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2025 Country Report - Czechia

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the economic, social, employment, structural and budgetary policies of Czechia

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European Commission

Czechia

2025 Country Report



ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

Growth has resumed, but global uncertainty weighs on the economy

Economic growth to be driven mainly by internal demand. GDP growth has been low in the last two years, reaching 1.1% in 2024, with internal demand and net exports being the main drivers. Internal demand is likely to remain the main GDP driver. The resumption of growth in real wages, falling inflation and the monetary easing applied by the Central Bank are likely to cause internal demand to grow more quickly. Moreover, households' consumption volumes are below 2019 levels, one of the lowest compared to other EU countries, while saving rates are among the highest in the EU. These factors further support the growth in households' consumption. Public and private investments are expected to stay strong, driven by monetary easing([1]) and increased EU funds absorption, with the Recovery and Resilience Facility (RRF) ending in 2026. Private investments are among the highest in the EU as a percentage of GDP.

Net exports are negatively affected by trade uncertainty and increasing imports. As industrial goods (with the automotive sector in first place) represent 81% of exports, the uncertainties regarding trade policy and the outlook for the main trading partners are likely to impede the growth of Czech exports. Structural challenges, such as increasing costs of energy and labour, also have a negative impact on net exports. The forecast increase in domestic demand is likely to drive imports higher. Thus, net exports are forecast to hamper GDP growth.

Inflation is set to continue declining. The high inflation rate from 2022 and 2023 had an adverse effect on the Czech economy. It impacted on real wages growth, prompted households to increase their savings and affected certain industrial sectors which are energy intensive. However, inflation declined significantly to 2.7% in 2024 and is forecast to stay low at 2.2% in 2025.

Labour market remains tight. Despite a small increase in unemployment rate from 2.2% in 2022 to 2.6% in 2024, the Czech labour market has one of the lowest unemployment rates in the EU. The employment rate([2]) is also high at 82.3%, above the EU average of 75.8%. The tight labour market thus remains an important limiting factor of economic growth.

Czechia's public finances still in deficit. In 2024, Czechia's government balance (the difference between government revenue and expenditure) recorded a deficit of 2.2% of GDP, down from 3.8% in 2023. The decrease in the budget deficit was driven by the government consolidation package and the phase-out of measures to mitigate the impact of high energy prices. However, the government balance continues to be reduced by around 2 percentage points of GDP due mainly to the permanent cut in personal income tax effective from 2021, and tax evasion. The budget deficit is forecast to stay broadly unchanged at 2.3% of GDP in 2025 and 2.2% of GDP in 2026. The planned phasing out of windfall profits tax is set to cut revenue in 2026. Finally, gross government debt was 43.6% of GDP at end of 2024, forecast to rise to 45.4% in 2026.

([1]) https://iate.europa.eu/entry/result/1125542/en

([2]) Calculated for the age class 20-64

Net public expenditure to accelerate growth in the 2025 election year. In 2024, net expenditure ([3]) in Czechia remained unchanged, with 0% growth (see Annex 1). This outcome was mainly driven by growth in social transfers to support living standards, public-sector pay and the provision of public goods and services. In 2025, the year of the parliamentary elections, net expenditure is forecast by the Commission to grow by 4.0%, which is below the maximum growth rate recommended by the Council([4]). The cumulative growth rate of net expenditure in 2024 and 2025 taken together is projected at 4.0%, which is below the maximum growth rate recommended by the Council.

The Czech economic model faces competitiveness challenges

The Czech economy, which is based on industry and a middle position in the value chain, has experienced slower productivity growth in the last few years. Czechia's economy is characterised by a high reliance on industry (25.4% of GDP, second highest in the EU), a high percentage of foreign ownership in the economy (45% of gross value added produced by foreign-owned companies, fifth highest in the EU) and a relatively low value added compared to economic output (40%, third lowest in the EU) (Graph 1.1). The high increases in energy and in nominal unit labour costs in the past few years have put pressure on the competitiveness of the economy and led to stagnating productivity. Labour productivity grew by 1% in the past five years, compared to 1.3% in the EU. This comes also on the back of a tight labour market which is experiencing gaps in mobility and supply.

Czechia´s energy-intensive sectors face several challenges to remaining competitive in the context of volatile energy prices. The Czech economy has one of the highest energy intensities (i.e. amount of energy consumed to produce a unit of GDP) in the EU ([5]). This is the cumulative result of a higher share of the industry in GDP (Graph 1.1), an above-average energy intensity of industry ([6]), higher energy transformation losses ([7]) and higher energy intensity of the building stock ([8]) compared to EU averages. As Czechia is still heavily dependent on fossil fuels, its high energy intensity leaves the economy exposed to movements in energy prices. While electricity and gas prices for households and industry are only slightly above the EU averages (5-15% as of H1 2024), the increase from 2019 has been significant, especially for electricity. Electricity prices more than doubled in the last five years, arguably also because in 2019 they were at a 20-30% discount to EU averages (see Section 3). Sustained increases in energy prices risk leading to losses as regards the economy's price competitiveness. This translates not only into higher input costs for industry but also into a higher social burden for households, which would ultimately also add pressures on salaries. Taxation on electricity is less favourable than on gas, which exacerbates the gap between electricity and gas prices, thus disincentivising electrification.

([3]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of interest expenditure, discretionary revenue measures, expenditure on programmes of the Union.

([4]) Council Recommendation of 21 January 2025 endorsing the national medium-term fiscal-structural plan of Czechia (OJ C, C/2025/666, 10.2.2025, ELI: http://data.europa.eu/eli/C/2025/666/oj)

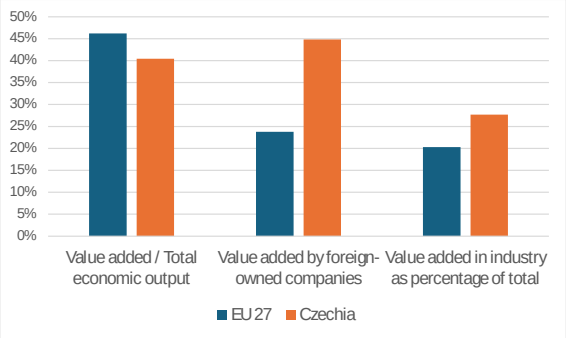
([5]) 101.21 KGOE per thousand euro of GDP in purchasing power standards compared to 78.5 EU average.

([6]) 61.7 toe per euro value added produced in industry and construction segments compared to 53.7 EU average.

([7]) 65% energy transformation output per transformation input, compared to 81% EU average.

([8]) 15.5 thousand kgoe per sqm compared with 11.1 EU average.

Graph 1.1: **Structural economic differences between Czechia and the EU-27**



Source: Eurostat, European Commission

Lack of diversification makes Czechia more vulnerable to external shocks and holds back productivity growth. With exports representing 57% of GDP, Czechia is one of the most trade-dependent economies in the EU. However, Czech exports are concentrated primarily in the automotive industry, which leaves them vulnerable to trade disruptions caused by changes in trade policy, and highly dependent on the main trading partner, Germany. While exports of other goods and services are growing, this is still happening slowly. Slow growth in local businesses and low R&D performance seem to be among the causes. Despite households having the highest saving rates in the EU (19.4% in 2023), these savings are concentrated in traditional banking products or property. The local capital market remains underdeveloped, limiting the growth of new businesses, and the business environment could be further enhanced (see Annex 4). An additional drag on growth comes from the low performance of the R&D sector due to low government support and low knowledge transfer between research and businesses (see Annex 3).

There is wide scope to improve the quality of public finances. Public debt is below 60% of GDP, and Czechia faces low to medium risks associated with fiscal sustainability. Still, given medium- to long-term spending pressures, such as those coming from the ageing population and the challenges to the growth model, further reforms are needed to boost competitiveness, productivity and sustainability. Czechia announced to gradually increase defence spending by 2030, which could add to pressures on government spending. However, public finances struggle to prioritise and put expenditure to its most productive use, make the tax and benefit systems more efficient, and improve quality of services. For example, the tax system fails to incentivise housing construction, the long-term rental housing market and R&D investment. The tax and benefit system excessively burdens low-income earners and does not encourage young mothers to go back to work (see Section 4). Finally, property taxation is still below the EU average, and environmental taxes have been decreasing in Czechia over the last 15 years. This has caused the tax system to be reliant on labour taxation and less growth friendly (see Annex 2).

Fully implementing the recently adopted pension reforms will be crucial for limiting ageing-related fiscal pressures. In 2023 and 2024, Czechia adopted legislative reforms addressing the long-running country-specific pension recommendation. The reform primarily seeks to gradually raise the statutory retirement age to 67 by 2056. In addition, the pension formula was adjusted to slow down the growth of newly granted pensions. Also, the maximum duration of early retirement was reduced from five to three years, and eligibility conditions for early retirement were made stricter. In combination with Czechia's penalty system for early retirement, these measures are projected to increase the effective retirement age and limit the increase in public pension spending in the long term by 1.9 pps. of GDP (see Annex 1). Fully implementing the recently adopted pension reforms would help to mitigate ageing-related spending pressures and the resultant risks for fiscal sustainability.

Challenges remain as regards strategic planning, coordination and implementation capacity in the public administration. Enhancing the ability to attract and retain skilled professionals, build analytical capabilities and promote evidence-based policymaking with the strong involvement of stakeholders would help to make public investment and spending more effective. Processes such as spatial planning and construction permitting remain complex

and slow, becoming a key constraint on economic development (see Annex 6).

Boosting innovation capacity and business dynamism

Enhancing innovation and improving the business environment and firms' access to capital market financing are essential for improving Czechia's competitiveness. Despite its robust industrial and research base, Czechia's competitiveness and productivity are hindered by high energy costs, overly complex administrative processes and a fragmented innovation environment. Key impediments include red tape, limited links between the business and science sectors and insufficient access to finance. Addressing these issues and implementing reforms and investments (see Annexes 3 to 8) could significantly bolster Czechia's innovation capacity, business environment and competitiveness. The functioning of the capital markets could be improved by adjusting regulations and helping retail investors to more easily exploit the untapped potential of high household savings (see Annex 5). This would open up new sources of financing for Czech businesses. In turn, this would help drive economic growth and enable the economy to diversify away from the traditional industrial sector.

Accelerating decarbonisation will be key to lowering energy costs and will boost competitiveness

Competitiveness is hindered by Czechia's high energy intensity combined with the insufficient roll-out of renewables. Further investments in renewable energy sources and in energy efficiency could help to lower energy costs for both industry and households. Despite the regulatory reforms supported by the recovery and resilience plan (RRP), the deployment of renewable energy sources, especially in wind, and flexibility of the grids remain low. Investment in more traditional, centralised energy sources, such as nuclear and gas, is prioritised despite higher costs and, in the case of gas infrastructure, potential for stranded assets. Limited social acceptance of renewables, bottlenecks in the grid capacity and recent changes to subsidies for renewables run the risk of considerably delaying future investments. Progress in improving the energy efficiency of buildings remains slow, despite a diverse set of programmes supporting renovations and decarbonisation of heating. Greenhouse gas emissions from road transport have been increasing, exposing households, businesses and transport users in Czechia to the impact of the carbon price.

Expanding tertiary education and improving labour market mobility are key to increasing productivity

Higher education's potential to transform Czechia into an innovative knowledge economy is underused. Tertiary educational attainment (33.7%) is far below the EU average (43.1%), in particular because of high drop-out rates. This is linked to Czechia's shortage of general-education secondary schools and limited permeability between general and specialised schools, leading to early specialisation. Furthermore, educational performance in Czechia is strongly dependent on socio-economic background. Finally, Czechia faces structural challenges with teacher shortages, particularly in science, technology, engineering and mathematics (STEM) subjects, which negatively influences student performance.

Czechia's labour market delivers high employment, but job transitions to more productive jobs remain low and the labour market participation of certain social groups could be higher. Specifically, in 2024, Czechia had an 82.3% employment rate (against an EU average of 75.8%) (see Annex 10), while the job vacancy rate exceeded 3.3% (against an EU average of 2.4%). Furthermore, the Czech labour market exhibits one of the lowest job transition rates among EU Member States, with only approximately 1% of workers in Czechia changing jobs in the course of a year (against an EU average of 2.3%). A notable barrier to labour mobility is the affordability of housing in cities. Finally, the employment of certain groups could be higher, for example young women, with the gender employment gap for women between 25 and 34 being 36.1 pps in 2024 (against an EU average of 25.2 pps).

Box 1:

Barriers to private and public investment

Czechia's net private investment decreased from 4.8% of GDP in 2023 to 3.8% in 2024. **Public investment declined** as a percent of GDP from 4.9% in 2023 to 4.7% in 2024. Several barriers contribute to this development:

- **Infrastructure deficits.** Persistent gaps in essential infrastructure – particularly in housing, energy and transport (e.g. lack of high-speed trains) – hamper economic growth and deter investment.
- **Labour and skills shortages.** Tight labour market conditions, labour regulation and insufficient skilled labour migration from abroad deepen skills mismatches, which prevents the expansion of businesses and is considered a significant obstacle to investment.
- **High costs of doing business.** High energy costs, geopolitical uncertainty, excessive red tape, complexity of R&D deductibles, high interest rates, and underdeveloped venture capital constrain access to finance for businesses and undercuts their ability to invest.

Czechia lacks a long-term planning document for nationally funded public investments, ensuring prioritisation and monitoring. Additionally, deployment of revolving financial instruments supported from the Cohesion Funds remains low (2.36% compared to 9% at EU level) and fragmented across sectors, exacerbating Czechia's ability to transition towards making greater use of these funds as opposed to grants. In this regard, financial instruments are better suited to increasing economic incentives and a return on investment, while mobilising private finance. Clean technologies, energy efficiency, housing and SME support are examples of areas where the use of financial instruments could be scaled up. Absence of a stronger financial instruments hub also remains a challenge.

The implementation of the recovery and resilience plan of Czechia is well on its way but faces considerable challenges. At present, Czechia has fulfilled 38% of the milestones and targets in its RRP. The absorption of recovery and resilience funds is particularly constrained by bottlenecks including limited administrative capacity at some of the implementing bodies as well as suboptimal use of financial instruments as detailed above. This is particularly visible in areas such as the green and digital transitions.

It remains important to accelerate the implementation of cohesion policy programmes. The mid-term review offers opportunities to speed up progress and better address EU strategic priorities related to competitiveness, defence, housing, water resilience and the energy transition.

Czechia has not yet taken advantage of the opportunities provided by STEP under Cohesion Policy to reallocate resources towards this priority. However, it can still support the development or manufacturing of critical technologies in the areas of digital and deep tech, clean and resource efficient technologies, and biotechnologies.

Box 2:

UN Sustainable Development Goals (SDGs)

Czechia performs well when it comes to SDGs on macroeconomic stability (SDGs 8) and fairness (SDGs 1 and 10) but is moving away from the targets for SDGs on quality education (SDG 4) and health and wellbeing (SDG 3). While Czechia has made progress on environmental sustainability, it remains below the EU average on climate action (SDGs 12 and 13) due to higher net greenhouse gas emissions per capita and a lower share of renewable energy in gross final energy consumption. Despite improvements, challenges also remain as regards gender equality, particularly in employment and leadership positions (SDG 5), and access to affordable energy (SDG 7).

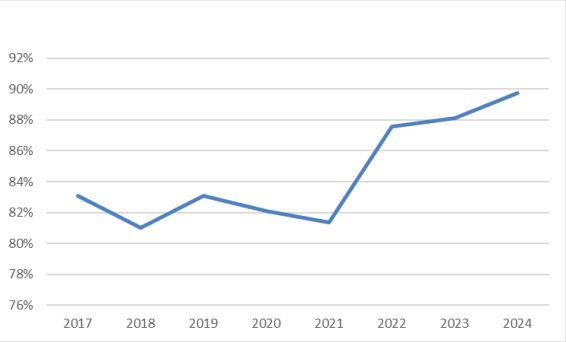
INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

Strengthening innovation and the business environment

Competitiveness and productivity are held back by a suboptimal innovation environment and excessive red tape. Despite having a robust industrial and research base, complex research and innovation (R&I) governance and fragmented research capacities limit the effectiveness of R&I investment and capacity to set clear priorities and pursue R&I reforms. Czechia's innovation capacity and productivity are also hindered by a shortage of skilled workers and a complex bureaucracy. The latter is influenced by, among other factors, the incorrect transposition of EU directives, with Czechia ranking second highest in the EU in that respect in the past five years. Czechia would benefit from reviewing the research and innovation governance policy coordination system for R&I with a view to clarifying the responsibilities of the ministries and bodies involved in the R&I sector as regards cross-cutting priorities. Also, conditions in terms of permit duration, family reunification and job mobility for highly skilled workers from non-EU countries are a limiting factor. Czechia lacks a dedicated institution which promotes productivity-enhancing policies and would benefit from setting up a national productivity board.

Despite significant improvements in recent years, Czechia lags behind on innovation. Czechia is a moderate innovator, with a performance of just under 90% of the EU average (see Graph 2.1). The innovation activity of Czech companies continues to lag markedly behind. This is visible in the low number of innovation outputs including the number of patent applications, and the uptake of emerging technologies. The links between the business and science sectors remain weak. There is room for improvement as regards how public support for innovative companies is organised. Efforts to improve this should be combined with initiatives to make the R&D tax deduction more attractive for companies and involve less red tape (for R&D expenditure see Graph 2.2). Only a third of companies which are consistently engaged in R&D use indirect public support in the form of R&D tax incentives, while small and young firms utilise the incentives even less frequently (see Annexes 2 and 3). Czechia has taken some legislative steps to improve knowledge transfer and would benefit from swiftly adopting and implementing measures proposed in 2024([9]) as well as the expert recommendations of the policy support facility project on the reform of the technology transfer offices (see Annex 3).

