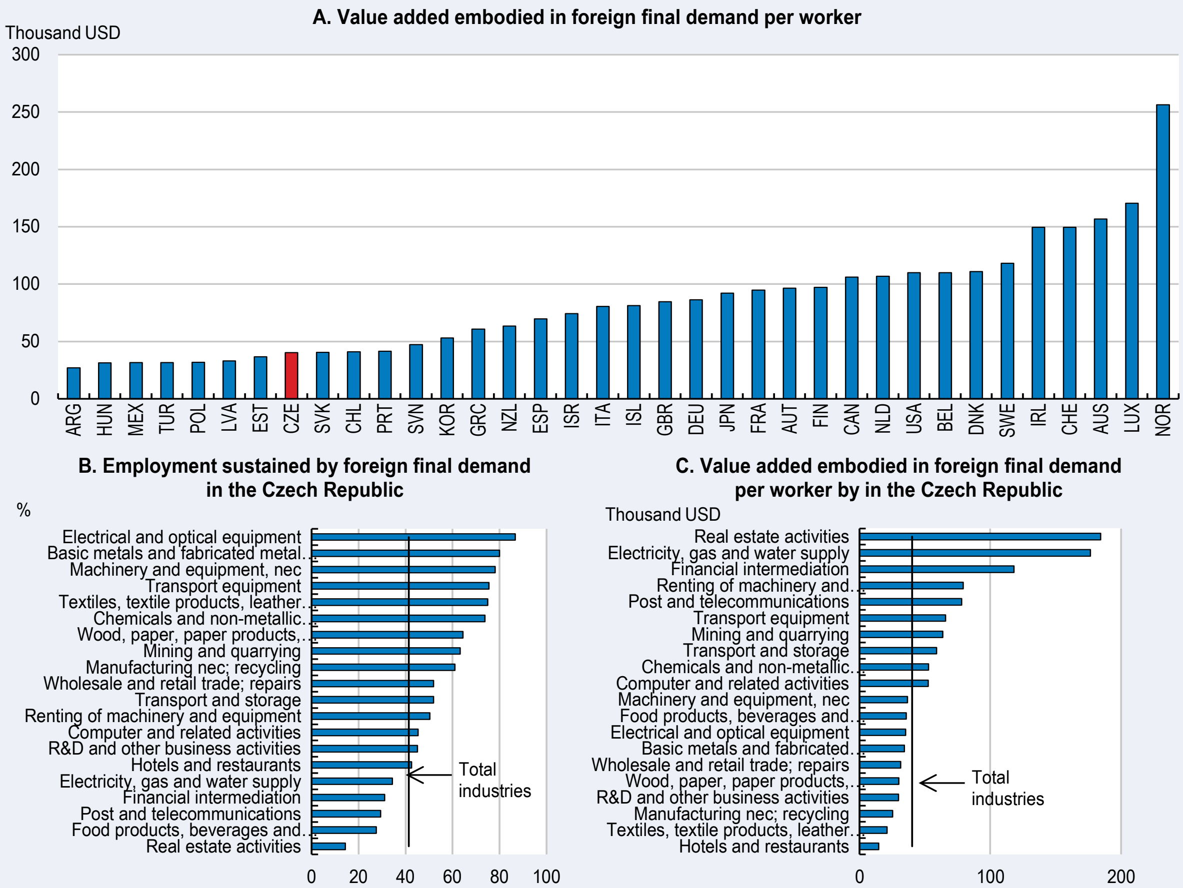
Box 2. Economic upgrading through integration in Global Value Chains (GVCs)

Geographic proximity to Western European markets and significantly lower labour costs, a well-developed supplier base and increasing agglomeration economies have contributed to Czech Republic's high integration in GVCs over the last two decades (Pavlínek, 2015[26]). More than 40% of all jobs are generated through participation in GVCs (Figure 19, Panel B). In some manufacturing industries - e.g. electrical and optical, machinery and transport equipment, textiles - participation in GVCs sustains more than 75% of jobs. Despite the high integration in GVCs, the value-added resulting from this participation is low and most jobs are in less knowledge-intensive sectors (e.g. mass assembly in the automotive industry). Thus, in industries where a large share of jobs is sustained by participation in GVCs, the value added per worker is comparatively low.

Figure 19. Benefits from participating in GVCs are moderate

2011 or latest available



Source: OECD (2018), OECD STAN (database) and OECD TiVa (database).

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The amount of value created has a direct effect on the economy in terms of employment, income and also economic growth. Value added varies across the different stages of the production process, with most of it added at the beginning or the final stages. The fabrication process tends to add the least value to the product.

There are several ways to realise higher value added from GVC participation. Humphrey and Schmitz (2002[20]) distinguish four basic types of upgrading, which have been documented in vast number of case studies (OECD, 2013[27]):

- Process upgrading: undertaking tasks with significantly greater efficiency and lower defect rates, and process more complex orders.
- Product upgrading: supplying higher value-added products owing to their superior technological sophistication and quality, and also introducing novel products faster.
- Functional upgrading: starting to supply competitive products or services in value chain activities which are associated with higher value added.
- Chain upgrading: participating in new GVCs that produce higher value-added goods or services, often leveraging the knowledge and skill acquired from the current participation in GVCs.

Source: Based on OECD (2017[28]), Employment Outlook 2017; OECD (2017[23]), Skills Outlook 2017: Skills and Global Value Chains.

Addressing labour market challenges

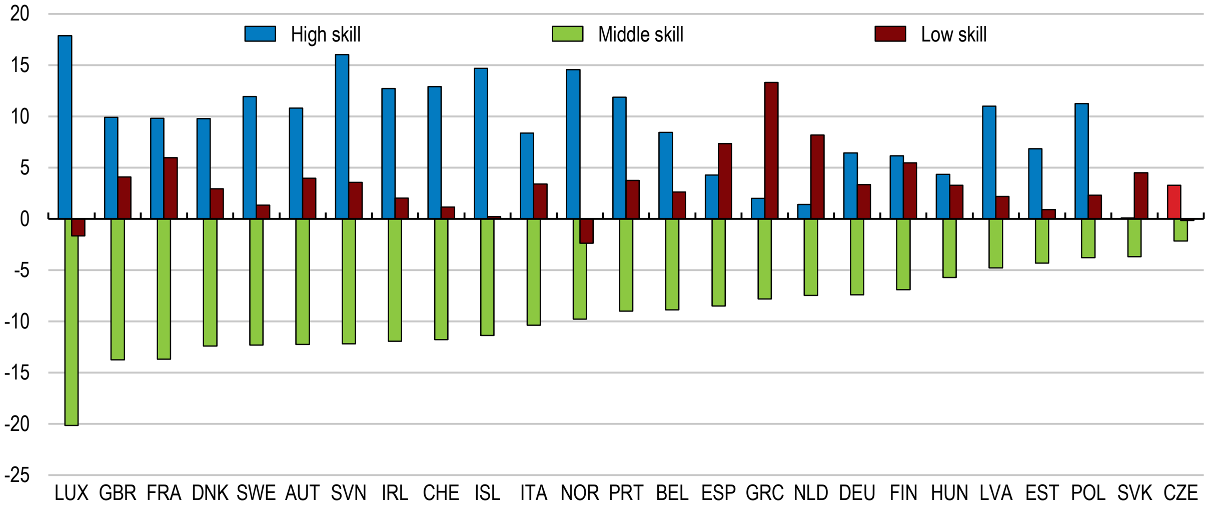
Structural changes in the labour market require adjustments of skills

The Czech labour market is shifting towards higher-skilled employment. Since transitioning from central planning, the service sector has expanded and manufacturing has become tightly integrated into global value chains, changing more and more the skill set that was needed in the labour market (OECD, 2014[29]). From 1997 to 2017, employment shifted from medium-skilled towards high-skilled jobs (Figure 20). Over this period, technology adoption measured as the level of ICT capital services per hour worked has grown by about 300% (OECD, 2017[23]). The increase in computerisation and automation not only led to a change of job profiles, but also to a loss of non-cognitive routine jobs due to automation.

