


















## »»» Czech Republic – focus on research and development is a sound strategy

No. 20, 9 May 2019

Author: Dr Matthias Bittorf, phone +49 69 7431-8733, matthias.bittorf@kfw.de

<p><b>Economic situation</b></p> <ul style="list-style-type: none"> <li> Real growth</li> <li> Real private consumption</li> <li> Inflation rate</li> </ul>	<p><b>Growth has slowed but economy remains well on track</b></p> <p>After real GDP grew by a vigorous 4.4% in 2017, economic output is expected to grow by 2.9% in 2018 and 2.4% in 2019. This continued respectable growth is primarily being bolstered by private consumption, while a very tight labour market recently enabled significant wage increases (particularly in the public sector). In May 2019 the key lending rate was lifted by 0.25 basis points to 2.0%, a move that is likely to halt inflation, which was at 2.1% across 2018.</p>
<p><b>Growth financing</b></p> <ul style="list-style-type: none"> <li> Budget balance to GDP</li> <li> Current account balance in % of</li> <li> Gross government debt to GDP</li> </ul>	<p><b>State finances are in good shape, current account balance slightly positive</b></p> <p>The Czech Republic has had a slight budget surplus since 2016, mostly due to reduced public spending. The current account balance also turned slightly positive of late. Continuous growth in goods exports provided the basis for this (high trade surpluses). The government debt ratio has fallen substantially in the strong growth years since 2013 and, at an estimated 33% in 2018, was significantly below the Maastricht threshold of 60% of GDP.</p>
<p><b>Growth resources</b></p> <ul style="list-style-type: none"> <li> Investment ratio</li> <li> Share of services in GDP</li> <li> Labour market participation</li> </ul>	<p><b>Growth is on a solid basis</b></p> <p>The Czech Republic's investment ratio is top-notch in an EU comparison (estimated at 25.4% in 2018, average for 2010–2018: 25.7%). A further surge is conceivable given the good public revenue situation. Labour market participation recently climbed to 76.7% (third quarter 2018), although the considerable gap between male and female labour market participation compared with the rest of the EU indicates untapped growth potential.</p>
<p><b>Economic relations with Germany</b></p> <ul style="list-style-type: none"> <li> Germany's share of exports</li> <li> Germany's share of imports</li> <li> FDI inflows from Germany / GDP</li> </ul>	<p><b>Czech Republic has a positive balance of trade with Germany</b></p> <p>Germany is the main destination of Czech exports, with a good 32% in 2018, and holds a dominant position as the main supplier country, accounting for around 29% of imports. The Czech Republic, in turn, is Germany's seventh most important supplier country and ranks 12th among its export markets (as at 2018). Germany is its second most important source of foreign direct investment after the Netherlands.</p>
<p style="text-align: center;"><b>The current value is among the ...</b></p> <p>Legend:  lowest  low  medium  high  highest</p> <p style="text-align: center;"><b>20% of the past 10 years.</b></p>	

### Investment climate – assessment by our local experts

The Czech Republic has grown strongly since 2014 and has had the EU's lowest unemployment rate for some years. The location scores with highly trained workers, particularly in the engineering and technology sector, with the quality of local suppliers and with payment discipline. The cost of labour, land and energy is still much lower than in Germany. The availability of skills, the efficiency of the education system and some bureaucratic hurdles are areas that need attention.

Continued on p. 2

### Focal theme: After the successful transition to a market economy, innovation is becoming a big issue

Although the Czech Republic mastered the transformation phase of the 1990s swiftly and without much friction, there was hardly any time to consider strategic research and development (R&D) planning during this highly resource- and energy-intensive transition to a market economy. R&D expenditure remained on a very low level. However, after fundamental progress had been made in stabilising the economy, which began to grow on a solid foundation at the beginning of the 2000s, the Czech Republic dedicated more and more of its efforts to meeting the challenge of modernisation. This was illustrated not least by the fact that the state-owned Business and Investment Development Agency CzechInvest defined eight industries as priority areas of support: The automotive and engineering industries as traditionally strong sectors, as well as fields of the future such as software development and, most of all, biotechnology and nanotechnology.