Graph 2.1: **Czech summary innovation index**



Note: The line chart shows the development of Czechia's innovation performance over time, relative to the performance of the EU-27.

Source: Eurostat, European Commission

([9]) Referred to in the national reform programme 2024.

Czechia has made some progress towards reducing administrative barriers and digitalising public services, but further efforts would be beneficial. Specifically, 72% of businesses still consider the complexity of administrative processes to be a significant barrier to doing business (vs 66% EU average) ([10]). To improve the situation, the Czech government adopted three packages ([11]) aiming to reduce bureaucracy, with a similar package being adopted by the Czech National Bank ([12]). To improve the situation further, more systemic implementation of the 'think small first' and 'digital first' principles, coupled with regulatory impact assessments and regular evaluations of legislation with a strong focus on small and medium-sized enterprises, could help. Similarly, continued digitalisation of public services could pave the way for a more growth-friendly and nurturing business environment. Furthermore, despite recent changes, the growth potential of start-ups is hindered by a burdensome approach to employee stock-option plans, resulting in their limited use ([13]). Reforming the scheme in line with business proposals could increase its uptake (see Annex 4).

Spatial planning, construction permitting processes and fragmented municipal governance represent significant administrative barriers. These hold back businesses by slowing down and raising the costs of commercial development as well as indirectly raising the costs of energy (via slow modernisation of the energy infrastructure) and reducing the mobility of labour (via inadequate supply of affordable housing). These are key contributors to Czechia having permitted the seventh smallest construction area in the EU in 2023 per capita. Spatial planning rules are particularly burdensome in large cities, where updating an urban plan can take over a decade. Reform is needed to accelerate the process, especially by redesigning competencies and differentiating planning requirements between small and large settlements. Such measures could significantly improve efficiency and responsiveness in urban development. On construction permitting, while progress has been made on the legal framework and, to some extent, on digitalisation, the positive impacts are not yet visible on the ground. Further improving digitalisation and the capacity and management of construction offices could further accelerate the process.

Unlocking funds to allow companies to thrive

The potential to boost competitiveness through better access to finance and the use of EU funds via financial instruments and in structurally affected regions remains untapped. Numerous instruments funded by the Recovery and Resilience Facility (RRF) or other EU funds support the competitiveness of companies, such as by providing new digital public services that facilitate the communication of businesses with the state (for example the entrepreneurial portal). In addition, the Czech authorities could make use of the incentives provided by the strategic technologies for Europe platform (STEP) to invest in the development or manufacturing of critical technologies to enhance EU's industrial competitiveness. In the area of access to finance, the RRF supports the roll-out of new financial instruments implemented by the National Development Bank and the European Investment Fund with a view to supporting small and medium-sized enterprises in the green transition or enhancing participation of institutional investors in venture capital. However, implementation delays reflect the slow progress made in mobilising the funding necessary for decarbonising and digitalising the Czech economy. In addition, losses in competitiveness have been particularly visible in 'structurally affected' regions (Karlovarský,

([10]) Eurobarometer, Businesses' attitudes towards corruption in the EU in 2024, July 2024.

([11]) Vláda schválila třetí antibyrokratický balíček připravený ministrem Michalem Šalomounem | Vláda České republiky, May 2024.

([12]) ČNB omezuje zbytečnou byrokracii. Do konce roku zruší 36 pravidel a výkazů - Česká národní banka, February 2025

([13]) 91% of start-ups in Czechia do not use a scheme of this kind according to start-up representatives:, April 2024.

Ústecký and Moravskoslezský regions). These losses have included net out-migration among young people, i.e. more young people leaving than moving into the region. Effective support for building up the administrative capacity of these regions is missing.

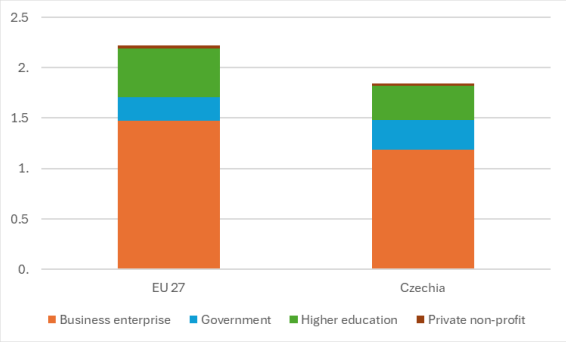
Leveraging public funding is key to mobilising private finance to support competitiveness and decarbonisation of businesses. The National Development Bank (which was assessed in 2023 and recently became an implementing partner for InvestEU) has limited power (compared to its EU peers) and insufficient administrative capacity (see Annex 6). Measures to strengthen the role of the National Development Bank would help it to achieve its potential in addressing market failures and the lack of risk capital to boost innovation, without crowding out private financial institutions. Building on the experience with the RRF, and as part of a much-needed transition away from reliance on grant support, better coordination with the private financial sector is essential. For example, putting in place simplified and uniform conditions of access to financing programmes for private operators can reduce the unnecessary costs incurred by financial institutions when designing products.

Czech firms do not have sufficient access to savings from abundant households. In 2024, the main sources of business funding were internal firm financing, followed by bank lending, while listed shares and bonds represented only 6.6% of funding sources. While loans to non-financial corporations declined as a percentage of GDP (from 19.6% in 2021 to 17.9% in Q3-2024), a timid recovery in credit growth due to easing of interest rates is expected in 2025. Furthermore, Czechia's capital market is less developed compared to other EU countries (with the stock market capitalisation at 9.5% of GDP in Q3-2024 compared with the EU average of 69.3%). Retail investor participation is also low, albeit gradually growing mainly through investment funds. The recently adopted legal framework for a long-term investment product has yet to demonstrate a material positive effect on attracting new investments – rather than redirecting the existing ones – from retail investors. Further policy action is essential to promote retail investment in the Czech capital markets, including by strengthening retail investor trust and improving financial literacy (see Annex 5). Ensuring an appropriate incentive structure and the availability of low-cost, well-diversified investment products suited for retail investors may also prove important.

Less-developed local venture-capital and growth-capital markets further compound the lack of funding sources for innovation, which is a key element for competitiveness. Private equity and venture capital assets are significantly below EU averages (with averages of 0.2% and 0.03% of GDP in 2021-2023, compared to EU averages of 0.6% and 0.08%). Domestic institutional investors, such as insurers or pension funds, provide little in the way of funding for start-ups and venture-capital investors. Lack of funding and no bespoke legal framework tailored to the specific needs of start-ups limit the prospects for setting up and subsequently scaling up innovative start-ups with no or limited profitability. However, recent policy changes ([14]) may facilitate a shift towards funds with less conservative strategies and could prove to be a first step in promoting start-up funding, even though it may need to be complemented by further policy actions in future (Annex 5).

([14]) Act No 417/2024 introducing an 'alternative participation fund' providing more flexibility in the investment policies of pension funds to include riskier investments and increased mobility of the participants between types of pension funds. The recent amendment of the Income Tax Act also represented a first step towards improving the attractiveness of Czechia's employee stock-option framework.

Graph 2.2: **R&D expenditure as % of GDP by sector, 2023**



Source: Eurostat, European Commission

Public procurement systems need to address deficiencies, including limited competition and corruption risks

More competition is key to making public procurement systems more cost-effective and efficient. The implementation of the RRF-funded public procurement strategy and its action plan, adopted in 2024, is still in its early stages, with limited effects on the deficiencies identified. These include a low number of companies submitting tenders, with a high proportion of single bids (41% over the last five years compared to an EU average of 26%) and insufficient expertise among professionals involved in public procurement. Measures to improve the expertise of professionals involved in public procurement and to develop central purchasing and collaboration at the regional level in order also to support the smaller contracting authorities are essential for making public procurement more efficient and cost-effective (See Annex 4). In addition, corruption-related risks continue to undermine competition, discouraging potential bidders. The risk of collusion and conflicts of interest persists in the public procurement system and fuels a high perception among companies of insufficient detection and enforcement of corruption (see Annex 6).

DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

Accelerate decarbonisation to boost competitiveness

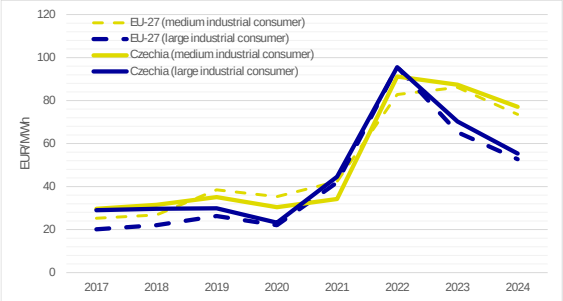
Czechia's low share of renewables in its electricity generation and its heavy reliance on coal puts its economy at a competitive disadvantage. In 2024, only 15.9% of the electricity generated in Czechia came from renewable sources, down by 0.5 percentage points compared with 2023, and well below the EU level of 47.4%. Coal and nuclear accounted for more than three quarters of the total electricity generated (35% and 40% respectively). While nuclear is currently the predominant source of electricity generation, coal still plays an important role in the power mix, putting upward pressure on electricity prices. Czechia is making progress in its energy transition by replacing coal with nuclear power and renewable energy sources (RES). Czechia is also taking steps to diversify nuclear fuels away from Russia. However, the planned increase of nuclear capacity is not expected to become operational until the late 2030's. In the meantime, a rapid expansion of renewables would help ensure security of supply and affordable prices. Czechia is currently discussing an amendment to the Energy Act called Lex GAS that introduces a mechanism for coal power plants which are already closed to start operating in an emergency. This could lead to legal uncertainty and risks causing speculation on the coal phase-out.

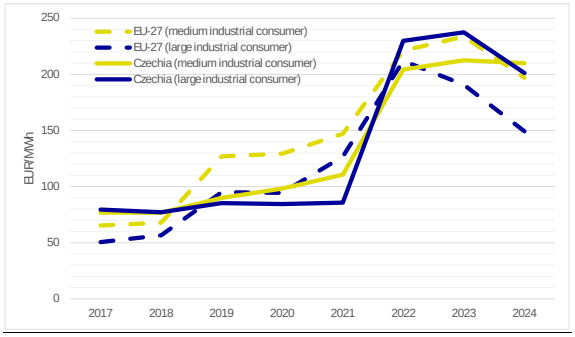
Czechia's reliance on fossil fuels makes its energy-intensive economy highly vulnerable to fluctuations in coal and gas prices. Following the energy crisis, prices in Czechia have stabilised at levels higher than those of pre-crisis years, mirroring the EU average. Industrial energy prices, which were once relatively stable, have risen substantially due to increases in gas markets prices and consequent impact on wholesale electricity prices (see Graph 3.1). However, small and medium-sized industrial consumers in Czechia still pay gas and electricity prices in line with the EU average, at EUR 77/MWh and EUR 209.9/MWh respectively([15]). Energy-intensive industries in Czechia have also been impacted by wholesale market price increases, in particular for electricity prices, reaching a peak EUR 237.5/MWh in 2023 (in 2024, price went down to EUR 201.2/MWh([16])), which is above the EU average. The energy crisis has also affected households, with energy prices at higher levels, although in line with the EU average. In 2024, natural gas prices for households in Czechia were EUR 110/MWh, while electricity prices stood at EUR 280/MWh. This was driven primarily by the energy component (where coal and gas are the main drivers) but was also caused by a higher level of electricity taxation in comparison with gas (Annex 8). Further expansion of renewables and lower levels of electricity taxation would cause electricity prices to fall, making energy more affordable in the country. The effective carbon rate is also lower than the EU average (Annex 2 and 8), driven by the low fuel taxation (gasoline, gas and petroleum products). This disincentivises electrification, perpetuates reliance on fossil fuels and makes decarbonisation less cost-effective.

([15]) For small and medium-sized industrial consumers, the EU average in 2024 is EUR 73.6/MWh for gas prices and EUR 197/MWh for electricity prices.

([16]) For energy-intensive industries, the EU average is EUR 53/MWh for gas prices – the same price level as Czechia – and EUR 149/MWh for electricity prices.

Graph 3.1: **Average industrial end-user gas (top) and electricity (bottom) prices**



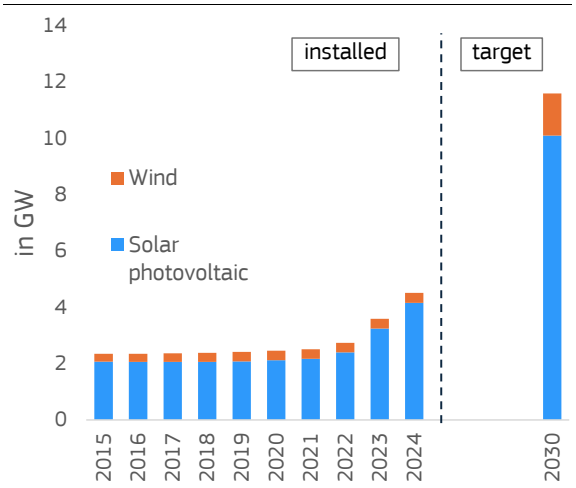


(1) prices include 3 components: the cost of energy and supply, network costs and taxes and levies excluding VAT
(2) For gas, medium industrial consumers (band I3, 10.000-100.000 GJ annual consumption) and large industrial consumers ((band I5, 1-4 million GJ annual consumption)
(3) For electricity, medium industrial consumers (ID band, annual consumption of 2 000 - 20 000 MWh) and large industrial consumer (IF band, annual electricity consumption between 70 000 - 150 000 MWh)
Source: Eurostat

Czechia has improved its legislative framework for renewables([17]) but progress on storage and flexibility remains slow. Lex RES I streamlined the permitting process with a focus on smaller installations. In 2024, the Lex RES II amendment introduced a significant regulatory overhaul, establishing a framework for energy communities, enabling energy sharing among consumers, and mandating the creation of the Electricity Data Centre (EDC), a new market entity responsible for managing electricity sharing within the Czech electricity system. In April 2025, the Lex RES III amendment brought to the regulatory framework the last pillar of RED II. This will enable households and companies to better manage electricity production and consumption, e.g. by using battery energy storage systems. These systems can be part of utility photovoltaic plans or be stand-alone systems which provide ancillary services for the grid and energy flexibility services. Following the adoption of Lex RES III, further efforts to revise the tariff structure, which have been pending for many years, would encourage investment in solutions which favour decarbonisation and would better address dynamic pricing (see Annex 8).

([17]) The legislative reforms on renewables are part of Czechia's national recovery plan.

Graph 3.2: **Installed capacity of main sources of renewables and national target for 2030 (in GW)**



Source: IRENA and CZ NECP

Designating 'renewable acceleration areas' is key to further investment, especially in wind. Czechia is currently laying the groundwork for the designation of renewable acceleration areas, aiming to deploy at least 2.5GW of solar and wind capacity (see Graph 3.2). This will require close collaboration with local communities to ensure their involvement and ownership. Delays in adopting the legal framework may deter investors by creating uncertainty and instability in the renewable energy sector. By contrast, swift adoption could finally unlock the building of additional capacity for wind energy, currently below potential. Moreover, the establishment of a digital one-stop shop for renewable projects, which includes the connection process, faces delays.

Introducing long-term contracts can play a crucial role in bringing stability and

predictability to the market, incentivising further investment in renewables. The use of power purchase agreements (PPAs) and contracts for difference (CfDs) is currently very limited in Czechia (see Annex 8). The development of the PPA market, in particular, could enable the growth of renewable energy projects beyond traditional regulatory schemes and period auctions. It could also allow renewable energy to be commercialised in the market, focusing on power self-generation and bilateral contracting with end-consumers. This would create opportunities for energy-intensive industries to decarbonise. Furthermore, both PPAs and CfDs would provide consumers with protection from energy price volatility. This would ensure certainty in energy costs, while also enabling companies to manage their revenue streams effectively. They would thereby be able to optimise their energy production and investment returns. The recent adoption of retroactive cuts dividends from feed-in-tariffs for solar projects built between 2009 and 2010 creates unpredictability for investors and may delay future projects.

Delays in the implementation of the Electricity Data Centre can hinder the quick uptake of electricity sharing and the benefits it offers to consumers. The Electricity Data Centre (EDC) (see Map 3.1) plays a crucial role in overseeing the energy sharing process, collecting and analysing data on electricity usage and generation. To facilitate this, every consumption and delivery location participating in energy sharing must be equipped with a smart meter, which measures electricity consumption and production at 15-minute intervals. The EDC collects and manages data on electricity consumption, production and trading daily, providing a comprehensive overview of the energy-sharing landscape. Since its inception, more than 13 000 sharing participants have already signed a contract with the EDC, sharing 105.49 MWh of electricity with each other([18]). This is equivalent to the energy generated by a 1-2 MW wind turbine operating at full capacity for about 6-12 months. Czechia is currently taking steps to implement the second phase of the EDC to allow also for flexibility services but delays in IT public procurement may put at risk the timely completion of this investment. The slow roll-out of smart meters is a key obstacle to consumer empowerment and energy sharing.

Map 3.1: **Electricity Data Centre and its functionalities**



Source: Electricity Data Centre

Czechia's distribution grid network faces significant challenges, which hold back the pace of investments in RES. The increase in the supply of renewables requires substantial investments in the distribution grid to expand and modernise the network and create solutions to make it more efficient. To address the lengthy connection queues, the Lex RES III amendment introduced a binding maximum timeline for RES project grid connections. Although it is too early to assess the impact of this measure, given the size of the challenge, further measures should be considered to reduce the number of projects in the queue. Such measures could, in particular, focus on more mature projects or on removing potentially speculative bids. Financial commitments could be introduced to reserve allocated grid capacity and regular checks could be conducted on waiting lists to assess project progress towards key milestones. Such measures would make it possible to manage waiting lists more dynamically, allowing slow-moving or stalled projects to be removed.