Sectors such as manufacturing, IT and business services will continue expanding, creating new jobs in these sectors. Employment projections from CEDEFOP (Figure 21) suggest that the need for high-skilled workers will increase, whereas the demand will decrease in low and middle-skilled employment. Similar results are found by Antal et al. (2015[17]) who showed that low-skilled jobs are at the greatest risk. By contrast, the demand for highly skilled workers, especially those with a technical education, is found to increase. Providing workers with the right skill set and training to adapt to a changing environment will also increase the resilience towards automation. Estimates suggest that about 10% of jobs are at high risk of being automated within the next 10 to 20 years, and another 36% are at risk of significant change (Arntz, Gregory and Zierahn, 2016[30]).

Figure 20. The labour market has shifted from medium towards high-skilled employment

Percentage point change in share of total employment, 1997 to 2017



Note: High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3. That is, legislators, senior officials, and managers (group 1), professionals (group 2), and technicians and associate professionals (group 3). Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8. That is, clerks (group 4), craft and related trades workers (group 7), and plant and machine operators and assemblers (group 8). Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9. That is, service workers and shop and market sales workers (group 5), and elementary occupations (group 9). As agricultural, fishery and mining industries were not included in the analysis, those occupations within ISCO-88 group 6 (agricultural and fisheries workers) were likewise excluded. The above chart includes 15 of the 18 listed industries. The excluded industries are the following: Agriculture, hunting, forestry and fishing (1), mining and quarrying (2), and community, social and personal services (18). As a result of unavailable data for 1997, a different starting year was used for some countries. Latvia and the Slovak Republic used 1998.

Source: Eurostat.

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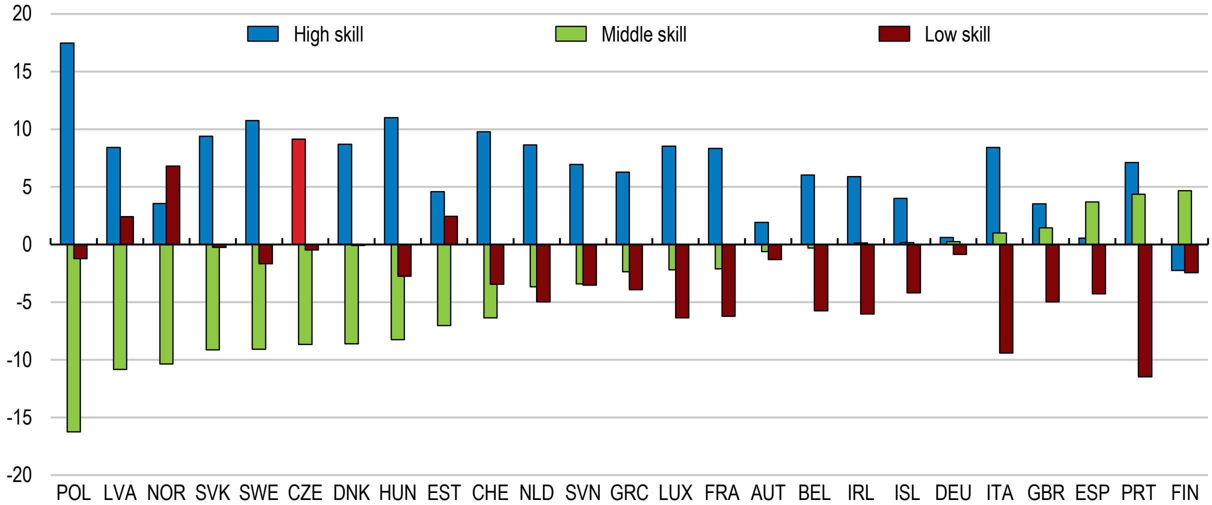
Preparing the labour market for technological change is high on the political agenda. Significant support is currently devoted to the area of digital competences as well as preparing the economy and society for the next industrial revolution. A key policy of the Industry 4.0 strategy is to upgrade data and information infrastructure to facilitate knowledge diffusion and adoption of technological change. This is expected to increase competitiveness through more efficient manufacturing, meaning faster, cheaper and resource-effective production and to enhance the ability of Czech companies to be involved in GVCs (European Commission, 2017[31]). The implementation of the Industry 4.0 strategy should be accelerated and a funding strategy for participating projects needs to be developed. Furthermore, policy actions that foster productivity and innovation as highlighted in the last survey (OECD, 2016[1]) have to follow.

Figure 21. The shift towards high-skilled employment is expected to continue

Percentage point change in share of total employment, 2015 to 2025



Note: High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3. That is, legislators, senior officials, and managers (group 1), professionals (group 2), and technicians and associate professionals (group 3). Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8. That is, clerks (group 4), craft and related trades workers (group 7), and plant and machine operators and assemblers (group 8). Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9. That is, service workers and shop and market sales workers (group 5), and elementary occupations (group 9). As agricultural, fishery and mining industries were not included in the analysis, those occupations within ISCO-88 group 6 (agricultural and fisheries workers) were likewise excluded. The above chart includes 15 of the 18 listed industries. The excluded industries are the following: Agriculture, hunting, forestry and fishing (1), mining and quarrying (2), and community, social and personal services (18). As a result of unavailable data for 1996, a different starting year was used for some countries. Finland, Sweden and the Czech Republic used 1997, while the Slovak Republic used 1998.
Source: European Centre for the Development of Vocational Training (Cedefop) (2017), Forecasting skill demand and supply, http://www.cedefop.europa.eu/en/events-and-projects/projects/forecasting-skill-demand-and-supply/.

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Identifying skill needs and preparing the workforce for the future

The relation of workers graduated in a field to the number of jobs in that respective field, indicates a lack of graduates in mathematics, science and statistics, health and welfare, but also in services such as finance and insurance (Montt, 2015[32]). Current developments suggest that the stock of skills in the labour force may not suffice to address emerging shortages in certain sectors, such as health and the IT (European Centre for the Development of Vocational Training, 2017[33]). Although the share of the population with tertiary education has been increasing from 23% in 2010 to 33% in 2016, students do not graduate in fields that are in high demand of firms. For example, in 2015 only 4% of tertiary graduates had studied information and communication technologies, and 10% health and welfare (OECD, 2017[34]). Moreover, this trend is expected to continue as the share of tertiary students currently enrolled in IT or health care does not indicate a significant change in the short to medium term. About 5% of students in 2015 were enrolled in information and communication technologies, and 12% in health care (OECD, 2017[34]).

To guide career decisions and assess potential skill gaps, the Czech Republic is aiming to make labour market forecasts with a focus on emerging skill needs within the framework of the KOMPAS project. Providing effective, up-to-date and tailored information, advice and guidance is one crucial element in developing strategies to address emerging skill gaps. In combination with high-quality initial education and training, this assessment forms the basis for setting incentives for individuals to invest in those skills most needed and to raise educational capacities in the relevant institutions to address the skill gap in the long term (OECD, 2017[35]). Such initiatives should further be part of a sustainable framework and could be directly linked with actual labour market policies and trainings.