Continued on p. 2

### Investment climate – assessment by our local experts

As early as in the 1990s, the Czech Republic was regarded as one of the most attractive Central Eastern European target markets for foreign direct investment and it remains so today. Motivated and highly trained workers, quality and availability of local suppliers and high payment discipline are its main strengths. The country's EU membership was again highlighted as the best location factor in the 2019 economic survey (covering 15 Central and Eastern European countries), which was run by the German Chambers of Commerce Abroad. The debate over a possible Czexit referendum in 2018 not only had foreign investors worried but it was ended by a clear response of the ruling centre-left government. Investors are still not satisfied with the overly theoretic Czech vocational education and training system. The tax system has also been under criticism for some time. At present (2019), the transparency of public procurement procedures and the fight against corruption are again being rated significantly more negatively than in previous years. For locally active businesses, however, the most urgent problem is the very severe skills shortage, as companies are forced to decline or postpone projects more and more often (which is particularly common in the construction industry). But these deficits in no way alter the continuing fundamental view of the Czech Republic as an attractive location in Central Eastern and South-Eastern Europe (ranking second behind Estonia in the 2019 economic survey run by the German Chambers of Commerce Abroad, after ranking first in the three previous years). This result is in line with the score on the Global Competitiveness Index 2018 of the World Economic Forum (ranked 29 of 140 countries, first in Central Eastern Europe) and the World Bank's Doing Business Rankings (2019: ranked 35 of 190 countries).

The Czech Republic is attempting to tackle the key problem of its skills shortage primarily by promoting labour migration (now also from non-European countries). The Prague Statistical Service recently announced that more than

472,000 foreigners were employed in the Czech Republic at the end of 2017. That is an increase of 200,000 workers within ten years (predominantly from poorer eastern European regions). On the other hand, the emigration of highly qualified local workers, who often find more attractive income opportunities in Western Europe, is to be limited where possible. As a result of the skills shortage, real wages, which have already increased strongly of late, will probably continue rising and play a role in this development. In order to mitigate the skills shortage, discussions have recently come to include the re-skilling of existing employees in particularly sought-after skill areas ('requalification').

The Ministry of Education is considering making changes to address deficits in commercial-technical vocational training, which is often too theoretical. For the time being, partnerships between small and medium-sized German investors and technical TVET providers has proven to be a good approach.

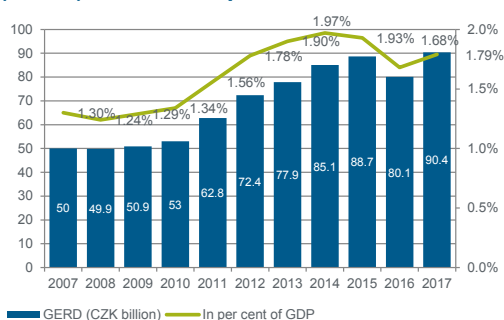
The planned amendment to the investment promotion act, which aims to attract technology-oriented jobs and, hence, more value creation to the country, is consistent with the envisioned innovation campaign (see focal theme).

If the Czech Republic also tackles other deficits – besides the particularly serious skills shortage – at the source, such as the cumbersome procedure involved with founding a business and the long delays in granting building permits, nothing should stand in the way of further dynamic development with above-average growth rates. For 2019 the Ministry of Finance of the Czech Republic expects GDP growth of no less than 2.4% despite slower momentum (April 2019 forecast).

On balance, Germany's south-eastern neighbour can be said to be a **high to very high-quality location**.

Based on an interview conducted with Bernard Bauer (General Manager of the German-Czech Chamber of Industry and Commerce, Prague) on 28 February 2019. ■

**Figure 1: Gross expenditure on R&D (GERD) in Czech Republic**

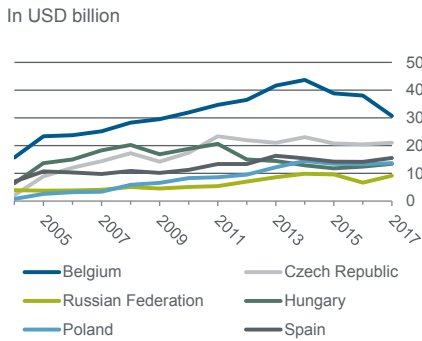


Source: Czech Statistical Service (ČSÚ).