([18]) Electricity Data Centre, press release 'From its establishment to over 1 000 MWh of shared electricity: The Electricity Data Centre celebrates its first year of existence', January 2025.

Insufficient support for clean tech manufacturing hinders competitiveness and scale-up opportunities in multiple sectors. Energy storage solutions, whose deployment remains at an early stage, play a key role in stabilising electricity grids, and Czechia could capitalise on the opportunities arising from this transition. The country is emerging as a significant hub for battery and storage technologies. However, the absence of a regulatory framework for the battery sector puts Czech companies in the sector at a disadvantage (see Annex 7). A dedicated clean tech manufacturing regulatory framework, including incentives for R&D, manufacturing facilities, and workforce development, could help increase manufacturing capacity and leverage Czechia's potential to become a key player in the lithium and batteries markets. As manufacturing depends heavily on imports of critical raw materials, Czechia is particularly vulnerable to supply chain disruption. The lithium and manganese deposits in Czechia that were recently declared deposits of strategic importance present a significant opportunity for sustainability and resilience.

Czechia lags behind in the uptake of zero-emission vehicles and would benefit from accelerating clean mobility measures to curb rising transport emissions. Despite the importance of the Czech automotive industry to Czechia's economy, the sector is expected to face competitiveness issues and low demand in the domestic market for zero-emission vehicles. As the sector would benefit from speeding up its transformation (see Annex 7), the uptake of zero-emission vehicles lags far behind the EU average. According to Eurostat, newly registered zero-emission passenger cars represented only 3.1% of all new passenger cars registered in Czechia in 2023, whereas the EU average is 14.5% of all cars registered. Moreover, according to the European Environment Agency, transport emissions in Czechia have risen by nearly 72% since 1990 and represent nearly 20% of all Czech emissions. Czechia has been making strides in reducing its transport emissions and increasing zero-emission vehicles deployment through measures in the Czech recovery and resilience plan (RRP). In particular, Czechia has adopted the clean mobility action plan and is boosting deployment of zero-emission vehicles through RRP investments in the public sector, public transport and private companies. However, it would be beneficial if the financial, fiscal, regulatory measures and funding schemes outlined in the action plan were to be implemented more quickly. These measures should include strengthening incentives for zero-emission vehicles, expanding charging and hydrogen refuelling infrastructure, and carefully designing subsidies and taxation to avoid regressive effects and inefficient outcomes. Furthermore, Czechia has a well-developed rail network and both the RRP and cohesion funds, and the Modernisation Fund are also supporting substantial investments in sustainable mobility. However, additional investments in low-emission transport infrastructure – especially in rail and public transport to reduce Czechia's car dependency – are needed.

Progress in improving the energy efficiency of buildings remains slow, despite a diverse set of programmes supporting renovations and decarbonisation of heating. Programmes like the new green savings (*Nová Zelená Úsporám*) programme have helped thousands of households to invest in energy-savings measures, such as renovations, replacement of heating sources and installation of photovoltaics. Despite these measures, the climate-corrected final energy consumption of households fell by only 1.26% between 2018 and 2022. This is in part due to the high electricity-to-gas price ratio ([19]) which encourages households to continue to use gas for heating and disincentivises them from switching to heat pumps and electrification. Intensifying efforts to decarbonise heating and provide support to renewable heating and cooling would positively impact the national economy. Czechia is currently home to at least 12 factories specialised in the manufacturing of heat pumps and there is an increasing

([19]) The electricity-to-gas ratio is a product of a fiscal burden disproportionately skewed towards electricity. Excluding taxes and levies, electricity costs 2.9 times more per unit than gas – after taxes and levies, this ratio increases to 3.3 (considerably higher than the EU average of 2.6).

potential in this area. These efforts will also help Czechia achieve its 2030 target of reducing building energy consumption by 8% compared to 2020, as outlined in its long-term renovation strategy.

The renovation of public buildings remains a challenge. Especially in cities like Prague, historical buildings are more expensive to renovate and require longer permitting procedures. Introducing innovative financial instruments, such as energy performance contracts, would help to speed up renovation of public buildings and activate and leverage private capital for energy savings investments. A recently proposed amendment to budgetary rules, if adopted, would allow central government bodies to make use of supplier finance to fund EPC renovations.

Improve climate adaptation to protect long-term competitiveness and ensure economic prosperity

Czechia faces significant climate adaptation challenges, with substantial economic impacts from extreme weather events like floods, droughts, and heatwaves, which are expected to worsen. Insufficient climate resilience threatens the competitiveness of the Czech economy. There is the prospect of increased economic harm due to, among other things, stranded assets, health-care costs, losses to labour productivity, decreased agricultural productivity, water shortages and supply chain disruptions. Estimates show that between 1980 and 2023 climate-related losses amounted to EUR 18.5 billion, with low insurance coverage. The costs of inaction exceed the costs of action, and especially in the medium to long term, climate adaptation will generate economic benefits ([20]).

Developing and implementing a comprehensive climate change adaptation strategy is crucial. The implementation of the current adaptation framework is fragmented, with isolated policies tackling separate environmental areas rather than there being a coherent set of mutually reinforcing measures. Particularly problematic is the lack of a clear governance framework and governmental responsibilities are poorly defined. To address these issues, Czechia should (i) clarify responsibilities within and between relevant ministries, (ii) finalise the climate risk assessment and use it to update the national adaptation strategy and action plan, (iii) increase coordination among actors at national, regional and local levels and (iv) utilise synergies between policies tackling separate environmental aspects to comprehensively build climate resilience.

Water resilience is a significant challenge for Czechia, with its water resources highly dependent on atmospheric precipitation and with ecological and chemical status of surface water and groundwater bodies deteriorating (even though it is partially due to improved monitoring, the downward trend is clear). Water stress causes economic harm and hampers the competitiveness of not only exposed sectors, such as agriculture, forestry or industry, but also the economy as a whole. For instance, it can threaten the stability of the energy supply due to the reliance on water in operating nuclear and coal power plants. Tackling the main sources of pressure, like industrialised agriculture, industrial emissions, and untreated wastewater (ensuring compliance with the Urban Wastewater Treatment Directive), would improve water resilience. Strengthening sustainable water management, prioritising nature-based solutions, and restoring rivers will improve flood resilience, bringing associated benefits for climate adaptation and nature protection.

The conservation of biodiversity and ecosystems plays an important role in climate resilience and long-term economic stability. With 44% of Czech gross value added dependent on ecosystem services, equal to the EU average, nature degradation poses serious risks to Czechia's competitiveness and economic security (based on EU-level data, for sectors like agriculture or

([20]) Národní akční plán adaptace na změnu klimatu

forestry the level of dependence reaches 100%, see Annex 9). But ecosystems in Czechia remain under pressure: a few habitats have a good conservation status, and the coverage of protected areas is below the EU average. Updating the national biodiversity strategy, increasing investment in biodiversity conservation, and promoting sustainable land-use practices to reduce habitat fragmentation and enhance species and habitat conservation would help address this challenge.

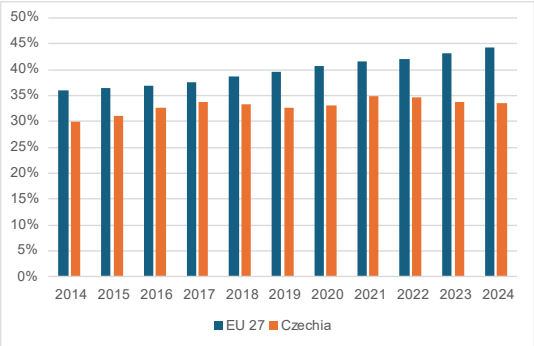
Czechia faces challenges in achieving its land use, land-use change and forestry (LULUCF) 2030 targets and promoting sustainable agriculture. These are relevant for reducing greenhouse gas emissions and mitigating negative effects on air, water and soils. Contrary to EU-level trends, LULUCF sector carbon removals have been declining over the last decades and even turned into emissions between 2017 and 2019. Enhancing sustainable agriculture practices, such as reducing nutrient loss from mineral fertilisers and manure, and continuing the successful uptake of organic farming, which has been steadily increasing since 2005, would help address these issues. Additionally, ensuring the successful implementation of Czechia's common agricultural policy strategic plan – in which Czechia envisages environmental measures to improve agricultural adaptation to climate change, such as whole-farm eco-schemes and agroforestry – would help to make the agricultural sector more competitive.

Increasing tertiary educational attainment and reducing inequalities

The potential of higher education to transform Czechia into an innovative knowledge economy is underused. Tertiary educational attainment (33.5%) for Czechs aged 25-34 is far below the EU average (44.2%) (see Graph 4.1), despite rising demand for skilled professionals in fields like information and communications technology and engineering (see Annex 12). High dropout rates, particularly in science, technology, engineering, and mathematics (STEM) fields, and declining enrolment in STEM programmes since 2017 illustrate systemic challenges. In 2022, only 11.9 women out of a thousand people aged 20-29 graduated in STEM fields, below the EU average of 15.1.([21]) Insufficient career guidance and lack of financial support to students are among the drivers of high dropout rates at Czech higher education institutions. This is despite the fact that the returns on employment and earnings are high compared to those who have completed secondary education. Supported by the Recovery and Resilience Facility (RRF), Czechia is launching new study programmes in high-demand fields relevant to the green transition. Further improvements could include increasing financial support for students, improving access to higher education for people from disadvantaged backgrounds and for those whose parents have a low level of educational attainment, improving career guidance and encouraging participation in STEM programmes through financial and non-financial incentives.

([21])Eurostat, data code: **educ_uoe_grad04**

Graph 4.1: **Tertiary educational attainment**



Source: Eurostat, European Commission

Czechia has a shortage of general secondary schools and limited permeability between general and specialised education pathways, limiting possibilities for students to successfully pursue tertiary education. While interest in tertiary educational attainment has strongly increased over the last 30 years, the number of general secondary schools has not kept pace with this. The shortage of general secondary schools pushes students to enrol in less competitive vocational schools, leading to early specialisation. Although two thirds of people who complete vocational education and training (VET) enrol in tertiary education, their success rates fall behind those of people who complete general tracks, which contributes to consistently low tertiary educational attainment. To address these challenges, Czechia has recently announced steps towards establishing new pathways that combine general and professional subjects and is seeking to modernise VET programmes to bring them into line with the needs of the labour market. To better prepare those who have completed secondary education for the labour market and support their transition to tertiary education, further improvements could focus on (i) expanding work-based learning opportunities, (ii) easing school-to-work transitions, (iii) strengthening the permeability between general and vocational secondary

education and (iv) increasing the capacity of general secondary schools.

Educational performance in Czechia is strongly dependent on socio-economic background. Pupils in Czechia perform better than the EU average in literacy, mathematics, science and digital skills, but the performance gap between socio-economically advantaged and disadvantaged pupils is large and growing compared to other EU Member States. Specifically, under the Programme for International Student Assessment (PISA 2022), the results gap in mathematics between the top 25% and bottom 25% in terms of socio-economic status was the fifth highest in the EU. Early tracking, whereby pupils are divided into different educational pathways, and differences in pupil performance between school types contribute to these results, as does the educational segregation of Roma children. To address these challenges, strong support for teachers and school leaders would be beneficial in order to implement the recently revised curricula and to reduce administrative burden on smaller schools. The planned RRF-supported reform of the school financing system aims to increase support for disadvantaged schools. Czechia is also establishing a support programme for disadvantaged schools funded by the RRF and focusing on training teachers to work with disadvantaged pupils.

Czechia faces challenges with teacher shortages, particularly in STEM subjects, which has an adverse impact on pupil performance. Despite efforts to make the teaching profession more attractive, including a strengthened practical component in initial teacher training and the introduction of a new teacher skills framework, shortages remain. Slow salary progression, particularly for less experienced teachers, contributes to 13% of primary education teachers intending to leave the profession. To address these challenges, measures should focus on making the teaching profession more attractive by improving salary progression and reducing administrative burden, for example by consolidating operational functions across schools.

Maintaining high employment, increasing job transitions and the employment of specific population groups

Czechia's labour market delivers high employment, but job transitions to more productive jobs remain low, and the employment of certain population groups could be higher. Specifically, in 2024, Czechia had an 82.3% employment rate (against an EU average of 75.8%) and an unemployment rate of 2.6% (against an EU average of 5.9%). Despite Czechia's high employment rate, the job transition rate is one of the lowest in the EU. Furthermore, the job vacancy rate exceeded 3.3% (against an EU average of 2.4%). Besides investment in automation, higher labour market participation of certain groups, notably mothers, low-income people, Ukrainians that fled Russian military aggression and Roma people, could help fill these vacancies and thus boost Czechia's competitiveness.

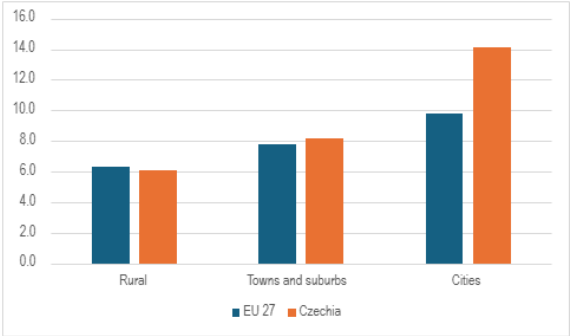
Easing the transition to more productive jobs, including by making housing more affordable

The Czech labour market exhibits one of the lowest job transition rates among EU Member States. In 2024, only approximately 1% of workers in Czechia changed jobs (against an EU average of 2.3% and 3% in Germany, an economically close high-vacancy high-employment economy) despite Czechia having one of the highest vacancy rates in the EU. The rate at which people change jobs and have a period of unemployment in between jobs is likely also very low, as only 0.8% of workers experienced unemployment after leaving their jobs in 2024 (against an EU average of 1.9% and 1.5% in Germany). This means labour is not being efficiently allocated to high-productivity sectors, contributing to Czechia's low real wages and household consumption, which remain below 2019, the

steepest decline in the EU compared to pre-pandemic levels. Overall, only 33% of Czech GDP goes into wages and salaries, the fifth lowest share in the EU([22]). The low rate of transitions is caused by factors such as the affordability of housing in cities, low short-term unemployment support (somewhat improved by the recent labour code amendments), a high proportion of specialised education and high barriers to obtaining professional certification. Adult participation in life-long learning – another important contributor to labour mobility – also remains low. In 2022, only 21.2% of adults aged 25-64 participated in formal or non-formal learning in the previous 12 months, compared to the EU average of 39.5%.

A notable barrier to labour mobility is the affordability of housing in cities. At the end of 2023, the standardised house price-to-income ratio stood 15% above its long-term average, the fourth highest in the EU([23]). Similarly, in cities, more than 14.1% of people spend more than 40% of their income on housing (compared to an EU average of 9.8% in cities) (see Graph 4.2). This is driven by many factors. First, as discussed above, Czechia suffers from slow spatial planning and construction permitting processes and a fragmented public administration. This contributes to Czechia having permitted the seventh smallest housing area in the EU in 2023 per capita. Second, there is a wide array of other causes: insufficient municipal incentives to build affordable housing, a lack of social housing and sub-optimally designed tax incentives. These include recurrent property taxes largely not based on property value (which fail to incentivise land use), mortgage interest deductibles (two thirds of which subsidise purchases, not construction) and lower taxation for short-term rents (often used for tourism) compared to long-term rents. While new legislation on affordable housing and construction permitting has been adopted in recent years and RRF-funded financial instruments supporting affordable housing are being rolled out, other key areas, such as spatial planning reform, have not been addressed.

Graph 4.2: **Housing cost overburden rate by degree of urbanisation, 2024**



Note: The housing cost overburden rate is defined as the percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40% of disposable income ('net' of housing allowances).

Source: Eurostat, European Commission

Incentivising higher labour market participation of certain groups

Female participation in the labour market is constrained by a lack of early childhood education and care and long-term care capacities. Parents of children under four years of age, typically mothers, have problems finding childcare and are disincentivised from joining the labour market (for long-term care challenges see the last paragraph of this Section). The gender employment gap for women between 25 and 34 was 36.1 pps in 2024 (against an EU average of 25.2 pps)([24]), corresponding to almost 67 thousand fewer women working than if Czechia had a gender employment gap corresponding to the EU average.

([22]) Eurostat, nama_10_gdp.

([23]) Eurostat, data code: tipsho60, https://ec.europa.eu/eurostat/databrowser/view/tipsho60/

([24]) Eurostat, data code: lfst_r_lfe2emprt

People are disincentivised from finding low-income or part-time work by the fact that Czechia's labour taxation system is not progressive enough. For example, low-income earners often face little or no financial benefit from working due not only to high tax rates (esp. through health and social contributions to which deductibles do not apply) but also to benefits that decrease as income rises. This is part of the reason why Czechia's taxation of people entering the labour market (the inactivity and unemployment traps) is higher than the EU average. As benefit eligibility is calculated based on income before wage garnishment (mandatory deduction from a person's wages for payment of a debt), this is especially the case for the more than 600 000 people in enforcement or insolvency proceedings. A recent study suggests that taxing low-income workers less could incentivise up to 50 000 employees to transition from informal or precarious work arrangements to standard employment (as well as lifting 29 000 people above the poverty line). Adjusting labour taxes to reduce the burden for low-income households would bring more people from these households into the labour market. Combining this with greater use of underutilised environmental and property taxation instruments (see Annex 2) would make the tax system more growth friendly.