Long-term strategies need to be complemented by short- and medium-term solutions focusing on skill upgrading of the existing workforce. As shifting the skill composition of the labour force through new entrants takes time, the current labour force should be provided with adequate training options to adapt to new skill demands. Vocational education should be further developed to play a significant role in overcoming skill mismatch through the involvement of employers to supply workers with the needed skill set. Support for vocational education is provided through projects that aim to increase the professional skills of employees, such as "Support for Vocational Training for Employees II" (POVEZ II) and "Education and Skills for the labour market II" (VDPT II). Retraining should encompass solutions for all skill ranges based on modern systems of lifelong learning that help workers to adapt and update their skills over the course of their career. In particular, specific programmes should be developed for old-aged workers to ensure that they are equipped to adapt and participate in the changing economy.

Changes in the occupational structure evoked by digitalisation and automation require a holistic policy framework to contain the risk of increasing inequality. The social security system needs to adapt to new forms of employment and ensure adequate coverage for workers on non-standard work contracts (OECD, 2017[35]). For example, rather than linking entitlements to the employment history, they should be linked to the individual and therefore allowing greater labour mobility. Moreover, new forms of employment which do not fit easily with the standard definition of employment need to be covered by the tax system and require solutions with respect to the minimum wage, employment protection legislation, working time regulations and regulations to safeguard occupational health and safety (OECD, 2017[35]). As such, labour market and skills policies as well as tax and benefit schemes will need to be adjusted to promote skill adaptation and labour mobility. At the same time, it needs to be ensured that even low-paying work provides a sufficient income to avoid poverty.

Mobilising domestic labour

To ensure economic growth, all potential sources of labour supply need to be mobilised. The increasing shortage in the labour market has already led to a decline in the employment gap of traditionally disadvantaged groups, such as the young (15-29-year-olds), non-native, old age, people with disabilities and mothers of young children (OECD, 2017[28]). Despite the slight improvements, further advances have to be made as the labour market misses out on talent (Table 9). Participation to the labour market of inactive persons could be favoured through special training and adaptation programmes.

Though participation of Czech women in the labour market is high, available skills of women are not utilised fully in the labour market. Women are increasingly investing in their education and over the past few years, more women than men graduated from tertiary education (63% of first-time graduates in 2015 were female). While men tend to be overrepresented in most STEM fields, female graduates form the majority in mathematics and natural sciences (59.6%) and health and welfare studies (83.5%). Although these skills are in high demand, they are not available to the labour market as one out of three women aged 25 to 34 that graduated in a STEM field with a tertiary degree reported being inactive in 2016 (OECD, 2018[36]). For the ones aged 35 to 44, still 15% reported being inactive. By contrast, less than 7% of men having graduated with a STEM field reported being inactive in both age groups combined.

Despite recent efforts, reconciling career and family choices continues to be a problem for women in the Czech Republic. As already highlighted in last surveys (OECD, 2016[1]; OECD, 2014[29]), female labour force participation tends to fall with childbirth contributing to gender inequality over the subsequent career path. While the employment rate between men and childless women differs only slightly, female labour force participation drops once women have children (Eurostat, 2017[37]). The difference between the employment rate of women aged 25-49 without children and with children under the age of 6 in 2016 exceeds 40 percentage points (see Figure 22). This places the Czech Republic among the three EU countries (together with Slovakia and Hungary) with the most sizeable consequences of childbirth on mothers' employment. The break in the employment history of mothers further translates into gender gaps in the overall employment rate and lower average earnings.

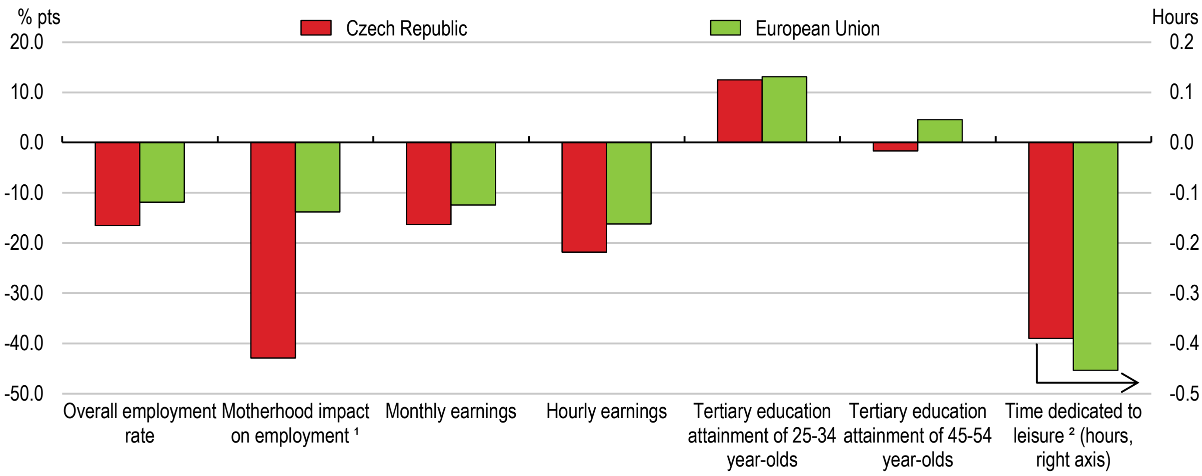
The long break in young mothers' employment is partly due to parental leave rules, which do not incentivise resuming work. Spending on maternity and parental leave is the highest among OECD countries, reflecting a public policy preference for home care over formal childcare. The Czech Republic offers up to 216 weeks of maternity and parental leave, which is significantly higher than the OECD average of about 85 weeks (19.1 weeks of maternity and 65.7 weeks of parental leave in 2016) (OECD, 2018[38]). However, the total amount of parental allowance can already be drawn in six months of parental leave. Furthermore, take-up rates are among the highest in the EU. While parental leave can be shared between the parents, mothers tend to be the principal user. In 2015, only about 2% of men used any kind of parental leave (OECD, 2016[39]). Moreover, from 2018 the government is increasing pro-family spending by CZK 5 billion to introduce paternity leave and increase social benefits. As highlighted in the last survey, conditional on the expansion of affordable and quality childcare, the maximum duration of parental leave should be reduced as planned. Fathers should be encouraged to take some of the parental leave. Child care facilities should be further developed by redirecting funds from family transfers towards OECD average.

Long maternity leaves are also due to a lack of accessible and affordable childcare services for young children. In 2014, only 5.6% of children aged two years or less were enrolled in formal childcare services and pre-school facilities. As such, the rate is significantly lower than the EU average (31%) and OECD-28 average (34%) (OECD, 2016[40]). As the maximum length of entitlement for parental allowance is until the child is aged up to 4 years, enrolment rates of children aged 3 to 5 in pre-primary and primary education are much higher at around 80%. However, participation rates for three-year-olds are with 68% far lower than those for the five-year-olds (89%), indicating a shortage of child-care facilities. Thus, out of the approximately 20% of respondents with unmet need for formal childcare services, about 28.5% declared as main reason that no child care places were available or that the opening hours were unsuitable (Eurostat, 2018[41]).