### Focal theme: The Czech Republic is planning to become a knowledge-based society with reciprocal approaches

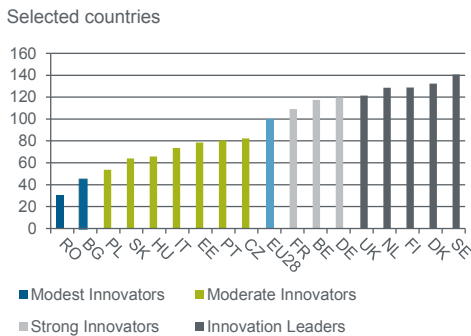
In the course of the realignment of the Czech economy towards more innovative capacity, research and development, public and private R&D expenditure has grown noticeably since 2011 (Figure 1). This has led to a technologically more sophisticated range of products and strong growth in high-technology exports. The latter grew tenfold from 2000 to 2017, when the Czech Republic was ranked 19th in the world, placing it ahead of much more populous countries such as Poland, Spain and even Russia (cf. Figure 2). Within the EU, it made an impressive leap to become the top moderate innovator within a short time (cf. Figure 3). The catching up process would surely have been even faster if Czech enterprises had not fulfilled the role of suppliers to such an extent, which meant that they were

**Figure 2: High-technology exports of selected European countries**



Source: World Bank

**Figure 3: Innovator performance within the EU**



Country-specific innovation performance covers a variety of innovation-related indicators. They are broken down into four main types – overall environment, investment, innovation activity and impacts – as well as 10 innovation dimensions (including attractiveness of research systems, financing and support, innovation-friendly environment, etc.).

Source: European Innovation Scoreboard 2018

hardly ‘forced’ to innovate.

**In order to tangibly increase wages and living standards and eventually bring them to the highest European level, further and more intensive efforts will be required.** The ‘Innovation Strategy of the Czech Republic 2019–2030’ which was presented by the government in February and rests on nine interconnected pillars responds to this need but is exceedingly ambitious. The Czech Republic wants to join the most technologically advanced industrial nations by 2030, guided by Switzerland, Sweden, Finland and Denmark as inspiring role models. In concrete terms, it wants to achieve a position within the ‘strong innovators’ of Europe by 2025 and a place among the ‘leading innovators’ by 2030. It has therefore elevated the promotion of science, research and innovation to a national priority. The country has learned from earlier efforts which suffered from ills such as stakeholders’ insufficient implementing capacity, lack of identification with targets and departmentalised thinking. Each of the nine strategic pillars that are crucial to achieving targets has been assigned an institutional guarantor (usually a ministry) which bears the responsibility for target achievement. Progress in implementation is to be evaluated monthly with the involvement of the Prime Minister and the high-ranking Government Council for Research, Development and Innovation. A palpable and firmly scheduled boost to R&D financing from 1.79% of GDP (2017) to 2.0% in 2020, 2.5% in 2025 and 3.0% in 2030 underscores the seriousness of the endeavour.

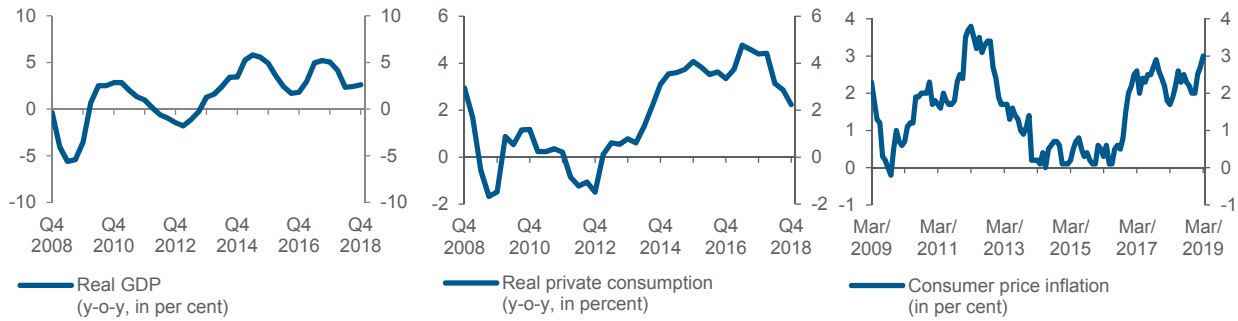
The very impressive research infrastructure created with the help of EU structural aid in the past decade can serve as **an advantageous starting position for the catching-up process**. There are now 40 regional research centres and eight national centres of excellence in the field of laser and nanotechnology as well as robotics, for example. No other reform country in Central Eastern Europe has invested EU Structural Funds so systematically in the expansion of research. The recent decision to make Prague the location of the planned EU Research and Innovation Centre on Advanced Industrial Production is likely to provide new impetus.