Ukrainians seeking shelter in Czechia are integrating into the labour market, as shown by their high levels of employment, but their qualifications could be put to better use. Almost 400 000 people have recently arrived in Czechia from Ukraine([25]) . While approximately 80% of the economically active are employed, 50% reported that their work did not correspond to their qualifications. This could be improved by reducing Czechia's high number of regulated professions and slow qualification and skill recognition processes. This would also enhance the integration of other foreign nationals.

The Roma minority, around 250 000 people, has untapped potential. Currently, only an estimated 45% of working-age Roma are employed, whereas the percentage of people in employment in the general population is 82.3% in 2024. Bringing them into the formal labour market could expand the workforce, broaden the tax base and reduce dependency on social security benefits. Empowering and upskilling the Roma community through education and training initiatives and measures promoting equal access to employment opportunities would help to integrate them more effectively into the labour market. For example, better ethnic data collection mechanisms could improve the targeting of labour market integration measures and assess their impact.

Other population groups who could be employed at a higher rate include informal carers and workers who are beyond pension age. More than 100 000 informal carers (of parents and other family members), typically women, report not being able to work full-time because of their caring duties. Increasing long-term care capacity (in particular home and community-based care) could enable them to join the labour market. The supply of workers could also be increased by further promoting working beyond pension age even though the employment rate for people over 65 is above the EU average. This is also linked to the health of the Czech population, whose life expectancy in good health is below the EU average and which has the fifth highest absenteeism rate in the EU. More emphasis on prevention could help, as Czechia does less than other EU countries in this area.

([25]) UNHCR, Ukraine Refugee Situation, https://data.unhcr.org/en/situations/ukraine.

KEY FINDINGS

To boost competitiveness, sustainability and social fairness, Czechia would benefit from:

- **accelerating the implementation of the RRP**, including the REPowerEU chapter; **swiftly implementing cohesion policy**, taking advantage of the opportunities under the mid-term review; and **making optimal use of EU instruments**, including InvestEU and STEP, to improve competitiveness;

- **limiting ageing-related fiscal pressures** by fully implementing the recently adopted pension reforms;

- **stimulating innovation** by improving research and investment policy coordination, reducing fragmentation of the research environment, implementing knowledge transfer reforms, strengthening business-science linkages, simplifying employee stock-ownership plans and better exploiting the potential of R&D tax benefits;

- **simplifying the business environment** by reducing regulatory barriers, particularly for start-ups and SMEs, continuing digitalisation of public services, and increasing efficiency and competition in public procurement;

- **increasing firms' access to non-bank finance** by promoting institutional investors' participation in the venture capital market as well as equity markets more widely, increasing retail participation in capital markets, improving the uptake and additionality of long-term investment products, scaling up the use of financial instruments and strengthening the role of the National Development Bank;

- **support the affordability of housing and construction** by streamlining spatial planning and construction permitting procedures, and by putting the existing land and housing stock to its most productive use, including by increasing the efficiency of property taxation;

- **accelerating decarbonisation to improve competitiveness** by creating more favourable conditions for investments in renewable energy sources, grid modernisation and energy efficiency, developing a regulatory framework for clean tech manufacturing, incentivising energy intensive industries to switch to cleaner energy sources, improving the energy efficiency of the building stock, increasing the uptake of zero-emission vehicles, and completing high-speed rail infrastructure;

- **strengthening climate and water resilience** by improving the governance and implementation of Czechia's climate adaptation and sustainable water management frameworks, and prioritising nature-based solutions;

- **boosting educational outcomes** by increasing tertiary educational attainment, expanding access to general secondary education, improving permeability between general and vocational education, promoting science, technology, engineering, and mathematics skills, enhancing support for disadvantaged schools and Roma pupils, and stepping up efforts to make the teaching profession more attractive;

- **tapping into the labour market's full potential** by, first, increasing labour mobility by, for example, supporting the affordability of housing; and second, boosting the participation of certain population groups, for example women, by increasing the capacity of early childhood education and care and the capacity of home and community-based long-term

care, improving tax-benefit incentives to work, reducing the tax burden on low-income workers and simplifying the recognition of foreign qualifications.

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ANNEX 1: FISCAL SURVEILLANCE AND DEBT SUSTAINABILITY

This Annex contains a series of tables relevant for the assessment of the fiscal situation in Czechia, including how Czechia is responding to Council recommendations issued under the reformed Economic Governance Framework.

The reformed framework, which entered into force on 30 April 2024([26]), aims to strengthen debt sustainability and promote sustainable and inclusive growth through growth-enhancing reforms and priority investments. The medium-term fiscal-structural plans (hereinafter, MTPs or plans) constitute the cornerstone of the framework, setting the budgetary commitment of Member States over the medium term. The latter is defined in terms of net expenditure growth, which is the single operational indicator for fiscal surveillance.

Czechia submitted its plan on 16 October 2024. The plan covers the period until 2028, presenting a fiscal adjustment over four years. On 21 January 2025, the Council adopted the Recommendation endorsing Czechia's plan.([27])

The assessment of the implementation of the Council Recommendation endorsing the Czechia's plan is carried out on the basis of the outturn data from Eurostat and the Commission Spring 2025 Forecast, and taking into account the Annual Progress Report (APR), that Czechia submitted on 30 April 2025. Furthermore, given Czechia's request to activate the National Escape Clause([28]) following the Commission Communication of 19 March 2025([29]), the assessment also considers, as appropriate, the projected increase in defence expenditure based on the Commission Spring 2025 Forecast.

The Annex is organised as follows. First, developments in **government deficit and debt** are presented based on the figures reported in table A1.1. Then, the assessment of the **implementation of the Council Recommendation endorsing the plan** follows, based on the relevant figures presented in Tables A1.2 to A1.9, including data on defence expenditure.

The Annex also provides information on the **cost of ageing** and the **national fiscal framework**. Fiscal sustainability risks are discussed in the Debt Sustainability Monitor 2024.([30])

Developments in government deficit and debt

Czechia's government deficit amounted to 2.2% of GDP in 2024. Based on the Commission's Spring 2025 Forecast, it is projected to increase to 2.3% of GDP in 2025. The government debt-to-GDP ratio amounted to 43.6% at the end of 2024 and, according to the Commission, is projected to increase to 44.5% end-2025.

([26]) Regulation (EU) 2024/1263 of the European Parliament and of the Council (EU) on the effective coordination of economic policies and on multilateral budgetary surveillance, together with the amended Regulation (EC) No 1467/97 on the implementation of the excessive deficit procedure, and the amended Council Directive 2011/85/EU on the budgetary frameworks of Member States are the core elements of the reformed EU economic governance framework.

([27]) OJ C, C/2025/666, 10.2.2025, ELI: http://data.europa.eu/eli/C/2025/666/oj.

([28]) On 21 May 2025, Czechia requested to the Commission and to the Council the activation of the National Escape Clause. On this basis, the Commission adopted a Recommendation for a Council Recommendation allowing Czechia to deviate from, and exceed, the net expenditure path set by the Council COM(2025)602.

([29]) Communication from the Commission accommodating increased defence expenditure within the Stability and Growth Pact of 19 March 2025, C(2025) 2000 final.

([30]) European Commission (2025) 'Debt Sustainability Monitor 2024,' *European Economy-Institutional Papers* 306.

Table A1.1: **General government balance and debt**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1	General government balance	% GDP	-2.2	-2.2	-2.3	n.a.	-2.2
2	General government gross debt	% GDP	43.6	44.5	44.5	n.a.	45.4

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR)

Developments in net expenditure

The net expenditure([31]) growth of Czechia in 2025 is forecast by the Commission([32]) to be below the recommended maximum. Considering 2024 and 2025 together, the cumulative growth rate of net expenditure is also projected below the recommended maximum cumulative growth rate.

Table A1.2: **Net expenditure growth**

	Annual			Cumulative*		
	REC	APR	COM	REC	APR	COM
	Growth rates					
2024	n.a.	2.8%	0.0%	n.a.	n.a.	n.a.
2025	4.5%	3.3%	4.0%	10.1%	6.1%	4.0%
2026	2.5%	n.a.	4.8%	12.9%	n.a.	9.0%

* The cumulative growth rates are calculated by reference to the base year of 2023.
Source: Council Recommendation endorsing the national medium-term fiscal-structural plan of Czechia (REC), Annual Progress Report (APR) and Commission's calculation based on Commission Spring 2025 Forecast (COM).
Source:

General government defence expenditure in Czechia amounted to 0.9% of GDP in 2021, 1.0% of GDP in 2022 and 1.2% of GDP in 2023([33]). According to the Commission 2025 Spring Forecast, expenditure on defence is projected at 1.3% of GDP in 2024 and 2025.

([31]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of (i) interest expenditure, (ii) discretionary revenue measures, (iii) expenditure on programmes of the Union fully matched by revenue from Union funds, (iv) national expenditure on co-financing of programmes funded by the Union, (v) cyclical elements of unemployment benefit expenditure, and (vi) one-off and other temporary measures.

([32]) European Commission Spring 2025 Forecast *European Economy-Institutional paper 318*, May 2025.

([33]) Eurostat, government expenditure by classification of functions of government (COFOG).

Table A1.3: **Net expenditure (outturn and forecast), annual and cumulated deviations vis-à-vis the recommendation**

	Variables		2023	2024	2025	2026
			Outturn	Outturn	COM	COM
1	Total expenditure	bn NAC	3346.4	3444.5	3618.1	3748.9
2	Interest expenditure	bn NAC	98.5	108.0	112.4	117.6
3	Cyclical unemployment expenditure	bn NAC	0.3	0.4	0.2	0.1
4	Expenditure funded by transfers from the EU	bn NAC	81.4	79.1	94.5	95.0
5	National co-financing of EU programmes	bn NAC	40.7	38.0	31.5	30.0
6	One-off expenditure (levels, excl. EU funded)	bn NAC	0.0	0.0	10.0	0.0
7=1-2-3-4-5-6	**Net nationally financed primary expenditure (before discretionary revenue measures, DRM)**	**bn NAC**	**3125.5**	**3219.0**	**3369.5**	**3506.3**
8	Change in net nationally financed primary expenditure (before DRM)	bn NAC		93.5	150.5	136.8
9	DRM (excl. one-off revenue, incremental impact)	bn NAC		93.5	21.4	-25.8
10=8-9	**Change in net nationally financed primary expenditure (after DRM)**	**bn NAC**		**0.0**	**129.1**	**162.6**
11	Outturn / forecast net expenditure growth	% change		0.00%	4.0%	4.8%
12	Recommended net expenditure growth*	% change		5.3%	4.5%	2.5%
13=(11-12) x 7	Annual deviation	bn NAC		-165.7	-15.7	78.4
14 (cumulated from 13)	Cumulated deviation	bn NAC		-165.7	-181.4	-103.0
15=13/17	**Annual balance**	**% GDP**		**-2.1**	**-0.2**	**0.9**
16=14/17	**Cumulated balance**	**% GDP**		**-2.1**	**-2.2**	**-1.2**
17	p.m. Nominal GDP	bn NAC	7618.5	8010.7	8402.2	8816.0

* The growth rate for 2024 is not a recommendation but serves to anchor the base, as the latest year with outturn data when setting the net expenditure path is year 2023.

Source: Commission Spring 2025 Forecast and Commission's calculation.

Table A1.4: **Defence expenditure**

			2021	2022	2023	2024	2025	2026
1	Total defence expenditure	% GDP	0.9	1.0	1.2	1.3	1.3	1.3
2	*of which: gross fixed capital formation*	% GDP	0.2	0.2	0.4	0.4	0.3	0.3
3	Flexibility from increases in defence expenditure	% GDP					0.4	0.4
4	**Cumulated balance after flexibility**	**% GDP**					**-2.5**	**-1.6**

Source: Eurostat (COFOG), Commission Spring 2025 Forecast.

Table A1.5: **Macroeconomic developments and forecasts**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1=7+8+9	**Real GDP**	**% change**	**1.1**	**2.0**	**1.9**	**n.a.**	**2.1**
2	Private consumption	% change	2.2	3.6	3.3	n.a.	3.0
3	Government consumption expenditure	% change	3.3	2.0	2.4	n.a.	2.2
4	Gross fixed capital formation	% change	-1.2	0.7	0.6	n.a.	3.2
5	Exports of goods and services	% change	1.8	1.6	1.1	n.a.	2.4
6	Imports of goods and services	% change	0.9	3.4	2.5	n.a.	3.6
	Contributions to real GDP growth						
7	- Final domestic demand	pps	1.3	2.3	2.2	n.a.	2.7
8	- Change in inventories	pps	-0.9	0.7	0.6	n.a.	0.0
9	- Net exports	pps	0.7	-1.0	-0.8	n.a.	-0.6
10	Output gap	% pot GDP	-1.7	-1.2	-1.1	n.a.	-0.5
11	Employment	% change	0.3	0.2	0.4	n.a.	0.2
12	Unemployment rate	%	2.6	2.6	2.6	n.a.	2.6
13	Labour productivity	% change	0.8	1.8	1.5	n.a.	1.8
14	HICP	% change	2.7	2.3	2.2	n.a.	2.0
15	GDP deflator	% change	4.0	2.7	2.9	n.a.	2.8
16	Compensation of employees per head	% change	5.9	6.6	6.5	n.a.	5.3
17	Net lending/borrowing vis-à-vis the rest of the world	% GDP	2.9	n.a.	2.5	n.a.	2.0

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR).

Table A1.6: **General government budgetary position**

	Variables (% GDP)	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1=2+3+4+5	**Revenue**	**40.8**	**40.9**	**40.8**	**n.a.**	**40.3**
	of which:					
2	- Taxes on production and imports	10.7	10.6	10.7	n.a.	10.6
3	- Current taxes on income, wealth, etc.	8.3	8.3	8.2	n.a.	7.9
4	- Social contributions	15.8	16.0	16.1	n.a.	16.1
5	- Other (residual)	5.9	6.0	5.8	n.a.	5.6
8=9+16	**Expenditure**	**43.0**	**43.1**	**43.1**	**n.a.**	**42.5**
	of which:					
9	- Primary expenditure	41.7	41.7	41.7	n.a.	41.2
	of which:					
10	- Compensation of employees	9.7	9.8	9.9	n.a.	10.0
11	- Intermediate consumption	5.8	5.8	5.8	n.a.	5.8
12	- Social payments	17.1	16.9	16.8	n.a.	16.5
13	- Subsidies	1.9	2.1	2.0	n.a.	2.0
14	- Gross fixed capital formation	4.7	4.8	4.9	n.a.	4.6
15	- Other	2.4	2.3	2.3	n.a.	2.2
16	- Interest expenditure	1.3	1.4	1.3	n.a.	1.3
18=1-8	**General government balance**	**-2.2**	**-2.2**	**-2.3**	**n.a.**	**-2.2**
19=1-9	**Primary balance**	**-0.9**	**-0.9**	**-1.0**	**n.a.**	**-0.9**
20	Cyclically adjusted balance	-1.6	n.a.	-1.9	n.a.	-2.0
21	One-offs	0.0	0.0	-0.1	n.a.	0.0
22=20-21	**Structural balance**	**-1.6**	**-1.9**	**-1.7**	**n.a.**	**-2.0**
23=22+16	Structural primary balance	-0.2	-0.5	-0.4	n.a.	-0.7

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR).

Table A1.7: **Debt developments**

	Variables	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1	**Gross debt ratio* (% of GDP)**	**43.6**	**44.5**	**44.5**	**n.a.**	**45.4**
2=3+4+8	Change in the ratio (pps. of GDP)	1.1	1.0	1.0	n.a.	0.8
	Contributions**					
3	**Primary balance**	**0.9**	**0.9**	**1.0**	**n.a.**	**0.9**
4=5+6+7	**'Snow-ball' effect**	**-0.7**	**-0.6**	**-0.7**	**n.a.**	**-0.8**
	of which:					
5	- Interest expenditure	1.3	1.4	1.3	n.a.	1.3
6	- Real growth effect	-0.5	-0.8	-0.8	n.a.	-0.9
7	- Inflation effect	-1.6	-1.1	-1.2	n.a.	-1.2
8	**'Stock-flow' adjustment**	**1.0**	**0.7**	**0.7**	**n.a.**	**0.7**

* End of period.

** The 'snow-ball' effect captures the impact of interest expenditure on accumulated general government debt, as well as the impact of real GDP growth and inflation on the general government debt-to-GDP ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting (including leads and lags in Recovery and Resilience Facility grant disbursements), accumulation of financial assets, and valuation and other residual effects.

Source: Commission Spring 2025 Forecast and Commission's calculation (COM), Annual Progress Report (APR).

Table A1.8: **RRF – Grants**

	Revenue from RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	RRF grants as included in the revenue projections	n.a.	0.1	0.3	0.4	0.4	0.6	0.6
2	Cash disbursements of RRF grants from EU	n.a.	0.4	0.0	0.3	0.7	0.5	0.7

	Expenditure financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.1	0.1	0.1	0.1	0.2
4	Gross fixed capital formation	0.1	0.1	0.1	0.1	0.2	0.4	0.4
5	Capital transfers	0.0	0.0	0.1	0.1	0.1	0.0	0.0
6=4+5	Total capital expenditure	0.1	0.1	0.2	0.2	0.2	0.5	0.4

	Other costs financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Financial transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Annual Progress Report

Table A1.9: **RRF - Loans**

	Cash flow from RRF loans projected in the Plan (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	Disbursements of RRF loans from EU	n.a.	0.0	0.0	0.0	0.1	0.1	0.1
2	Repayments of RRF loans to EU	n.a.	0.0	0.0	0.0	0.0	0.0	0.0

	Expenditure financed by RRF loans (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Gross fixed capital formation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Capital transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6=4+5	Total capital expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Other costs financed by RRF loans (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Financial transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Annual Progress Report

Cost of ageing

Total age-related spending in Czechia is projected to rise from about 20% of GDP in 2024 to around 21% in 2040 and 22.5% in 2070, staying below the EU average (see Table A1.10**).** The overall dynamic results from the projected increase in long-term care and healthcare spending. Following the 2024 reform, pension expenditure is expected to decline initially, from 8.7% of GDP in 2024 to 8.4% in 2040, followed by an increase, reaching a maximum of 9.2% in 2059 ([34]).