The Czech government has introduced new measures to expand access to child-care facilities. Following an amendment to the education act of 2016, public kindergartens are in the process of being scaled up, guaranteeing a place for children older than 4 years since September 2017. From 2018, there will be guaranteed places for all children older than three years and from 2020 for all children older than 2 years. In addition, firms are incentivised to provide children groups for children of their employees. By 2017, firms, NGO's and others provided 431 children groups accommodating 5 530 children (Ministry of Labour and Social Affairs). These developments are in line with previous recommendations regarding the expansion of child care and should be continued.

Figure 22. Gender gaps in the labour market are large

Percentage point difference between female and male outcomes, unless specified



1. Difference in employment rates of women aged 20-49 with children up to 6 years old and those without children.
2. The number of hours per day that, on average, full-time employed people spend on leisure and on personal care activities. This is one component of work-life balance dimension of the OECD Better life index 2017.
Source: OECD (2018), OECD Labour Force Statistics (database); Eurostat; OECD Earnings (database), OECD (2018), Education at a Glance (database); and OECD (2017), Better Life Index 2017.

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Childbirth and long maternity leave affect the career opportunities of women. The unemployment rate of women with children is twice as much as that of childless women. Re-entering the labour market after taking parental leave seems to be especially difficult. About 60% of unemployed women with children up to 6 years became unemployed immediately after their parental leave. Returning to work is partly hindered by inflexible work arrangements. In 2016, only 9.8% of working women in the 20-64 age group worked part-time, most of them mothers with children of up to 6 years. The EU average of women working part-time was significantly higher with 31.4% (Eurostat, 2018[42]). Increasing the flexibility of jobs by providing and enforcing existing rights for part-time work, flexible teleworking arrangements and shared jobs can support the re-entering of skilled female labour into the market.

Attracting skilled labour and integrating migrant workers

To compensate for labour shortages in the context of an ageing society, policies can attract skilled labour into the Czech Republic. However, attracting foreign workers from outside the EU faces several challenges, including language barriers and current migration policies. By 2015, most newly arrived migrants were from Eastern Europe, i.e.

from the Slovak Republic, Ukraine and Russia. In November 2015, a special migration procedure was introduced for high-skilled workers from Ukraine. This project “Special Procedures for Highly Qualified Workers from Ukraine” gave participants priority access to embassies when applying for the Employee Card. In August 2016, a similar project, “Special treatment for qualified workers from Ukraine”, was launched, with a capacity of 3 800 specialised workers per year. As there were high interest and uptake, the capacity was increased in February 2017 and in January 2018. Moreover, new programmes were launched for workers from Mongolia and the Philippines in 2018.

Migration policies should be reconsidered to attract skilled workers from countries other than Ukraine and Eastern Europe. Easy accessible information about educational degree verification, work opportunities and the availability of language courses could raise awareness among skilled workers to consider the Czech Republic as a destination. Already, a network of 13 regional integration support centres to co-ordinate the efforts of local authorities, NGOs and other stakeholders has been set up to provide information, advice, and integration courses and co-ordinate the development of local integration projects co-funded by the European Social Fund. These efforts should be scaled up to facilitate the integration of workers and their families.

Table 9. Past recommendations for improving innovation and skills mismatch

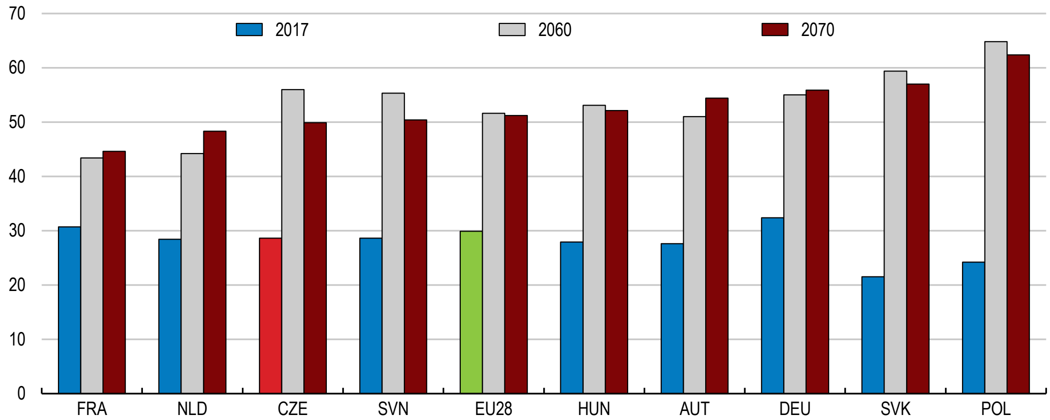
Recommendations in previous Surveys	Action taken
Remove the barriers to the mobility of workers to reduce skill mismatch by improving the functioning of the private rental market, lowering the cost of closing a business and easing the stringency of employment protection legislation.	In 2016, a financial contribution for jobseekers who, due to regional disparities (of a structural and qualification nature), have to commute for work outside their place of residence was introduced. The allowance is provided monthly, for a 12-month period, at a flat rate based on the commuting distance. Also, an allowance to change place of residence because of employment was introduced. This financial subsidy of CZK 50 000 can be provided to an applicant who moved house for the above-mentioned reasons within the territory of the Czech Republic.
Accelerate the creation of funds and guarantee programmes to support SMEs and innovation.	In progress. Example of policy initiatives: • In 2017, 2142 SMEs were provided support amounting to EUR 156.2 million within the framework of the program Guarantee 2015-2023. • During 2017 the first programs supporting venture capital were in co-operation with European Investment Fund (EIF). In January 2017 the Fund of funds managed by EIF was created, combining EUR 40 million from OP EIC (program Venture Capital) and 10 million from EIF RCR mandate.

Ageing will weigh on public finance

The Czech population is ageing more rapidly than in most European countries. According to recent European projections, the demographic old-age dependency ratio in the European Union is about to rise from the current 29.6% to 51.2% in 2070 (European Commission, 2018[43]). The Czech situation follows this average trend with projections going from 28.1% in 2016 to 49.7% in 2070 with a peak at 56.1% in 2058 (Figure 23). This peak is higher than the average for the EU and is caused mainly by large generations born in the 1970s and the drop in the turn of millennia, which was connected to the change of lifestyle after the Velvet Revolution.

Figure 23. The old-age dependency ratio is projected to peak around 2060

In percentage



Note: Old-age dependency ratio is the ratio of population aged 65 and more to the working-age population aged 15-64.
Source: Eurostat.

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Population ageing will affect public finances. Not only will spending on pensions increase, but also spending on health and long-term care. It is, however, the old-age pension scheme that brings the biggest burden on public finance in the context of ageing (Table 10).

The main pillar is a mandatory defined benefit pay-as-you go public system. A second pillar was introduced in 2013 and abolished in 2016. It was an attempt to set up a voluntary defined contribution funded scheme providing complimentary pensions, which would have allowed discharging the public scheme partially. A third pillar exists and allows voluntary savings in a fully funded, defined contribution scheme. Although the number of participants is high, the savings are low.

Pension spending in terms of GDP ratios are projected to be stable over the next 15 years. However, a steep rise is expected to occur over the 20 years after 2030, accounting for more than 2.5 percentage points of GDP. In 2017, the Czech government withdrew the automatic mechanism of increasing statutory retirement age and put a ceiling at the age of 65 (Table 11). However, every five years, the Ministry of Labour and Social Affairs will prepare a report on life expectancy and suggest a shift of statutory retirement age to assure that on average everyone spends a quarter of his life in retirement. Under this mechanism, the change of retirement age is dependent on government decision and prone to non-compliance.