**The planned rededication of investment promotion also fits into this context.** The relevant law is being revised to bring high-technology projects into the country. In the manufacturing sector, for example, future support is to be directed only at projects in which at least one in ten employees have a tertiary degree or at least 2% of employees work in research and development. Investors are being encouraged to cooperate with local research institutes. This basically means that the Czech Republic’s economic policy is **shifting the main investment motive** clearly away from the wage cost argument and more towards the argument of location quality (‘attractive location with high investment potential’). However, concerns are being raised about plans to make the government the only authority that can approve applications for support.

As the Czech Republic’s public budgets have further improved in past years and businesses have recently made good profits, there is financial scope for a successful technological catching-up process across a broad front. All political camps share the willingness to spend record amounts on science, research and innovation in the coming years. ■

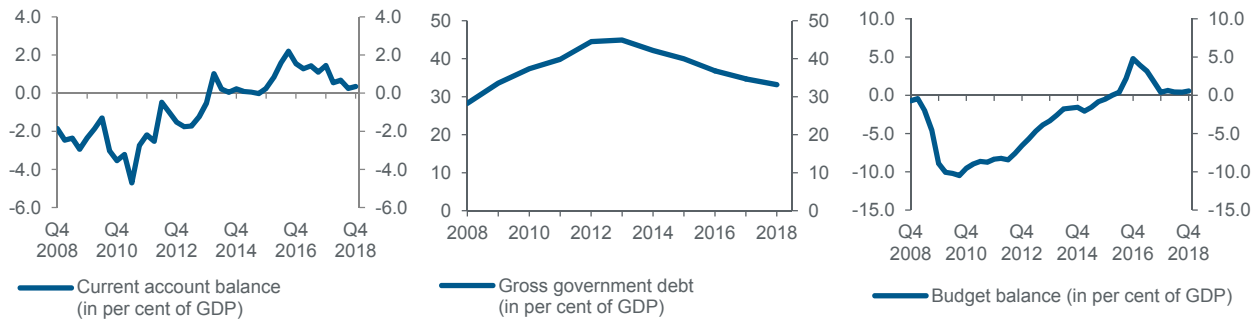
### Charts

#### Economic situation



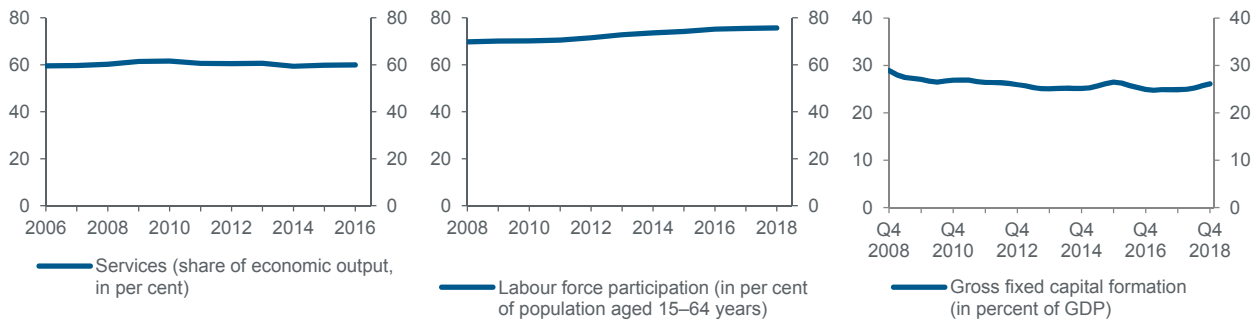
Source: Datastream, World Bank; OECD, Czech Statistical Service, own calculations

#### Growth financing



Source: Datastream; IMF, World Bank; Czech National Bank, own calculations

#### Growth resources



Source: Datastream, World Bank, OECD, own calculations.

#### Economic relations with Germany



Source: Deutsche Bundesbank; Datastream; IMF; own calculations

#### Disclaimer

This paper contains the opinion of the authors and does not necessarily represent the position of KfW. All data and information provided by KfW in this publication have been collated by KfW to the best of its knowledge and in good faith. KfW does not provide any assurance that the content is correct, complete or up-to-date. The data and information made available are not intended as individual advice for an investment decision nor as any other form of legal or tax advice and cannot substitute such advice.