Public healthcare expenditure is projected at 5.9% of GDP in 2024 (below the EU average of 6.6%) and is expected to increase by 0.4 pps by 2040 and by a further 0.3 pps by 2070. While

([34]) See 2024 Ageing report - country fiche Czechia (2025 update).

the overall increase is driven by an ageing population, it also reflects recent improvements in access to preventive and mental healthcare ([35]).

Public expenditure on long-term care is projected at 1.5% of GDP in 2024, slightly below the EU average of 1.7%) and is expected to increase by 0.5 pps of GDP by 2040 and by a further 0.8 pps of GDP by 2070 ([36]).

Table A1.10:**Projected change in age-related expenditure in 2024-2040 and 2024-2070**

	age-related expenditure 2024 (% GDP)	change in 2024-2040 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2040 (%GDP)	
CZ	20.4	*-0.3*	*0.4*	*0.5*	*-0.1*	***0.6***	21.0	**CZ**
EU	24.3	*0.5*	*0.3*	*0.4*	*-0.3*	***0.9***	25.2	EU

	age-related expenditure 2024 (% GDP)	change in 2024-2070 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2070 (%GDP)	
CZ	20.4	*0.0*	*0.7*	*1.3*	*0.1*	***2.1***	22.5	**CZ**
EU	24.3	*0.2*	*0.6*	*0.8*	*-0.4*	***1.3***	25.6	EU

Source: **2024 Ageing Report – 2025 update Czechia (EC/EPC).**

National fiscal framework

The Czech Fiscal Council (CFC) is a well-funded Independent Fiscal Institution (IFI) with an active outreach activity, but its role in assessing the macroeconomic forecast of the government could be enhanced and access to information could be improved. The Chamber of Deputies elects the Chairperson on a proposal of the government and the other two members on a proposal of the Senate and the Czech National Bank, respectively. As access to information is not regulated via memoranda of understanding with key providers, there is currently no uniform format and structure of even basic data from the general government sector and time series of sufficient length and granularity are often not available. There have not yet been any external reviews of the CFC. The macroeconomic and budgetary forecasts are evaluated by the Committee on Budgetary Forecasts (CBF), which is not an IFI.

Table A1.11:**Fiscal Governance Database Indicators**

2023	Czechia	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	12.35	14.52
Medium-Term Budgetary Framework Index (MTBFI)	0.57	0.73

The Country Fiscal Rule Strength Index (C-FRSI) shows the strength of national fiscal rules aggregated at the country level based on i) the legal base, ii) how binding the rule is, iii) monitoring bodies, iv) correction mechanisms, and v) resilience to shocks. The Medium-Term Budgetary Framework Index (MTBFI) shows the strength of the national MTBF based on i) coverage of the targets/ceilings included in the national medium-term fiscal plans; ii) connectedness between these targets/ceilings and the annual budgets; iii) involvement of the national parliament in the preparation of the plans; iv) involvement of independent fiscal institutions in their preparation; and v) their level of detail. A higher score is associated with higher rule and MTBF strength.
Source: Fiscal Governance Database

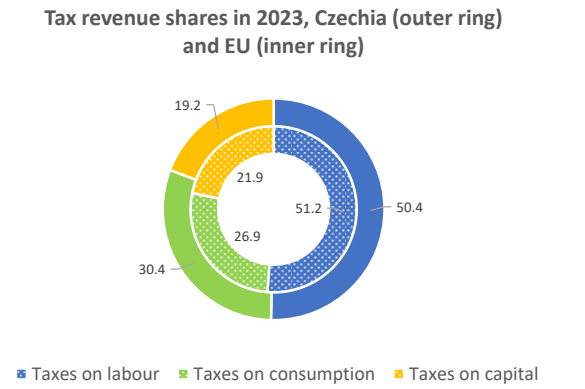
([35]) Key performance characteristics, recent reforms and investments of the Czech healthcare system are discussed in Annex 14 'Health and health systems'.

([36]) The adequacy and quality of the Czech long-term care system are covered in Annex 11 'Social policies'.

This annex provides an indicator-based overview of Czechia's tax system. It includes information on: (i) the tax mix; (ii) competitiveness and fairness aspects of the tax system; and (iii) tax collection and compliance.

Czechia's tax revenue is relatively low in relation to its GDP. Table A2.1 shows that Czechia's tax revenue as a percentage of GDP was considerably below the EU average in 2023. Total tax revenue has increased by about 2.5 percentage points (pps) of GDP since 2010, but remains below the EU average (34% in Czechia in 2023 compared with 39% in the EU; see Table A2.1). Tax revenue in all categories remains below the EU average except for revenue raised by corporate income tax (which was equivalent to 4.2% of Czechia's GDP in 2023, compared with an EU average of 3.2%. Revenue from labour taxes has increased since 2010 (by 2 pps of GDP to 17.1% in 2023), while revenue from consumption taxes fell in 2022 and 2023, dropping below the 2010 level (by 0.3 pps to 10.3% of GDP in 2023). Revenue from capital taxes increased to 6.5% of GDP in 2023. Revenue from environmental taxes is below the EU average (at 1.6% of GDP, compared with an EU average of 2.0%) and revenue from property taxation (including recurrent property taxation) remains very low, both expressed as a percentage of GDP and expressed as a percentage of total tax revenue (see Table A2.1 and Graph A2.1). These low taxes on property will slightly increase in the coming years as laid down in the Act on the Consolidation of Public Budget([37]) (Consolidation Package) explained in Annex 19 of the 2024 Country Report. Real estate tax in Czechia is payable annually by the owner of land or buildings. The amount of the real estate tax is dependent on area, location, and usage of the land or buildings. Effective from 2025, the calculation of property tax will be affected by an inflation coefficient. In addition, a mortgage tax credit allows taxpayers to deduct interest paid for their housing needs from their income-tax base. However, concerns arise in relation to both the distributional effect of this tax-deductibility regime and the effective support it gives to construction. A significant share of this tax-deductibility scheme has been found to be directed towards high-income households. In relation to the shares of revenue from different taxes in 2023, the structure remains unchanged from 2022 with a similar weight of taxes on labour in Czechia and in the EU (50.4% as a share of total tax revenues vs an EU average of 51.2%) but with continued lower taxes on capital and taxes on consumption in Czechia than the EU average (19.2% in taxes on capital and 26.9% in taxes on consumption in Czechia in comparison with 21.9% and 30.4% respectively in the EU).

Graph A2.1: **Tax revenue shares in 2023**



Source: Taxation Trends Data, DG TAXUD

Low rates of business taxation seem to contribute to the competitiveness of the Czech economy, but the complexity of the tax system could still be reduced. The statutory (19%) and effective (18.34%) corporate tax rates are close, suggesting a limited use of tax incentives in Czechia and a preference for direct public financing of business R&D expenditure. Moreover, 110% of R&D expenses can be deducted from taxable income if R&D expenses were higher than the previous year. This regime has been found to be complex and administratively burdensome (see Annex 3 Innovation to Business). In some cases, green investments in Czechia can benefit from a favourable depreciation regime. As an example, emission-free vehicles for corporate fleets acquired and put in use between 1 January 2024 and 31 December 2028 can benefit from accelerated depreciation over two years. However, Czechia faces some challenges in relation to the labour market and the country's high dependency on fossil fuels as explained in other sections.

([37]) Act No.349/2023 Coll. Of 8 November 2023, entered into force on 1rst January 2024.

Table A2.1: **Taxation indicators**

		Czechia					EU-27				
		2010	2021	2022	2023	2024	2010	2021	2022	2023	2024
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	32.5	34.8	34.0	34.0		37.8	40.2	39.7	39.0	
By tax base	Taxes on labour (% of GDP)	16.9	18.4	17.2	17.1		19.8	20.5	20.1	20.0	
	of which, social security contributions (SSC, % of GDP)	14.3	16.0	15.3	15.3		12.9	13.0	12.7	12.7	
	Taxes on consumption (% of GDP)	10.6	11.1	10.8	10.3		10.9	11.2	10.9	10.5	
	of which, value added taxes (VAT, % of GDP)	6.5	7.3	7.6	7.5		6.8	7.3	7.4	7.1	
	Taxes on capital (% of GDP)	5.0	5.3	6.0	6.5		7.1	8.5	8.7	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	3.7	3.6	3.5	3.7		8.6	9.6	9.4	9.3	
	Corporate income taxes (CIT, % of GDP)	3.2	3.6	4.0	4.2		2.2	2.9	3.2	3.2	
	Total property taxes (% of GDP)	0.5	0.3	0.3	0.3		1.9	2.2	2.1	1.9	
	Recurrent taxes on immovable property (% of GDP)	0.2	0.2	0.2	0.2		1.1	1.1	1.0	0.9	
	Environmental taxes (% of GDP)	2.2	1.8	1.4	1.6		2.5	2.4	2.1	2.0	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	NA	66.1	NA	65.0		NA	86.0	NA	84.8	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	35.7	35.4	35.1	35.8	36.8	33.9	31.8	31.5	31.5	31.8
	Tax wedge at 100% of average wage (single person) (*)	42.1	40.0	39.9	40.2	40.9	40.9	39.9	39.9	40.2	40.3
	Corporate income tax - effective average tax rates (1) (*)	18.5	17.8	18.1	18.3		21.3	19.3	19.1	18.9	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	8.0	7.2	6.1	6.2		8.6	8.2	7.9	7.7	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		28.8	20.4				35.5	32.6		
	VAT gap (% of VAT total tax liability, VTTL) (**)		6.7	4.2	3.2			6.6	7.0		

(1) Forward-looking effective tax rate (KPMG).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average.
(**) Forecast value for 2023. For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2024 report, https://data.europa.eu/doi/10.2778/2476549.
For more data on tax revenues as well as the methodology applied, see the Data on Taxation webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
Source: European Commission, OECD

Czechia has a high tax burden on labour at low earnings levels. Czechia's labour tax burden is less progressive than the EU average. The tax wedge ([38]) for single workers earning 50% of the average wage (36.8% in 2024) was high as compared to the EU average (31.8%), while it was below the EU average at high earnings levels (see Graph A2.2). The tax wedge at high earnings is lowered also by the fact that social contributions are capped above a certain earnings level. The ability of Czechia's tax-and-benefit system to reduce income inequality (measured by its ability to reduce the Gini coefficient) has decreased since 2010 and has remained below the EU average in recent years (see Table A2.1).

The latest measures approved in the country's 'consolidation package' may increase the progressivity of the tax ad benefit system. A higher personal income tax rate of 23% now applies to income above a specific threshold (the threshold is equal to three times the average monthly wage or an annual tax base up to 1 450 000 CZK ([39]). The taxation rate applying to earners in the first income bracket remains at 15%.

In addition, taxation for self-employed people is significantly lower in Czechia than taxation of traditional employment. Taxation of self-employed people is unequal and regressive given that it is possible to deduct between 40% and 80% of gross annual income as business expenses, with only the remaining share of income being subject to personal income tax. Alternatively, self-employed people earning up to 2 million CZK([40]) a year may also opt to pay a lump sum grouping their income tax, pension and health insurance liabilities. This lump sum can in some cases be significantly lower than the tax that a conventional employee earning a similar amount would pay.

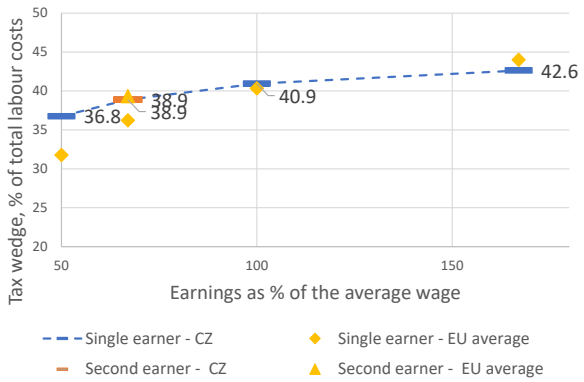
([38]) The tax wedge is defined as the sum of personal income taxes and employee and employer social-security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social-security contributions paid by the employer).

([39]) Equivalent to 57 927 euros as of the exchange rate in effect on 21rst March 2025.

([40]) Equivalent to 79 820 euros as of the exchange rate in effect on 21rst March 2025

The tax system's effect on work incentives for second earners has improved. The tax wedge for second earners earning 67% of the average wage was 38.9% was equal to that of single earners and close to the EU average. A tax credit is granted to dependent spouses whose household partner earns an annual gross income not exceeding a certain threshold. As of 1 January 2024, the conditions for benefiting from this tax credit have been tightened, and the tax credit is now only granted to households caring for a child under the age of three. However, this measure is to some extent counterbalanced by the removal of the tax credit helping parents to pay for pre-school facilities.

Graph A2.2: **Tax wedge for single and second earners, % of total labour costs, 2024**



The tax wedge for second earners assumes a first earner at 100% of the average wage and no children. For the full methodology, see OECD, 2016, Taxing Wages 2014-2015.
Source: European Commission

Increasing tax compliance through digitalisation and improved tax administration could help to increase revenue without changing tax rates. Technologies like advanced data analytics can help to reduce tax avoidance and tax evasion, ensuring a fairer distribution of the tax burden. It can also reduce Czechia's cost of tax collection, which is currently one of the highest in the EU. Although there has been significant progress in implementing e-filing for corporate-income tax and VAT (more than 90% of returns for these two tax categories are now filed electronically), there is still room to increase the e-filling rate for personal-income-tax returns: in 2021, this rate was just above 30%, one of the lowest rates in the EU. In addition, about 17% of tax arrears are collectable but remain uncollected in Czechia, although this is on the lower end when compared with the average for the EU's 27 Member States.

E-commerce sales in Czechia declined between 2019 and 2022, although VAT revenue grew by 15.8%, and the VAT compliance gap continued to shrink, reaching 4.2% in 2022. The VAT compliance gap is expected to fall further in 2023. The VAT compliance gap has continued its downward trend, falling by a further 2.5 percentage points to 4.2% in 2022 compared with 6.7% 2021. Since 2019, the VAT compliance gap – expressed as a percentage of GDP – has fallen each year and is expected to fall by a further percentage point in 2023 to 3.2%([41]). The stability of this trend suggests that there were no major issues with VAT compliance. E-commerce growth in Czechia declined between 2019 and 2022, with online sales falling from 31.7% to 29.9% of business turnover, and the share of businesses engaging in e-sales dropping from 29.8% to 24.7%. Moreover, online retail sales decreased from 8.8% to 8.5% over the same period. The decline in e-sales has the potential to increase VAT non-compliance risks. VAT revenue in Czechia grew by 15.8% in 2022. Meanwhile, the VAT compliance gap fell sharply between 2019 and 2022.

Finally, as part of its budgetary and public health strategy, the Czech government is progressively increasing excise duties on alcoholic beverages. A 10% increase is planned in 2024 and 2025, and a further 5% increase is planned in 2026.

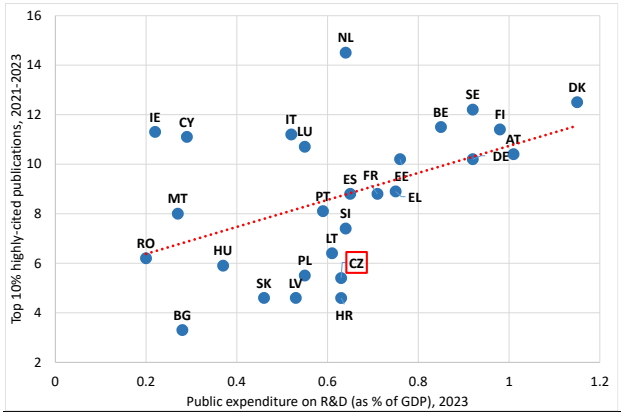
([41]) European Commission: VAT Gap in the EU – 2024 Report; Figure 42

In 2024, Czechia continued to be deemed a 'moderate innovator', with performance below the EU average. According to the 2024 European Innovation Scoreboard ([42]), its innovation performance remains below the EU average (89.7%), but has grown faster than the EU average since 2017. In 2023, R&D intensity ([43]) stood at 1.83% and experienced a third year of decline after enjoying annual growth since 2016, peaking at almost 2% of GDP in 2021. This is below the EU average of 2.24% and might not be sufficient to achieve the national target of 3% ([44]) by 2030. Czechia's fragmented research and innovation (R&I) system lacks strong coordination, requiring more defined and determined governance. Direct and indirect support for innovative companies could be better targeted and effectively implemented to boost the ability of domestic firms to pursue advanced innovations and support the creation of start-ups and spin-offs. Czechia also has significant scope to improve its performance in the digitalisation of businesses and its contribution to the EU's Digital Decade targets.([45]).

Science and innovative ecosystems

Despite continuous improvements, more attention to quality and performance is needed for public research to reach its full potential in the R&D ecosystem. Even though it has been decreasing over the past three years, public R&D expenditure as a percentage of GDP is not far from the EU average (0.63% vs EU average of 0.72% in 2023) and has been relatively high compared to peer countries. Nevertheless, the quality of research outputs, as measured by the share of scientific publications within the top 10% most cited publications worldwide as a percentage of total publications, is significantly below the EU average (5.4% vs 9.6%). This could point to lagging efficiency and impact of public R&D expenditure (see also Graph A3.1).