The recently introduced ceiling on retirement age is worsening the effect of pension spending on public finances. As in many OECD countries, the Czech Republic should follow the strict and tight linking of retirement age with life expectancy, which would limit the increase of pension spending (Table 10).

Also, the recent changes in the pension indexation rule are pushing up pension spending along the projection horizon. Currently, pensions are indexed to a combination of the consumer price index (or pensioners' cost of living index, whichever is higher) and real wage growth (half of the growth). Moreover, if the growth of pensions were to be less than 2.7% according to the standard formula, the government has the discretion to raise pensions by as much as 2.7%. Before, it was the sum of inflation and one third of real wage growth. This new rule makes the expenditure approximately 0.3 percentage points higher at the projection horizon compared to the previous indexation rule (Ministry of Finance, 2017[44]). The new indexation rule should help prevent old age poverty by targeting an average replacement rate at around 40%.

Table 10. Pension expenditure projections

Percentage of GDP

	2016	2020	2030	2040	2050	2060	2070	Peak year
Total public pensions	8.2	8.1	8.2	9.2	10.8	11.6	10.9	2059
of which								
old-age pensions	6.8	6.7	6.8	7.7	9.4	10.2	9.5	2059
disability pensions	0.9	0.8	0.8	0.8	0.8	0.7	0.8	2016
survivor pensions	0.5	0.6	0.6	0.7	0.7	0.7	0.7	2062
linked to life expectancy	8.2	8.1	8.0	8.5	9.7	10.2	9.3	2059

Note: The baseline scenario is computed with the fixed ceiling on statutory retirement age. The last row represents a scenario linking the statutory retirement age to the life expectancy.
Source: Ministry of Finance (2017[44]).

Table 11. Past recommendations on pension reforms

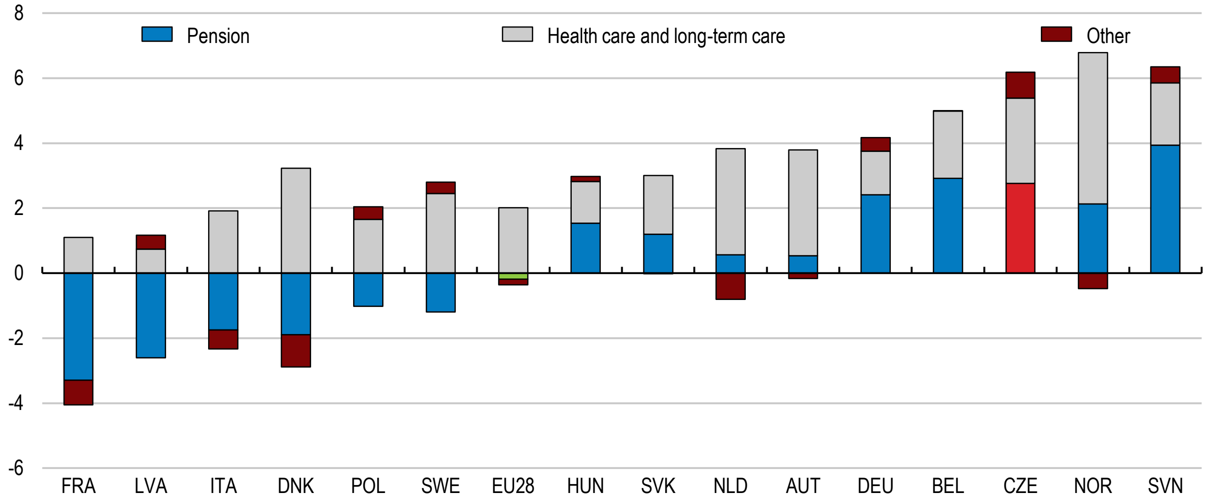
Recommendations in previous Surveys	Action taken
Take steps to secure an increasing effective retirement age. Continue to ensure that the indexation of pensions does not lead to old-age poverty problems. Consider options for diversifying income sources for pensioners. An additional measure could be to bring forward the increases in the statutory retirement age.	Pension indexation changes introduced in 2017 are more generous to protect the purchasing power of pensions. Retirement age increases have been capped at 65 years of age for both men and women.

Health care and long-term care expenditures are also projected to rise in the upcoming decades. In comparison with other EU countries, the Czech Republic is going to face above average increases as share of GDP (Figure 24). Since this comparison is based on AWG reference scenarios (European Commission, 2018[43]), it disregards the non-demographic aspects and considers mainly the effect of ageing. The actual increase is thus likely to be even higher (see Chapter 1).

Financing pensions, health care and long-term care currently requires more than 43% of the government budget and the requirements will rise substantially in the coming decades. While keeping the size of the budget in relation to GDP constant (around 35%), the projected social expenditures in 2060 would take more than 75% of the budget (Table 12). Thus, it would mean either serious crowding out of other expenditures (wages in public administration and education, investments, etc.), or an expansion of the government budget by an increase of the tax burden. Linking tightly retirement age to life expectancy will limit the impact of ageing on public finances. More efficiency in health care delivery will also help limit the impact of aging on health spending (see Chapter 1).

Figure 24. Ageing will have a substantial impact on public finances

Change in gross public expenditure between 2016 and 2070 in percentage points of GDP



Note: Other expenditure covers education and unemployment benefits. Baseline scenarios are used for pensions, education and unemployment benefits, and AWG reference scenarios for health care and long-term care.
Source: EC (2018), Ageing Report: Economic and budgetary projections for the 28 Member States (2016-2070) and Ministry of Finance of the Czech Republic (2017), Pension projections of the Czech Republic, October 2017.

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Table 12. Expenditure projections as shares of the government budget

	to GDP		to govt. budget	
	2017	2060	2017	2060
Pensions	8.2	11.6	32.4	45.7
Old age pensions	6.8	10.2	26.8	40.2
Health care	6.2	9.6		
financed by employees, employers and self-employed	4.1	3.3		
financed by the government budget	2.1	6.3	8.4	24.7
Social long-term care	0.7	1.4	2.8	5.5

Note: The share of health care financed by the government budget is only approximated. It is not possible to get it directly from the budget, as it is decomposed in various items, not only direct payments to health insurance funds, but partly also in other social transfers and transfers to regional budgets. Projections to 2060 are estimated assuming fixed ratio of the budget to GDP. Long-term care does not cover health long-term care which is included in health care expenditures. Total government expenditures accounted for CZK 1 279.8 billion in 2017. Pensions covered 414.7 billion (32.4%), from which 343.4 billion went particularly in old-age pensions. Health care was financed mostly through direct contributions of employees, employers and self-employed to health insurance funds, which is not recorded in the government budget. The government expenditure is thus approximated subtracting these contributions from the total public health expenditures, assuming that the rest must be covered by the public budgets. The share in 2060 is estimated with an assumption of a fixed burden on one person in terms of GDP ratio. The decreasing ratio is a result of shrinking working age population. Health spending increases include non-demographic factors and correspond to OECD estimates.
Source: EC (2018), Ageing Report: Economic and budgetary projections for the 28 Member States (2016-2070), OECD projections for health spending.

Greening growth and addressing environmental issues

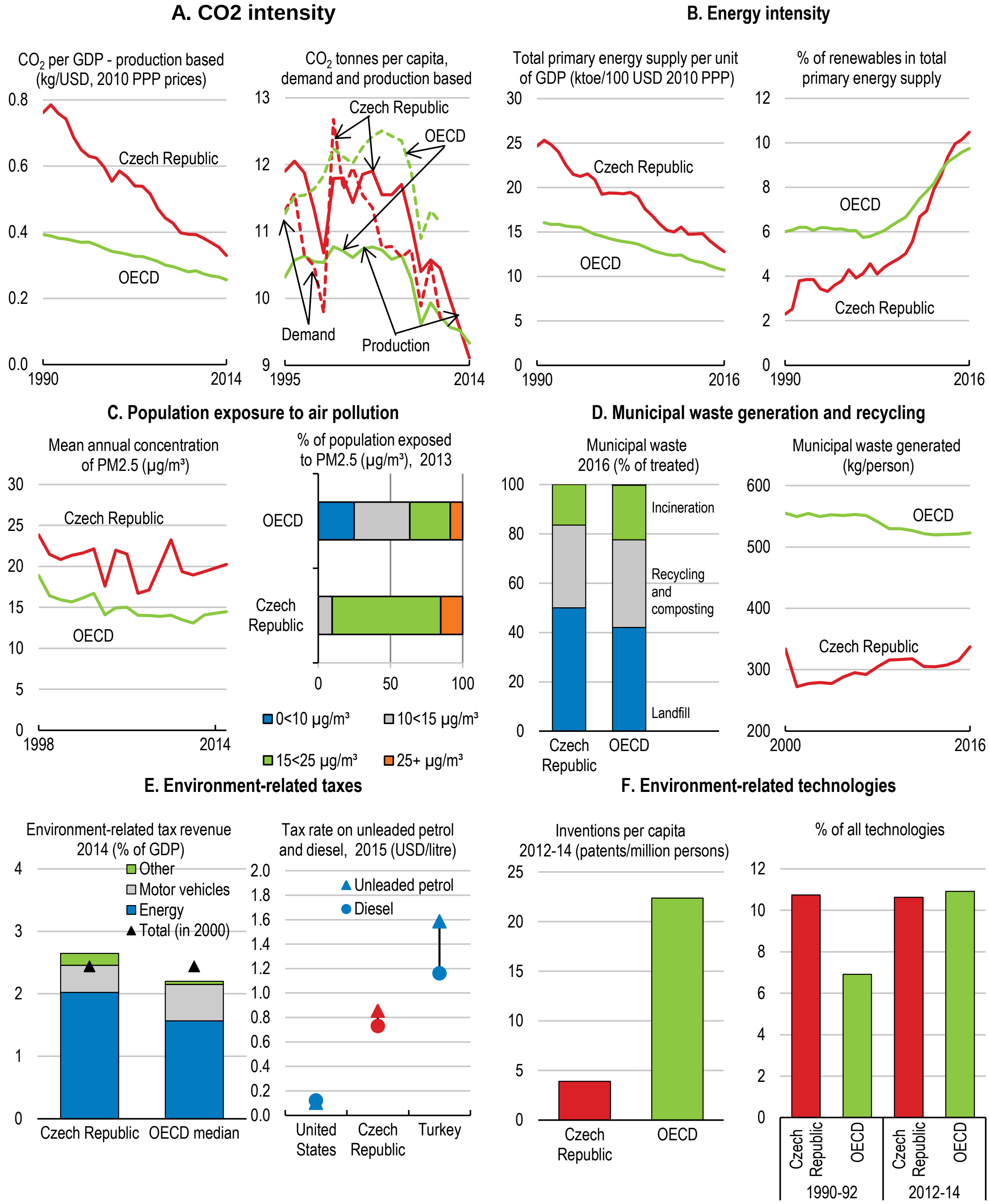
The 2018 OECD Environmental Performance Review of the Czech Republic finds that the country performs well on a number of Sustainable Development Goals such as poverty, water and biodiversity. The 2017 "Czech Republic 2030" strategy defines priorities for implementing the 2030 Agenda. However, the economy remains among the most energy- and carbon-intensive in the OECD, and the population is exposed to high levels of air pollution due to reliance on coal (Figure 25).

Strengthening political commitment to a low-carbon economy and aligning the State Energy Policy with the Paris Agreement objectives are key priorities. The Review analyses the potential for a review of the tax structure to better align economic and environmental objectives. Pricing carbon will help in tackling climate change and air pollution cost-effectively. It could contribute to improving energy affordability.

The Czech Republic has progressed in increasing the use of environmental and regulatory impact assessments, as well as strategic environmental assessments of policies. But it could go further in greater use of cost-benefit analysis and in ex-post analysis of policy impacts and efficiency. Public participation in environmental decision making and access to information have improved, but on issues including the liability regime and access to environmental justice, current practices need upgrading.

In considering particular policy areas, the Czech Republic made progress in waste recovery but continues to rely on landfilling (Figure 25, Panel D). The Review sees the need for promptly adopting the pending new Waste Act and harmonising the national waste management information. It also reviews how compact city policies can help the future urban structure produce a better balance between affordable housing with adequate mobility and low air pollution.

Figure 25. Green growth indicators: Czech Republic



Source: OECD (2018), Green Growth Indicators.

StatLink https://doi.org/10.1787/888933790733

Box 3. Recommendations of the 2018 OECD Environmental Performance Review

The Review makes a wide range of specific recommendations, of which the following is a non-exhaustive summary.

Many specific policy recommendations highlight that policy coherence and adequate price signals are key to progress towards green growth:

- Strengthen political commitment to a low-carbon economy: develop an integrated energy and climate plan to reach the 2030 and 2050 GHG reduction targets.
- Introduce a carbon component in energy taxation for carbon emissions outside the EU ETS and provide a stronger and more consistent price signal across the economy.
- Consider recycling part of revenue from higher taxes on heating fuels and electricity to vulnerable households using an income-tested cash transfer.
- Raise the excise tax on diesel to at least match that on petrol, and index the taxes on both fuels to inflation.
- Extend distance-based charging to address air pollution and congestion and tighten environmental criteria of vehicle taxes to promote fleet renewal towards cleaner vehicles.
- Review waste-related taxation in line with the waste hierarchy and ensure full cost recovery for municipal waste service provision.
- Reduce agricultural pollution by reducing fertiliser and pesticide use, including through taxation.
- Apply water user charges that allow sustainable cost recovery. Ensure that groundwater abstraction charges reflect resource scarcity and remove exemptions that are not justified on environmental grounds.
- Consider establishing a green tax commission, possibly as part of the National Budgetary Council, to review the environmental effects of fiscal instruments.

In some cases, environmental governance and management could be strengthened to improve co-ordination, efficiency and enforcement. For example:

- Enhance collaboration among municipalities to make use of economies of scale and co-ordination in service provision, e.g. waste treatment and disposal, water supply and treatment.
- Improve vertical co-ordination by strengthening guidance from the Ministry of Environment to regional and local authorities.
- Use more cost-benefit analysis for assessing environmental policies, and expand ex post evaluation.
- Establish and enforce strict (independent of faults) liability for environmental damage by removing exemptions for compliance with

environmental permits.

- Ensure that the public and NGOs have a right to go to court if the competent authority fails to act in response to non-compliance.

Source: OECD (2018), Environmental Performance Review of the Czech Republic.