Graph A3.1: **Top 10% most cited publications in relation to public R&D expenditure**



Source: Eurostat / Science-Metrix

The governance of R&I in Czechia is quite complex and the system fragmented. Over the last few years, Czechia has invested heavily in its research infrastructure. It was supported by both the cohesion policy and the recovery and resilience plan, which has helped modernise facilities. While this has strengthened Czechia's research capacities, more effort such as better cooperation among research teams is needed to achieve critical mass. A total of 180 research organisations receive institutional support for research, including 26 public universities, 2 state universities, 54 institutes of the Czech Academy of Sciences and 22 sectoral public research institutes ([46]). As

([42]) 2024 European Innovation Scoreboard, Czechia. The scoreboard provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national systems. European innovation scoreboard 2024 - European Commission.

([43]) Defined as gross domestic expenditure on R&D as a percentage of GDP.

([44]) Czechia's innovation strategy for 2019-2030 sets targets for increasing R&D funding (by 2% by 2020, 2.5% by 2025 and 3% by 2030).

([45]) The EU's Digital Decade policy programme sets ambitious targets for 2030 to drive Europe's digital transformation. In the realm of business digitalisation, the programme aims for 75% of EU companies to utilize advanced digital technologies such as cloud computing, artificial intelligence, or big data. Additionally, it targets more than 90% of small and medium-sized enterprises (SMEs) to reach at least a basic level of digital intensity. These objectives are designed to enhance the competitiveness and innovation capacity of European businesses in the global digital economy - Europe's digital decade: 2030 targets | European Commission

([46]) Background report, Policy Support Facility Support Czechia. Czechia on the reform of the Technology Transfer Offices sector - Publications Office of the EU (see p. 9) and Czech research cooperation in the EU is growing only slightly, AVUni is doing well | RMU – Asociace výzkumných univerzit.

previously observed ([47]), stronger institutional governance of R&I policy and collaboration between ministries, funding agencies and stakeholders is necessary. The National Research and Development Policy holds a prominent position, as it is explicitly referenced in the Act on the Support of Research and Development. However, the concurrent existence of other strategies that also address research and innovation, combined with the often ambiguous relationships among them and their outcomes, lead to a lack of clarity regarding the strategic vision for policymakers and the research, development, and innovation (RDI) community ([48]) .

The potential of female scientists remains untapped. The total number of people employed in R&D almost doubled between 2005 and 2022 ([49]). However, the proportion of women fell slightly over the same period (32.6% (full-time equivalents/FTEs in 2005 versus 28.7% FTEs in 2022), the least in the EU. A recent study ([50]) monitoring the representation of female scientists between 2002 and 2022 concludes that Czechia is not making enough use of the potential of skilled, highly educated women in science ([51]) in the long term. While the recovery and resilience plan entails among others the creation of a national excellence programme to better support excellent researchers, specific actions to strengthen' the position of female scientists are also needed to ensure that Czechia continues to build a strong foundation for research. Looking ahead, a potential way to address this issue could be through targeted initiatives such as newly introduced 'return grants'. These enable scientists who have taken a career break, for example due to parental leave, to plan their return to science.

Business innovation

The number of Czech companies that are able to implement advanced innovations remains low, while the integration and contribution of multinationals into the R&I ecosystem could be improved. Czechia has a large share of industrial production ([52]) of GDP within the EU, but the industrial sector's level of innovation and role in value chains lags behind. In 2023, domestic applicants filed 465 inventions or new technical solutions for patent protection with the national Industrial Property Office ([53]), which is the lowest number since 1995. Compared with other Member States, patent applications filed under the Patent Cooperation Treaty also remain well below the EU average (0.7 per billion euro of GDP in 2022 versus EU average of 2.8). Czechia could benefit from participation in the unitary patent system ([54]).

Business enterprise expenditure on R&D as a percentage of GDP was below the EU average in 2023 (1.19% vs 1.49%) but has experienced a consistent rise for over 10 years. These increases have been driven to a large extent by foreign affiliates ([55]). These account for around 65% of total R&D business expenditure, highly correlated with the structure of knowledge-intensive industries ([56]) in Czechia ([57]). This has opened a

([47]) Country report Czechia, 2020, see pp. 34-35: eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52020SC0502.

([48]) Panel of experts, 2025, *From fragmentation to synergy and impact: A review of the knowledge transfer system in Czechia* (Final report, Policy Support Facility), see p.12: Support to Czechia on its reforms of the Technology Transfer Offices sector | Research and Innovation

([49]) The 2022 Monitoring Report on the position of women in Czech science provides an overview of current statistical indicators between 2005 and 2022 based on data from the Czech Statistical Office (CSO), the Ministry of Education and Culture (MEYS), and data from individual institutions.

([50]) Třísková, Hana. 2024. *The Position of Women in Czech Science 2022. Monitoring Report*, web page: The Position of Women in Czech Science 2022. Monitoring Report - Institute of Sociology of the Czech Academy of Sciences.

([51]) Czechia ranks bottom in the EU in terms of the representation of women in research positions (source: Analysis of the state of RDI in the Czech Republic and their international comparison in 2022).

([52]) www.eurostat.eu datasets on GDP and industrial production by country.

([53]) Data source: Czech Statistical Office, V Česku bylo nejméně patentových přihlášek od roku 1995 - Vědavýzkum.cz.

([54]) The country is expected to join by ratifying the Unified Patent Court Agreement, which it has already signed.

([55]) The amount of R&D spending in foreign controlled companies has increased more than threefold in nominal terms since 2010.

([56]) The majority of business expenditure on R&D is spent in the manufacturing sector (54%), with a visible pattern of growth also in the ICT sector (20%) (source: Policy Support Facility background report).

([57]) Pazour Michal, 2024, *Support to Czechia on the reform of the Technology Transfer Offices sector (Background report, Policy Support Facility)*. Web page: Support to Czechia on the reform of the Technology Transfer Offices sector - Publications Office of the EU.

gap between the knowledge intensity of the domestic business enterprise sector and that of foreign-owned companies. Czech companies often have limited ability to integrate cutting-edge research into their business activities ([58]). This can hinder the effective transfer of knowledge from public research to the business sector. On the other hand, the size of the ICT sector in Czechia is slightly above the EU average, contributing 5.1% to gross value added in 2021. Business expenditure on R&D in the ICT sector accounts for 26.37% of total R&D expenditure, indicating a relatively strong focus on innovation in this sector ([59]). Furthermore, the Czech start-up ecosystem is developing dynamically as highlighted by a 2024 study ([60]), despite ongoing challenges ([61]) such as difficulties in securing initial financing, a shortage of skilled workers and complex bureaucracy, particularly on employee stock option plans.

The adoption of digital technologies by firms in Czechia remains below the EU average, despite the implementation of several supporting measures. In 2023, AI adoption in Czech firms stood at 11.26% (vs EU average of 13.48%), cloud uptake stood at 35.23% (vs 38.86%) and data analytics adoption at 19.49% (vs 33.17%). While the adoption of AI has increased significantly (+14.5% from 2022 to 2023), cloud uptake declined between 2021 and 2024, in contrast to an overall increasing trend at EU level. Czechia has allocated significant funding, notably EUR 575 million under the Recovery and Resilience Facility, to support business digitalisation, as well as additional cohesion funding. Moreover, the National Artificial Intelligence Strategy has been updated through a detailed Action Plan, focusing specifically on AI development and deployment. Its implementation is guided by a series of KPIs and encompasses 69 targeted projects, including subsidy programmes, business manuals, retraining courses, and the rollout of innovative AI solutions, fostering collaboration between the public and private sectors.

Direct and indirect public support for innovative companies could be better implemented. According to a recent report ([62]), public funding for innovation in Czechia primarily benefits large, established industrial firms, but lags behind other countries in supporting small innovative firms. In 2023, indirect support in the form of R&D tax incentives accounted for 0.04% of GDP, well below the EU average of 0.10%. Less than a third of companies ([63]) consistently engaged in R&D use this kind of support, with small and young firms using these incentives even less frequently ([64]). The scheme is criticised by companies as being complex and bureaucratic. The innovation support programmes could be examined and possibly redesigned to be more inclusive of young innovative companies. This effort should be combined with initiatives to make the R&D tax deduction more attractive for companies and less burdensome.

Business-science linkages are still underdeveloped, and research commercialisation remains subdued. Collaboration between private businesses and academia remains limited, as underlined by the level of contractual research, illustrated by public R&D expenditure financed by the business enterprise sector (national) as a percentage of GDP being significantly lower than the EU average (0.024 vs 0.050 in 2023). Additionally, there is not much diffusion from research to entrepreneurship, with the number of spin-offs in the country still low ([65]). This could be caused among other things by the inconsistent support and variable quality of technology transfer offices as well as bureaucratic

([58]) INKA 3: Výsledky 3. kola mapování inovačních kapacit - Technologická agentura ČR.

([59]) Eurostat, ICT sector size and R&D in ICT sector, all data from 2021.

([60]) StartupJobs, J&T Bank, Vodafone, 2024. *Smart Market Report 2024*: sj-smart-market-report-en.pdf.

([61]) Deloitte, 2022, *Start-up Survey by Deloitte*: Jak se v Česku daří startupům | Deloitte Česká republika and source under ft 120 (see p. 59).

([62]) Martin Srholec, Národohospodářský ústav AV ČR,2024 IDEA_Studie_06_2024_Nedotovani_inovatori_tisk_0926.pdf *Which Innovative Firms Do/Do Not Receive Public Support for Innovation?*, Jaké inovativní firmy (ne)čerpají veřejnou podporu na inovace?).

([63]) A number that has been gradually decreasing (by more than 40%) since 2015. Background report 2024, Policy Support Facility (see p. 33).

([64]) IDEA_Studie_06_2024_Nedotovani_inovatori_tisk_0926.pdf Which Innovative Firms Do/Do Not Receive Public Support for Innovation? (IDEA, 2024).

([65]) Background report 2024, Policy Support Facility (see page 61) Support to Czechia.: Czechia on the reform of the Technology Transfer Offices sector - Publications Office of the EU.

obstacles that complicate the transfer of intellectual property rights for researchers and entrepreneurs or low motivation among universities to support activities other than core education and research. As a result, researchers are mainly encouraged to produce publication outputs without trying to commercialise their research results. Czechia is currently engaged with the Horizon Europe Policy Support Facility and received expert recommendations on how to improve support for science-business linkages, and more specifically on the reform of the technology transfer offices ([66]). Moreover, the government approved a new draft Act on Research, Development, Innovation and Knowledge Transfer, which is now part of a legislative procedure. The draft act aims to improve the commercialisation of research results, boost cooperation between different bodies and provide better legal certainty.

Financing innovation

Venture capital levels have improved but remain small compared with other countries worldwide. The average value of venture capital investment as percentage of GDP went up from 0.004% in 2012 to 0.029% in 2023 but is still much lower than the equivalent EU average (0.078% in 2023) moreover, the participation of domestic institutional investors in providing funding for start-ups and venture capital investors is low, further contributing to an underdeveloped local risk capital market. There is a financing gap for early-stage innovative firms in need of capital with high-risk tolerance throughout their lifecycle. Some policies have been put in place to promote start-up funding, also via the Czech recovery and resilience plan. These include a recent amendment of Czechia's employee stock option framework, applied since 1 January 2024. However, it may need further adjustments to improve its usability and attractiveness compared to EU and international peers. For further details on these topics, see Annex 5.

Innovative talent

The shortage of skilled workers affects Czechia's innovation capacity. The demand for tertiary education graduates has outpaced the available supply ([67]) and at the same time, the number of tertiary education graduates in science and engineering continue to decrease (14.2 per thousand population aged 25-35 in 2012 versus 10.3 in 2022), on this topic read more in Annex 12: Education and skills. Labour shortages have prompted Czech employers to look for workers from abroad, but the current labour migration policy does not seem to be sufficiently geared to attracting skilled foreign workers. While immigration has been rising steadily, close to 90% of foreign workers from non-EU countries work in low- to medium-skilled jobs. Conditions in terms of permit duration, family reunion and labour market mobility in Czechia for highly skilled workers are less favourable than in peer countries ([68]). For bottlenecks in domestic workers, see also Annex 10.

The development of entrepreneurship education in Czechia is in its early stages, calling for strategic planning and monitoring. Entrepreneurship education is anchored in the school curricula as one of the eight key competences that should be developed in compulsory education. While some new initiatives have been launched, including supporting entrepreneurial skills of students and new entrepreneurs via the CzechInvest Agency under the national recovery and resilience plan, entrepreneurship is not among the priorities for educational policy. Czechia lacks a dedicated strategy for its development and data on students' participation and on the quality and outcomes of the existing entrepreneurship education.

([66]) PSF Country | Research and Innovation.

([67]) OECD (2025), *OECD Economic Surveys: Czechia 2025*, OECD Publishing, Paris, https://doi.org/10.1787/7a70af5c-en.

([68]) OECD (2023), *OECD Economic Surveys: Czech Republic 2023*, OECD Publishing: https://doi.org/10.1787/e392e937-en.

Table A3.1: **Key innovation indicators**

Czechia	2012	2017	2020	2021	2022	2023	2024	EU average (1)	USA
Headline indicator									
R&D intensity (gross domestic expenditure on R&D as % of GDP)	1.76	1.75	1.95	1.93	1.89	1.83	:	2.24	3.45
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.82	0.64	0.75	0.71	0.67	0.63	:	0.72	0.64
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	4.6	4.6	5.1	5.4	:	:	:	9.6	12.3
Researchers (FTE) employed by public sector (Gov+HEI) per thousand active population	3.5	3.6	4.1	4.3	4.4	4.4	:	4.1	:
International co-publications as % of total number of publications	36.2	42.4	51.1	52.8	53.7	56	:	55.9	39.3
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	0.93	1.1	1.19	1.21	1.21	1.19	:	1.49	2.70
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.4	0.32	0.32	0.34	0.35	0.35	:	0.4	0.3
Researchers employed by business per thousand active population	2.9	3.9	4.3	4.9	5.2	5.3	:	5.8	:
Innovation outputs									
Patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €)	1.1	0.8	0.9	1	0.7	:	:	2.8	:
Employment share of high-growth enterprises measured in employment (%)	:	16.86	10.86	:	:	:	:	12.51	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	68.0	:	70.8	72.9	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	:	19.5	:	33.2	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	40.0	:	35.2	:	38.9	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	4.5	:	5.9	11.3	13.5	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	5.9	6.6	7	7.5	7.9	8	:	7.7	8.9
Public expenditure on R&D financed by business enterprises (national) as % of GDP	0.019	0.028	0.024	0.023	0.022	0.024	:	0.05	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.227	0.153	0.15	0.153	0.144	0.126	:	0.204	0.251
R&D tax incentives: foregone revenues as % of GDP	0.048	0.049	0.036	0.390	0.044	0.036	:	0.102	0.141
BERD financed by the public sector (national and abroad) as % of GDP	0.179	0.104	0.114	0.114	0.100	0.090	:	0.100	0.110
Financing innovation									
Venture capital (market statistics) as % of GDP (calculated as a 3-year moving average)	0.004	0.003	0.009	0.023	0.027	0.029	:	0.078	:
Seed funding (market statistics) as % of GDP	0	28.8	17.1	8.9	9.3	8.6	:	7.3	:
Start-up and early-stage funding (market statistics) as % of GDP	73.2	70.9	53.4	69.3	60.1	48.8	:	44.0	:
Later stage and scale-up funding (market statistics) as % of GDP	26.8	0.4	29.5	21.8	30.6	42.6	:	48.7	:
Innovative talent									
New graduates in science and engineering per thousand population aged 25-34	14.8	11.9	10.6	10.5	10.3	:	:	17.6	:
Graduates in the field of computing per thousand population aged 25-34	2.9	2.8	2.6	2.9	2.9	:	:	3.6	:

(1) EU average for the last available year with the highest number of country data.

Source: Eurostat, DG JRC, OECD, Science-Metrix (Scopus database), Invest Europe, European Innovation Scoreboard

Czechia's business environment is challenged by high energy prices, administrative and regulatory burdens and labour market shortages that all require faster progress in addressing barriers so that Czechia remains competitive in the long term. High energy prices are the crucial factor affecting the general condition of the Czech industrial sector. Low demand in key trading partners (especially Germany) is weighing on industrial production and exports. Urban planning and the procedure for the granting of construction permits is one of the main obstacles to economic growth. Progress has been made in enhancing the business environment and reducing administrative and regulatory burden, but additional efforts are still required in order to improve competitiveness and investment. Labour shortages persist across most industries, with the construction sector being particularly affected.

Economic framework conditions

Czechia's business environment remains one of the least favourable in the EU. According to the Prosperity and Financial Health Index ([69]), Czechia has the sixth worst conditions for doing business in the EU. Businesses have been burdened by a significant increase in electricity prices, which have more than doubled in the last three years. Underperforming capital market is limiting financing for companies and start-ups and hindering company growth (see the Annexes on Innovation to Business and on Capital markets, financial stability and access to finance). The corporate income tax rate increased from 19% to 21% as part of the consolidation package in 2024, weighing on business activity and investments.