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Annex A. Progress in structural reforms

A. Strengthening the fiscal framework and fiscal sustainability

Recommendations in previous *Surveys*	Action taken
Implement the new fiscal framework and the fiscal council.	Acts on budgetary responsibility entered into force in February 2017. A medium-term budgetary objective is set to ensure long-term sustainability of public finances. Two independent institutions are put in place to guarantee the respect of fiscal rules: • National budgetary council (members appointed on 25th January 2018: surveillance of the respect of fiscal rules and assess the impacts of governmental actions on long-term sustainability of public finances • Committee for Fiscal Forecasts (appointments are ongoing): the other will verify the plausibility of macroeconomic and fiscal forecasts used in budgetary process.
Use a multi-pronged approach to secure fiscal sustainability. • Take steps to secure an increasing effective retirement age. • Continue to ensure that the indexation of pensions does not lead to old-age poverty problems. • Consider options for diversifying income sources for pensioners. • An additional measure could be to bring forward the increases in the statutory retirement age.	Limited progress has been made. • Pension indexation changes in 2017 are more generous to protect the purchasing power of pensions. • Retirement age increases have been capped at 65 years of age for both men and women.

B. Fostering productivity growth and income convergence

Recommendations in previous *Surveys*	Action taken
R&D and innovation systems	
Encourage the participation of managers and workers in training and further education to increase the productivity of staff. Offer individual training accounts or refundable tax credits to individuals that undertake training at accredited institutions.	No action. Different options are preferred. The Ministry of Education, Youth and Sports (MEYS) prepared "Action Plan for Development of Human Resources for Research, Development and Innovation and Gender Equality in Research, Development and Innovation in the Czech Republic for the years 2018-2020" (hereinafter referred to as "HR Action Plan"), which was approved by the Government Resolution No. 8 of 3 January 2018. In the coming period, the measures resulting from the approved HR Action Plan will be implemented.
Unify the design, assessment and co-ordination of research and development and innovation policies in a single institution. Specifically, research institutions should be under the responsibility of the same institution.	Work in progress. The August 2017 proposal for a new law on the support R&D&I has been put on hold.
Increase R&D spending effectiveness by better targeting government funding to broaden the scope of R&D activities in the Czech Republic.	Has been realized under the National R&D&I Policy respectively the National RIS3 Strategy through targeting of (European, national and private) funds to activities leading to the priority defined promising areas.
Develop government co-financing schemes to complement grants and increase fiscal incentives for business R&D spending.	No action taken
Increase incentives and funding through the national programmes of applied research and innovations to develop collaboration between research entities and businesses.	Ministry of Education, Youth and Sports (hereinafter referred to as "MEYS") implemented within the OP RDE a call called "Building Expert Capacities - Transfer of Technologies" aimed at supporting the development of centres and other necessary background for technology transfer at research organizations in the Czech Republic.

	MEYS also continuously implements "National Sustainability Programs I and II", with the establishment of "Regional Centres for Research and Development" created for the purpose of co-operation of the public research sector with the business sphere.
Develop mobility schemes for public researchers to work during some period in businesses research centres to facilitate the inter-actions between research institutions and firms.	Addressed through MEYS programmes: "Pre-application Research", "Pre-Application Research for ITI", "Long-term inter-sector co-operation" and "Long-term inter-sector co-operation for ITI" for support of individual projects under the OP RDE and already above mentioned "Building Expert Capacities - Transfer of Technologies".
Use public procurement contracts to initiate innovative solutions in strategic areas with societal benefits.	No action taken
Remove the barriers to the mobility of workers to reduce skill mismatch by improving the functioning of the private rental market, lowering the cost of closing a business and easing the stringency of employment protection legislation.	In 2016, a financial contribution for jobseekers who, due to regional disparities (of a structural and qualification nature), have to commute for work outside their place of residence was introduced. The allowance is provided monthly, for a 12-month period, at a flat rate based on the commuting distance. Also, an allowance to change place of residence because of employment was introduced. This financial subsidy of CZK 50 000 can be provided to an applicant who moved house for the above-mentioned reasons within the territory of the Czech Republic.
Increase the share of government R&D grants directed to programmes including international collaborations and to support activities conducive to the acquisition of knowledge-based capital.	In progress. MEYS prepared an "Action Plan of International Co-operation of the Czech Republic in R&D and the Internationalization of the R&D Environment of the Czech Republic for the Years 2017-2020" (hereinafter referred to as "Action Plan"), which was approved by the Government Resolution No. 1179 of 19 December 2016.
Creating a productivity enhancing environment	
Limit the possibilities to delay bankruptcy procedures and eventually allow for the write-off of debts.	Partial developments had been made by recent enactment of the amendment to the Act no. 182/2006 Coll., on Bankruptcy and Methods of its Resolution (Insolvency Act). This relatively extensive amendment entered into effect on 1st July 2017 contributed to significant acceleration of unsuccessful discharge procedures. Since 1st July 2017, unsuccessful discharges prevailingly lead to the complete dismissal of the insolvency proceedings. This allows accelerated write-off of debts for creditors.
Reduce the number of regulated professions and strengthen the competition and regulation of product markets framework.	The general trend in the Czech Republic is to deregulate the regulated professions. For instance, the licensed trade "Preparation of catalogue data" was deregulated in 2017.
Accelerate the creation of funds and guarantee programmes to support SMEs and innovation.	In progress. Example of policy initiatives: • In 2017, 2142 SMEs were provided support amounting to EUR 156.2 million within the framework of the program Guarantee 2015-2023. • During 2017 the first programs supporting venture capital were initiated by the Ministry of Industry and Trade in co-operation with European Investment Fund (EIF). In January 2017 the Fund of funds managed by EIF was created, combining EUR 40 million from OP EIC (program Venture Capital) and 10 million from EIF RCR mandate. The first selected funds shall begin to operate during 2018. • At the end of 2017 the Ministry of Industry and Trade joined regional initiative of EIF called the Central Europe Fund of Funds, together with Austria, Slovenia and Slovakia. The Czech contribution delivered by the Czech-Moravian Guarantee and Development Bank amounts to EUR 8.2 million, the combined sources of the Fund of funds amount to EUR 80 million.
Reduce the advantages of self-employment in terms of social contributions and personal income tax.	Since January 2018 there has been a significant reduction of the flat-rate expenditure limit (to CZK 1 million) for entrepreneurs. This measure reduces the fictitious reporting of employment as a self-employment activity and approximates the level of taxation of self-employed to workers (this should be also addressed by other institutes that will be implemented by the forthcoming new Income Tax Act). It is also expected

	to introduce a new discount of CZK 500 per month as compensation for social security payments for employees. These expenditures are not reflected in contemporary tax base.
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.	No action taken concerning training support through tax subsidies or reduction in social contribution. All contribution in various projects focused on youth employment support is done via financial funds to create new jobs or on in the job training. Minimum wage has been increasing steadily in the past few years to amount 40% of average wage. There are equal conditions for all - different minimum wage rate for disability pension beneficiaries has been abolished as of 1 January 2017. Lower min. wage rate for youth up to 21 years was abolished by 1 January 2013.

C. Promoting competition and improving the business environment

Recommendations in previous *Surveys*	Action taken
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.	No action
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.	ENERGY SECTOR: The Energy Regulatory Office (ERO) is the regulatory authority responsible for the Czech energy sector (electricity, gas and heating). The effective independence of the Energy Regulatory Office is set in the Energy Act No. 458/2000 of 28 November 2000. Since 1 August 2017 (an amendment of the Energy Act by the Act No. 131/2015) the ERO is controlled by the Board of the Energy Regulatory Office which consists of five board members, each nominated by the minister of industry and trade and confirmed by the government for a five year term. On 29 November 2017 the Energy Regulatory Office and the Office for the Protection of Competition (UOHS) signed a memorandum on mutual co-operation to create a clear and stable regulatory framework in the energy sector. ELECTRONIC COMMUNICATIONS/POSTAL SERVICES:The Czech Telecommunication Office, sectoral regulatory authority, is independent according to the Electronic Communications Act (127/2005 Coll., as amended). This office co-ordinates and co-operates with the Office for the Protection of Competition in the field of relevant market analyses and in dealing with significant market power.
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.	ELECTRICITY SECTOR: In the Czech Republic, the unbundling process in the electricity sector, as required by the EU third energy package, has been completed. GAS INDUSTRY:As well in the gas industry, ownership unbundling has already been implemented. ELECTRONIC COMMUNICATIONS/POSTAL SERVICES SECTOR: Financial and functional separation is voluntary within the Czech legal framework. However, we have positive examples, such as the division of the former incumbent, nowadays 2 companies: CETIN (Ceská telekomunikacní infrastruktura) – pure network operator, O2 Czech Republic (pure service provider). The postal incumbent is obliged by law to keep separate accounts for costs and revenues related to the provision of each of the universal services. On the basis of those records the national regulatory authority can check the calculation of the net cost, if any, of universal service obligations. Those data are also used for price regulation and price control makes it possible to prevent potential cross-subsidies. RAILWAY SECTOR: The vertical separation in railway sector started in

	2003 when Ceské dráhy, s. o., was divided into Ceské dráhy, a. s - railway operator company, SŽDC, s. o. – infrastructure manager and the rail inspection when the Act n. 77/2002 Coll., on Ceské dráhy, a. s., SŽDC, s. o. and further amendments was adopted. In 2011 the process of separation moved significantly forward when infrastructure manager (SŽDC, s. o.) took over traffic management. In 2016 property of all railway stations within the Czech Republic was transferred from Ceské dráhy, a.s. to infrastructure manager (SŽDC, s. o.) in 2016.

D. Promoting a more effective public sector

Recommendations in previous *Surveys*	Action taken
Enhancing the effectiveness of public administration	
Further improve tools and rules to increase use of joint procurement by public entities. Increase auditing throughout the process and monitoring of processes and outcomes.	No action taken
Establish specialist competency centres to help public bodies and local governments with technical procurement contracts.	The Ministry for Regional Development provide the contracting authorities with methodological support. Regular training courses are organised.
Designate responsibility for the co-ordination and prioritisation of investments on the basis of the highest social return. Evaluate investment needs in a standardised way across sectors and use cost-benefit analysis for all large projects.	No action taken
Increase monitoring and accountability throughout the investment cycle, from project selection through to ex post evaluation.	No action taken
Use and publish standardised performance indicators for publicly funded activities at all levels of government. Increase the use of benchmarking.	There have been no such steps undertaken which would have led towards standardised performance indicators for publicly funded activities at all levels of government at this point. At this point CBA does not intend to do so as municipalities and regions are according to the Czech law independent and decide fully on its own.
Extend the national and regional standing conferences for EU-funded projects to all significant investment projects and cross-cutting public policies.	No action taken
Give the Supreme Audit Office powers to audit all public bodies and local government.	There was a legislative proposal focused on extending of the powers of the Supreme Audit Offices to audit further public bodies and local and regional governments. It was approved by the Chamber of Deputies, in a later stage however rejected by the Senate.
Review the implementation of the Civil Service Act, including the capacity of human resources units, the overall remuneration system and conditions and staff engagement.	The Civil Service Act is subject to a deep ex-post evaluation aimed at its implementation and functioning. This evaluation includes also remuneration system, conditions and staff engagement.
Introduce conflict of interest disclosures and create a register of private interests for officials involved in procurement.	The Public Procurement Act has introduced an obligation to identify the actual owner of the selected supplier. Since 1 January 2018, the central register of real owners has been created.
Improving the effectiveness of sub-national government arrangements	
Establish framework conditions which help municipalities to reap the benefits from joint service provision, while building support for mergers.	A special project in this regard is being implemented in co-operation between the Ministry of Interior and the Union of Towns and Municipalities. Objective of the project “Shared service centres” is to ensure more efficient delivery of public services to citizens. The political representation strictly refuses any discussions concerning mergers of municipalities.
Increase incentives and technical support for mergers.	There are indirect financial incentives for municipalities providing a wider range of services for citizens and delegated state administration tasks. The Ministry of Interior is however ready to provide a methodological and technical support to those municipalities which merge on a voluntary basis.
Increase local capacity through technical assistance and supporting shared services centres. Consider establishing a minimum size required for carrying out certain municipal functions.	Shared service centres are currently being developed within the framework of the above-mentioned project focused on inter-municipal co-operation.
Reduce the share of grants and transfers that are earmarked and ensure adequate service standards are maintained by monitoring performance.	The main general grant for municipalities and regions (contribution for performance of state administration) has been increased and reshaped in last several years. Earmarked grants are provided principally for

	specialised projects in specific fields. Maintaining of service standards is continuously monitored by higher-level authorities, specialised control bodies or by beneficiaries themselves. In 2018, the law on budgetary designation of taxes was changed and the share of municipalities on VAT was increased. Transfers from central level account only for 15 % of total revenue of municipalities.
Simplify the system of territorial administration by completing the transition from the system of districts and streamlining delivery of delegated functions at municipal level.	There is a legislative proposal of the Act on Territorial Division of the State which was carried out and submitted just for the purpose of simplification of the system of territorial public administration and which includes all mentioned aspects. It should be submitted to the Government by the end of 2018.
Increase incentives in local government revenues to grow local economies. Use a fiscal equalisation component to adjust for differences in revenue-raising capacity.	Local economies, after recovering from the financial crisis of 2008 – 9, are fluently growing. Some equalisation components are currently in place as well.
Proceed with plans to introduce a debt rule for local governments.	The debt rule for local governments was introduced by law, and although challenged by a group of Senators due to alleged excessive interference of the State in the right for self-government, it was recently confirmed by the Constitutional Court. Debt rule for local governments was introduced by the Act No. 23/2017, o rules of budgetary responsibility with the effect as of 1 January 2018.

E. Achieving efficiency in the energy system

Recommendations in previous *Surveys*	Action taken
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.	No action taken. Work in progress.
Develop traffic management in urban areas, including traffic restrictions in city centres, parking fees and incentives to commute by public transport. Strengthen control of emission from older vehicles and stimulate the renewal of vehicles through adequate carbon pricing.	Following the Air Protection Act cities can introduce low-emission zones, but it is a voluntary activity itself cities. The MoE supports the purchase of vehicles with alternative propulsion for municipalities and regions and organizations set up by them, and municipal transport projects – e.g. City Mobility Partnership and is active in supporting the European Mobility Week. Since 1 December 2017, emissions measurement has been tightened by an amendment to the Act on road operating conditions (No. 56/2001 Coll.) as follows - the measurement record and its result are recorded in the online system (as well as in the technical inspection stations). The measurement system of Emission has changed since June 2017. Since 1/1/2018 Emission Measurement Stations have started taking photos of vehicles. Since January 2018, it has been no longer possible to issue a valid emission measurement protocol if an emission measurement station is not connected to the system.