Private net investment remained unchanged, but public net investment declined in 2024. Private net investment (expressed as a percentage of GDP) stayed at the same level as in 2023 and above the EU average (4.43% in Czechia vs 3.44% in the EU). According to Czech Founders, the total amount of investment in Czech start-ups grew by 174% to EUR 588.6 million in 2024. A closer look nevertheless suggests that 59% of this (EUR 350.6 million) was raised by two unicorns, while only the remaining 41% (EUR 238 million) was invested in the rest of the market – resulting in only a slight increase of 11.1% in total investment in Czech start-ups. Government net investment declined in 2024 after strong growth in 2023. The main reason for this (apart from last year's high base) was the government's budget consolidation efforts. Accelerating investment in transport infrastructure is one of the pro-growth measures outlined in the government's strategic document, based on the proposals of the government's National Economic Council.

Energy costs remain the main investment obstacle for businesses. Czechia ranks last in the EIB Investment Survey ([70]) regarding high energy prices. Czech businesses' difficulties with energy prices have further worsened compared with 2023 and this has affected 95% of firms – the highest share of firms since 2022 (vs 77% in the EU as a whole).

Czechia continues to experience difficulties with urban planning and construction-permitting processes, despite some steps that it has taken in the right direction. The new Building Act, which gradually came into effect in 2023-2024, reduces the deadlines for building permit procedures and changes to their enforceability. It also established a specialised Transport and Energy Construction Authority. However, urban planning processes remain unreformed and are holding back development in large cities, where they take over a decade to complete. A new digital system for issuing building permits that was initially planned for launching in July 2023 was launched in July 2024. Its purpose is to simplify applications, expedite processes and improve transparency. However, the system's introduction was not successful, and its malfunction caused the government to postpone many digitalisation elements until 2027. This setback affects not only the construction and energy sectors but also the whole economy.

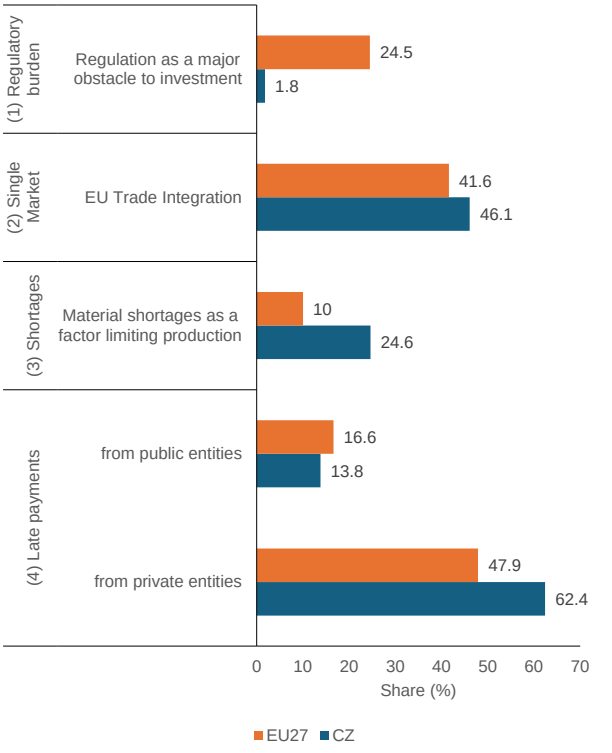
Investing in automation and robotisation could be a key element in resolving labour shortages, enhancing productivity, and GDP and wages growth. Czechia faces persistent challenges linked to labour and skills shortages. Availability of skilled staff is the third most

([69]) Česká spořitelna, the Europe in Data portal and the Institute of Sociology of the Czech Academy of Sciences, The Prosperity and Financial Health Index, December 2024.

([70]) European Investment Bank, EIB investment survey 2024, based on interviews carried out between April and July 2024.

significant barrier to investment. Labour shortages are still reported in most sectors, but especially in manufacturing and construction (see the Labour market Annex). Based on the structure of employment in Czechia and forecasts of technological advancements, it has been estimated that 51% of jobs could be automated ([71]). Business could therefore overcome these labour shortages by increasing investment in automation and robotisation in order to fill workforce gaps, maintain operational efficiency and drive economic growth. Reducing skills shortages and mismatches requires reform of the VET and broadening of access to general education (in order to reduce over-specialisation) and promotion of work-based learning as well as expanding opportunities for reskilling and upskilling.

Graph A4.1: **Making Business Easier: selected indicators.**



Share of (1) enterprises, (2) average intra-EU exports and imports in GDP, (3) firms, (4) SMEs.
Source: (1) EIB IS, (2) Eurostat, (3) ECFIN BCS, (4) SAFE survey.

Further efforts are needed on late payments and insolvencies in order to increase SMEs' resilience. The public sector's payment delays decreased in 2024 compared with 2023 and are slightly below the EU average. By contrast, the business-to-business gap has widened and is now above the EU average ([72]). Czechia has the third highest share of SMEs in the EU experiencing late payments from private entities in the current and previous quarters (62% - compared with the EU average of 47%) ([73]). This increases SMEs' risk of disrupted cash flows. Some of the life events of companies, such as those surrounding insolvency, have received less attention, and could be streamlined and digitalised ([74]).

Czechia has made progress in mobile connectivity, but challenges remain in fixed infrastructure deployment. 5G coverage accelerated from 83% in 2022 to nearly 95% in 2023 (above the EU average of 89.3%). The national target for 5G coverage is 100%, which is close to the EU's target. 50.5% of households are currently covered by very high capacity networks (VHCN), so Czechia has significant scope to improve its contribution to the EU's Digital Decade target. The prompt implementation of investments supported by the Recovery and Resilience Facility and the Connecting Europe Facility is crucial in this regard. Fibre-to-the-premises (FTTP) coverage is 36.1% (well below the EU average of 64%) and the roll-out is not progressing fast enough to meet the 2030 target. Contributing factors include lengthy building-permit procedures; coordination difficulties between local and regional authorities; and the high cost of deployment in smaller towns.

In the area of cybersecurity, Czech enterprises report a higher incidence of ICT security-related incidents than the EU average. The percentage of Czech enterprises affected by cyber incidents decreased slightly from 4.67% in 2022 to 4.49% in 2024 but remains well above the EU average of 3.43% ([75]). Security measures and staff awareness are gradually improving, but further efforts are needed in order to strengthen resilience against cyber threats ([76]).

([71]) Deloitte, Automatizace práce v ČR, 2018.

([72]) Intrum, European Payment Report 2024.
([73]) 2024 Survey on the Access to Finance of Enterprises (SAFE), January 2025.
([74]) The mid-term evaluation is undertaken by the OECD in collaboration with Czechia's Ministry of Industry and Trade and with financial support from DG REFORM, within the framework of the 2024 Technical Support Instrument (TSI) cycle (project code: 24CZ02), June 2024 – June 2025.
([75]) Eurostat, isoc_cisce_ic.
([76]) Eurostat, isoc_cisce_ra.

Regulatory and administrative barriers

The Czech business environment faces significant obstacles (including the complexity and uncertainty of policy decisions, and the burdensome administrative and regulatory requirements that accompany them). Business regulations are only a major obstacle to investment for a small share of companies (see Graph A2.1), but the complexity of administrative procedures and fast-changing legislation remain the most important challenges when doing business in Czechia ([77]). 72% of companies identified the complexity of administrative procedures as a problem when doing business – above the EU average (66%). There is a heavy administrative burden on all sectors of the economy. According to estimates from the Chambers of Commerce, businesses spend thousands of hours annually on administrative tasks – equivalent to an estimated loss of CZK 72 billion (EUR 2.9 billion).

Efforts to improve the business environment are underway, several initiatives are being implemented and improvements are beginning to appear. Following the introduction of the first two 'anti-bureaucratic packages' in 2022 and 2023, the Czech government approved a third package ([78]) of 29 measures in May 2024 to alleviate the excessive administrative burden on businesses. Under the oversight of the Expert Group for Reducing Bureaucracy ([79]), another set of 22 measures was prepared in August 2024 to help businesses reduce costs and save time. The Licenced Trade Portal ([80]) already makes it possible to set up a business fully online. The Entrepreneurial Portal (a measure of the recovery and resilience plan) that is currently under development will provide a single digital place for electronic communication with institutions. The perception of business regulations as a barrier to investment improved among the Czech businesses, with the share decreasing from 63% in 2023 to 57% in 2024([81]). This trend was also echoed in labour regulations, which fewer businesses (46%) saw as an obstacle to investment in 2024 (52% in 2023).

Further enhancements to the business environment and SME policies are needed in order to foster competitiveness and attract investment. The 'think small first', 'once only' and 'digital first' principles could feature more prominently in future regulations in order to create a more favourable business environment for SME development. Implementation of measures such as better regulatory impact assessments, regular and ad hoc *ex post* evaluations (see the Effective institutional framework Annex) offers significant potential for improvement. Czechia does not systematically request insights and feedback from stakeholders during the consultation process. Also, introducing tacit agreement to streamline administrative procedures to obtain licences and permits could enhance the business environment. Several regulatory measures have been implemented in order to improve access to finance. These include new legislation on the employee stock option plan (ESOP) that was adopted in 2023 and should help to attract talent and motivate employees. However, start-up representatives ([82]) state that 91% of start-ups in Czechia do not use this ESOP regime because it does not reflect the real needs of tech start-ups. Amendments to the ESOP (e.g. more flexible conditions, simplified corporate governance and a review of the tax framework according to the principle of 'no tax before cash') would strengthen the start-up ecosystem.

Single market

Czech businesses are well integrated into both the single market and global value chains. Czechia has one the highest integration rates in the EU for goods: the trade volume of goods represented 38% of its GDP in 2024 (compared to the EU average of 27%). The share of Czech businesses reporting that they are facing material supply constraints in building activity is

([77]) Eurobaromoeter, Businesses' attitudes towards corruption in the EU in 2024, July 2024.
([78]) Vláda schválila třetí antibyrokratický balíček připravený ministrem Michalem Šalomounem | Vláda České republiky, May 2024.
([79]) Expert Group for Reducing Bureacracy within the Ministry of Industry and Trade of Czechia.
([80]) Licensed Trades Portal.
([81]) EIB investment survey 2024, EIB Investment Survey 2023.
([82]) Za lepší ESOP - Czech Founders, April 2024, Předali jsme návrh na lepší ESOP Ministerstvu financí - Czech Founders.

the highest in the EU (24.5% in Czechia vs 10% in the EU) ([83]), making Czechia vulnerable to supply chain disruptions. The 2024 rate was slightly lower than that of 2023 (26.9%) but was still more than double the pre-COVID level. This may be due to Czechia's significant trade dependence on the German economy, and the concentration of its industrial sector in a few key industries (e.g. automotive and machinery).

Market regulations are barriers to competition and market entry in some sectors. With around 360 professions, Czechia has the second highest reported number of regulated professions in the EU([84]). This presents challenges for individuals seeking to provide services in Czechia. The European Commission's data([85]) and the OECD's PMR figures([86]) suggest that restrictions on regulated professions in Czechia are higher than the EU average for lawyers, civil engineers, architects and real estate agents.

Recognition of qualifications is a significant barrier for some groups wishing to enter Czechia's labour market. Approximately 60% of Ukrainian refugees in Czechia (about 180 000 people) are working below their level of qualification([87]). Disproportionately high formal requirements are creating additional burdens for individuals seeking to provide services in Czechia. It is crucial to have a clear and common assessment framework before regulating professions in order to avoid unjustified barriers in the single market and to facilitate access to regulated professions([88]). Czechia would benefit from an audit and revision of the certification requirements, followed up by the establishment of a system of departmental supervision([89]).

Czechia could benefit more from the single market. Czechia had the second highest proportion of incorrectly transposed single market directives in the EU over the last five years, although its performance has improved in the last year (1.7% in 2023 vs 1.1% in 2024 and above the EU average of 0.9% in 2024). Czechia has also made some progress in addressing its transposition deficit. The percentage of single market directives not transposed decreased from 0.9% in 2023 to 0.7% in 2024 (so slightly below the EU average of 0.8% in 2024). In 2024, Czechia resolved 88.9% of the SOLVIT cases it handled as the lead centre (the EU average was 84.9%). The number of its pending single market infringement cases decreased to 26 in 2024 from 29 in 2023 but was still above the EU average of 24.

Public procurement

Competition in the public procurement system could be improved. Czechia's overall performance on public procurement is below the EU average, because it attracts too few bidders, and the procedures can be lengthy and costly (particularly for the public procurement review system). The new Public Procurement National Strategy (PPNS) and its action plan, which was adopted in 2024, have started to be implemented, but it is still too early to see the impact on competition in the public procurement markets. The data indicate that public procurement is still suffering from the low number of companies submitting tenders. The proportion of single bids has been high for several years (40% in 2024 and 41% over the last five years, compared with 27% and 26% in the EU accordingly). Improving the expertise of professionals involved in public procurement is crucial in order to make the public procurement system more efficient and cost-effective. Developing central purchasing and collaboration at regional level could provide more targeted support to smaller contracting authorities in order to optimise the efficiency of regionally centralised purchases. The PPNS includes this measure, but its implementation seems to trigger practical problems that undermine it.

([83]) ECFIN BCS.

([84]) European Commission, Regulated professions database, December 2024.

([85]) European Commission, 2021, Communication on updating the reform recommendations for regulation in professional services, COM(2021)385, 9/7/2021.

([86]) OECD Product Market Regulation, July 2024.

([87]) https://www.paqresearch.cz/post/dva-roky-pote/.

([88]) The Commission decided to refer Czechia to the Court of Justice of the EU for failing to correctly transpose EU rules on proportionality of professional regulations (Directive (EU) 2018/958) in April 2024.

([89]) National Economic Council (NERV).

Table A4.1: **Making Business Easier: indicators.**

Czechia								
POLICY AREA	**INDICATOR NAME**		**2020**	**2021**	**2022**	**2023**	**2024**	**EU-27 average**
Investment climate								
Shortages	Material shortage, firms facing constraints, %[1]		11.4	35.6	46.7	26.9	24.6	10.0
	Labour shortage, firms facing constraints, %[1]		18.9	22.7	23.6	19.7	14.3	20.2
	Vacancy rate, vacant posts as a % of all available ones (vacant + occupied)[2]		6.8	6.4	6.0	4.7	4.1	2.3
Infrastructure	Transport infrastructure as an obstacle to investment, % of firms reporting it as a major obstacle[3]		5.8	5.4	6.2	1.2	1.9	13.4
	VHCN coverage, %[4]		-	52.5	53.2	50.5	-	78.8
	FTTP coverage, %[4]		-	35.8	37.4	36.0	-	64.0
	5G coverage, %[4]		-	49.4	82.6	94.6	-	89.3
Reduction of regulatory and administrative barriers								
Regulatory environment	Impact of regulation on long-term investment, % firms reporting business regulation as a major obstacle[3]		21.7	14.6	10.7	3.6	1.8	24.5
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[5]		3.4	11.5	9.4	14.8	16.0	15.6
	Payment gap - public sector, difference in days between offered and actual payment[5]		-1.0	9.8	9.2	17.4	14.8	15.1
	Share of SMEs experiencing late payments, %*[6]	from public or private entities in the last 6 months	55.8	62.3	61.1	64.5	-	-
		from private entities in the previous or current quarter	-	-	-	-	62.4	47.9
		from public entities in the previous or current quarter	-	-	-	-	13.8	16.6
Single Market								
Integration	EU trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]		45.7	48.3	50.2	47.1	46.1	41.6
	EEA Services Trade Restrictiveness Index[7]		0.044	0.044	0.044	0.044	0.050	0.050
Compliance	Transposition deficit, % of all directives not transposed[8]		1.5	2.4	1.4	0.9	0.7	0.8
	Conformity deficit, % of all directives transposed incorrectly[8]		2.0	2.3	2.1	1.7	1.1	0.9
	SOLVIT, % resolution rate per country[8]		92.0	82.4	94.9	76.0	88.9	84.9
	Number of pending infringement proceedings[8]		31.0	33.0	30.0	29.0	26.0	24.4
Public procurement								
Competition and transparency in public procurement	Single bids, % of total contractors**[8]		41	40	42	40	41	-
	Direct awards, %**[8]		9	10	10	10	9	7.0

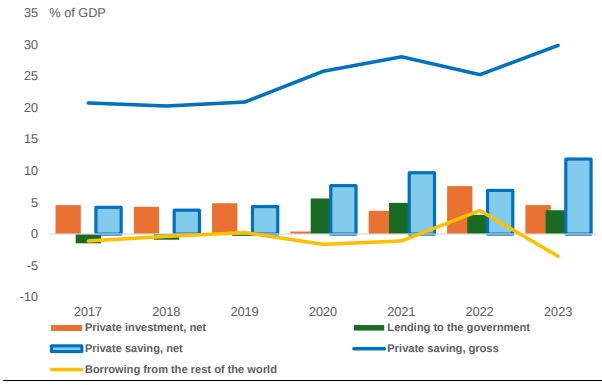
*Change in methodology in 2024: reporting late payments from public and private entities separately.
**Data on single bids for 2024 is provisional and subject to revision. Due to missing data, the EU average of direct awards data is calculated without Romania.
Sources: (1) ECFIN BCS, (2) Eurostat, (3) EIB IS, (4) Digital Decade Country reports; target = 100%, (5) Intrum Payment Report, (6) SAFE survey, (7) OECD, (8) (8) up to 2023: Single Market and Competitiveness Scoreboard, 2024: Public procurement data space (PPDS).

Until recently, the domestic private and public sectors have been absorbing the above-average and growing net private savings in Czechia. However, capital markets remain at a very early stage of development and do not contribute sufficiently to the financing of Czech companies. Banks, which dominate the financial sector, are robust, both in terms of capital and liquidity, and are well prepared to tackle future risks. Direct retail participation in capital markets remains low, while indirect participation through investment funds is growing. At the same time, the investment policies of domestic institutional investors are also quite conservative. This leaves internal financing as the main alternative to bank funding for Czech firms, which is a limiting factor for the setting up and subsequent scale-up of innovative start-ups with no or limited profitability. Moreover, Czechia's less-developed capital markets reduce the exit options for private-equity and venture-capital investors. The less-developed capital markets also contribute to a less-developed local venture-capital and growth-capital market, compounding the lack of funding sources for innovation, which is a key factor of competitiveness.

Availability and use of domestic savings

The growing net private savings of the Czech economy have been supporting domestic private investment and public finances. As of end-2023, the private savings ratio, net of fixed capital consumption, which has been on a persistently rising trend, reached 11.9% of GDP, i.e. almost double its ten-year average of 6.2% of GDP (see Graph A5.1). The net private investment ratio, which measures the net contribution of the private sector to capital accumulation in the country, did not exhibit such a growing trend and averaged 4% of GDP, with a maximum of 7.6% in 2022. At the same time, since 2020 the government budget has no longer been balanced, which resulted in an average ten-year deficit equivalent to 1.7% of GDP. As a result of these trends and structural changes, the Czech economy turned out to be a creditor to the rest of the world for about 0.5% of its annual GDP during 2014-2023. Thus, while the net private savings have been absorbed domestically until recently, their future growth could result in the Czech economy becoming a more pronounced lender to foreigners.

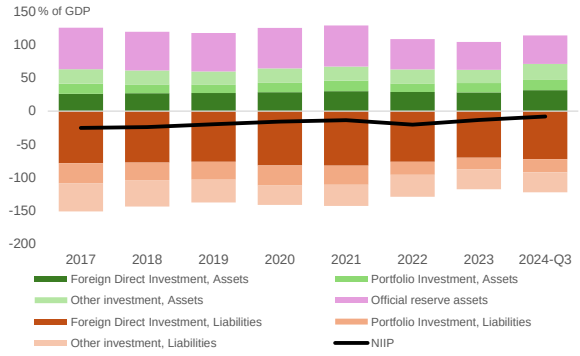
Graph A5.1: **Net savings-investment balance**



Source: AMECO.

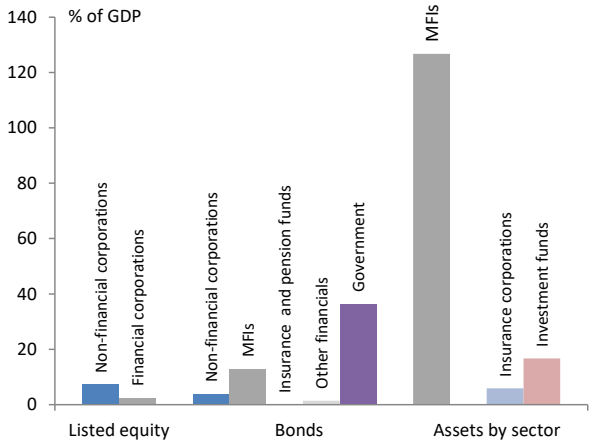
Consistent with its regular position as a small annual net creditor to the rest of the world, the Czech economy managed to improve its (negative) net international investment position. As of Q3 2024, total assets on foreigners reached 115% of GDP, down from 127% in 2017, while liabilities to foreigners stood at 123% of GDP, down from 152% in 2017. As a result, the negative net international investment position (NIIP) came down from -25% of GDP in 2017 to -8% of GDP as of Q3 2024, showing that the Czech economy remains nevertheless a net borrower from the rest of the world in terms of outstanding net foreign assets (see Graph A5.2). The increase in the NIIP is structural and concerns all forms of investment. During 2017-2024, the net stock of foreign direct investment grew by circa 12 percentage points of GDP, the net stock of portfolio investment increased by 11 percentage points of GDP, and the net stock of other investments expanded by 14 percentage points of GDP. However, the overall impact in NIIP was more limited, with an increase of only 17 percentage points of GDP, because the stock of official foreign reserves declined by 19 percentage points down to 43% of GDP as of Q3 2024. Thus, lately, the Czech economy, which appears to be comparatively well integrated in international capital flows, has been accumulating more private assets on foreigners, improving its still negative NIIP position.

Graph A5.2: **International investment position**



Source: ECB.

Graph A5.3: **Capital markets and financial intermediaries**



Source: ECB, EIOPA, AMECO.

Structure of the capital markets and size of the financial sector

Capital markets are at an early stage of development in Czechia. The market capitalisation of listed equity reached 9.8% of GDP at end-2023, which is much below the EU average of 67% (see Graph A5.3). Non-financial corporations accounted for three quarters of that capitalisation. The outstanding volume of debt securities reached 54.7% of GDP at end-2023, which is almost three times lower than the EU average. General government bonds accounted for two thirds of the outstanding amounts. The remainder was distributed between banks (23%), non-financial corporations (7%) and other financial intermediaries (4%). Thus, the contribution of capital markets in Czechia to the financing of the domestic economy appears to be rather limited.

While the financial sector in Czechia remains dominated by banks, investment funds have gained in importance lately. After peaking at 141% of GDP in 2021, the size of the banking sector declined to 127% of GDP in 2023, which is significantly below the EU average of 253%. Foreign banks control 83% of the sector's assets. Banking concentration appears to be higher than the EU average of 54%, with the top five MFIs controlling more than 65% of the sector. The insurance sector, with total assets that declined from 8% of GDP at end-2020 to less than 6% of GDP at end-2023, stays much behind the EU average of 55%. From all non-bank financial intermediaries, only investment funds have been growing lately, reaching the equivalent of 16.7% of GDP at end-2023, up from 11.7% at end-2020, based on ECB data.

Resilience of the banking sector

The Czech banking sector exhibits good resilience to risks despite declining but still robust levels of capital. Historically, the aggregate capital adequacy ratio in Czechia has been comparatively higher than elsewhere in Europe. However, the overall capital ratio has been declining since 2020, when it reached 22.1%, and stood at 20.5% in Q3 2024, slightly above the EU average of 20.1% (see Table A5.1). During the same period the CET1 ratio declined from 20.3% to 18.5%, remaining however significantly above the EU average of 16.5% as of Q3 2024. The 2023 latest supervisory solvency stress tests, that the Czech National Bank is conducting every two years, and which cover 91% of the sector's assets, showed no capital shortfall even under the adverse scenario. Czech banks' aggregate Minimum Requirement for Own Funds and Eligible Liabilities (MREL) rate stood at 28.7% of risk-weighted assets at the end-2023, which was 2.9 percentage points above the required level.

In addition to showing improved asset quality, banks' balance sheets are well prepared for future risks. With an aggregate non-performing loan (NPL) ratio of 1.2% as of Q3 2024, which is below the EU average of 1.9%, credit quality remains robust. At the same time, the corporate NPL ratio declined to 2.8% in 2023, below the 3.5% EU average. So far, the tightening cycle of interest rates has not deteriorated asset quality. Moreover, banks' aggregate coverage ratio

of NPLs by existing provisions reached 50.5% as of Q3 2024, well above the EU average of 42.1%. This suggests that Czech banks have applied an extra degree of caution when accounting for non-performing loans, which puts them in a comparatively better position, should asset quality deteriorate in the future. In acknowledgment of banks' preparedness for cyclical risks, the CNB progressively decreased the counter-cyclical capital buffer from 2.5% in October 2023 to 1.25% as of July 2024. However, to strengthen banks' resilience amid deglobalization and rising geopolitical tensions, the CNB introduced a systemic risk buffer of 0.5% for local banks as of January 2025.

Czech banks maintain strong liquidity positions. Banks in Czechia are exposed to a low liquidity funding risk and show a satisfactory term adequacy between assets and liabilities. As of Q3 2024, the liquidity coverage ratio stood at 162%, in line with the EU average. As of end-2023, the net stable funding ratio reached 159%, i.e. 23 percentage points above the EU average. Czech banks' structural position has been further strengthened by a declining loan-to-deposit ratio, which fell from 103.9% in 2019 to 91.4% at end-2023, below the EU average of 94.7%. Considering the importance of euro-denominated loans and their high share in Czech banks' assets, and to tackle the related specific foreign exchange risk, the banking sector improved its average euro liquidity coverage ratio, which reached 125% as of Q1 2024, up from 72% a quarter earlier.

Resilience of the non-bank financial intermediaries

The Czech insurance sector, which remains small and highly concentrated, appears resilient to risks. The sector is very concentrated, with two insurers accounting for about half of all premiums written in both the life and non-life segments. Its overall solvency is adequate although it has slightly deteriorated in recent months, with the average solvency ratio at solo level falling from 229% at end-2023 to 208% in September 2024 ([90]). Both life (circa 30% of the market in terms of gross premiums written) and non-life insurance segments are highly profitable, with the combined cost ratio for non-life insurers standing at 89%, well below the European Economic Area average of 96%. Based on an assessment by the European Insurance and Occupational Pension Authority (EIOPA), while floods and wildfires are relevant risks for Czech insurers, there are no significant protection gaps. Going forward, the risk of asset repricing of domestic government bonds, which are the main investment class for insurance companies, remains relevant. However, it is less pressing in the current environment of declining interest rates.

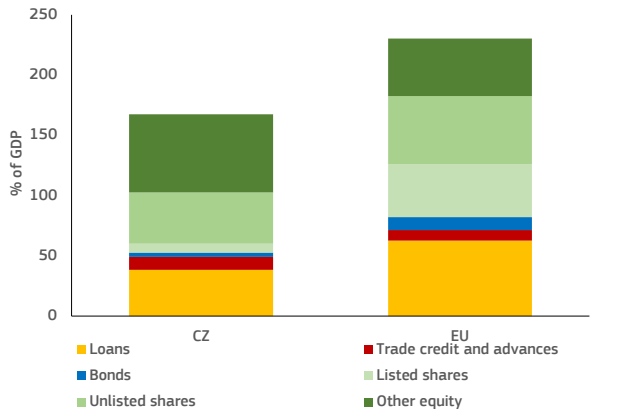
Voluntary pension funds are well prepared for potential liquidity risks related to ongoing reforms in the sector. Pillar 3 pension funds have been growing since their introduction in 1994 and reached 8.4% of GDP as of end-2023. The legacy so-called "transformed" funds, which are closed to new entrants since the 2013 reform, are bound to guarantee the invested amounts, which results in very conservative and often economically inefficient allocation strategies. As a result of that, the number of participants in these legacy funds has been declining and it further dropped by 12% in 2023. These divestments may give rise to additional liquidity needs. The CNB, which is monitoring this risk closely, assesses that i) legacy funds' aggregate liquidity is sufficient to cover any outflow of participants, and that ii) pension management companies in general have improved their liquidity resilience in 2023, in preparation for a potential outflow of clients.

Sources of business funding and the role of banks

Firms in Czechia rely less than the EU average on funding from banks or capital markets. More specifically, at the end of 2023 loans constituted only 22.9% of all funding sources for Czech non-financial corporations (NFCs), while listed shares and bonds represented only 6.6% of funding sources. The equivalent figures for the EU average are 27.2% and 23.8%. EU firms also have overall funding levels that are substantially higher as a share of GDP than Czech firms, as the overall level of NFC funding was 167.4% in Czechia but 230.3% of GDP in the EU on average (see Graph A5.4).

([90]) Source: EIOPA Insurance Statistics

Graph A5.4: **Composition of NFC funding as a % of GDP**



(1) Reference period is end-2023.
Source: Eurostat.

As a result, Czech businesses depend more on internal financing than their European peers. 75% of Czech firms' investment needs are covered by internal funding, compared with an EU average of 66% ([91]). At the same time, 88% of surveyed Czech firms believed that their investment activities over the last three years, i.e. in 2021-2023, were at about the right amount, a level of confidence that was higher than the EU average (80%), suggesting that there is no material financing gap relative to investment demand. However, this high level of overall satisfaction with their funding situation may not be the case for Czech firms with no or limited capacity for internal funding, such as innovative start-up firms (see below).

Despite its relative small size by EU standards, Czechia's banking sector plays an important role in financing the economy. Most banks are foreign controlled, and the sector is relatively concentrated ([92]). Given the resilience of the sector (see above), businesses are unlikely to face challenges in accessing stable and affordable bank loans in the near term.

As interest rates gradually ease, some timid signs of recovery in credit demand and therefore credit growth are appearing in Czechia. Credit growth has been on a general downward path since August 2022, albeit with a more volatile pattern for NFCs. However, as policy rates gradually decline, there are some signs of a recovery in credit growth, which is expected to continue in 2025. For households, the annual credit-growth rate for adjusted loans gradually edged up from 4.1% in April 2024 to 5.1% in September 2024. For NFCs, following a temporary rise at the end of 2023 and a subsequent steep fall from December 2023 to July 2024 (from 8.1% to 3.2%), annual credit growth has started to recover, reaching 4.2% in September 2024.

Credit demand from firms is also rebounding, further supporting credit-growth prospects. The latest bank lending survey by the central bank of Czechia showed that demand for loans, by large companies and for longer-term loans, rose in Q3 2024 in comparison to the previous quarter. Q3 2024 also saw the first increase in demand for investment-financing loans since early 2022. This was due to the gradual fall in lending costs from previous highs, as the average interest rate on the stock of company loans in Czech koruna fell from 7.42% in September 2023 to 5.73% in September 2024, with a much less pronounced fall in the average interest rate on company loans in euro.

Retail investment in capital markets

The Czech capital markets remain under-developed. The main stock exchange in Czechia is the Prague Stock Exchange (PSE). Both capitalisation and trading volumes are very low. The use of equity by SMEs is also very limited, as only 3.6% of Czech SMEs indicated in the 2023 SAFE survey that equity is relevant for them, compared with an EU average of 10.1% ([93]). Although Czechia's SME-focused START market has expanded listing opportunities, initial public offerings (IPOs) remain rather limited and small in the proportion to the economy.

Czechia had a national strategy in place for the development of its capital markets for 2019–2023. Certain key measures in this strategy have now been adopted, such as the introduction of a long-term investment product and a new type of alternative participation pension

([91]) See p.29 of the 2024 EIB Investment Survey.

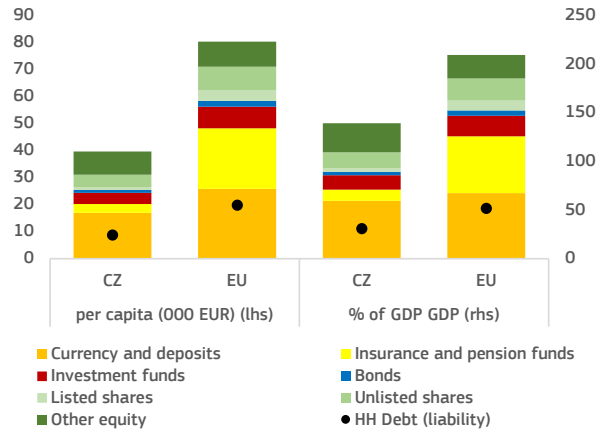
([92]) Based on the share of the total assets of the five largest credit institutions, see EU structural financial indicators | ECB Data Portal.

([93]) Data and surveys - SAFE - European Commission, 2023, Results by country, T27.

fund (see below). However, these measures have only been recently implemented and need time to reach their full potential. Since 2024, there has not been an updated strategy to develop Czechia's capital markets.

Czech households' above-average savings are invested conservatively, despite a gradual change in investment behaviour over the past 15 years. The degree of direct retail investment (i.e. investment by non-professional investors) in the Czech capital markets is low. Nevertheless, the assets of the investment-fund industry continue to grow, and now account for almost 10% of total financial-sector assets, with 72% of assets under management belonging to retail clients ([94]). Household financial assets held in pension, insurance and investment funds (or directly in financial investment instruments) as a percentage of total household financial assets rose from 17.8% in 2008 to 24.1% in 2023, but this is still substantially below the EU average for 2023 of 45.4% (see Graph A5.5).

Graph A5.5: **Composition of household financial assets per capita and as a % of GDP**



(1) Reference period is end-2023.
Source: Eurostat.

There is still significant scope to increase the level of direct and indirect retail investment in Czechia. This is evidenced by: (i) the stronger-than-average savings rate of Czech households in recent years, with positive median saving rates for all quintiles of the household income distribution; and (ii) the fact that cash and deposits account for a higher share of household assets than the EU average (42.7% vs 32.3%).

([94]) See Table A.8 in EFAMA Asset Management in Europe, facts and figures December 2024.

Recent policy initiatives in Czechia aim to promote retail participation in the country's capital markets. To boost household investment via the capital markets, a long-term investment savings account has been made available since 2024. It offers an alternative to other government-supported long-term savings products, e.g. pension funds and life insurance products. The new account, which is very flexible in terms of asset allocation and investment strategy, shares the same tax-relief features as these other long-term products, subject to a cumulative cap on tax advantages that applies to all of them.

However, further policy action may be needed to promote retail investment in Czech capital markets. More work may be needed to raise public awareness of the new long-term investment product. Its take-up has shown encouraging early signs, with CZK 2.4 bn (EUR 96 mn) invested by 116 544 investors in its first year of operation ([95]). But this take-up needs to be monitored closely to assess the product's attractiveness for new savers and its 'additionality' compared to other long-term savings products (i.e. the extent to which it is attracting new investment from retail investors rather than diverting existing investment that would otherwise have gone into other government-supported long-term savings products). Other aspects of the product may also need to be assessed, such as: (i) the competitiveness of the fee structures associated with this product; or (ii) the extent to which its design sufficiently supports the withdrawal of savings in the form of an annuity rather than a lump-sum. The Czech government could also consider both: (i) a wider review of the incentives in place to promote retail participation in financial markets; and (ii) possible steps to increase the availability of low-cost, well-diversified investment products suited for retail investors. It will also be crucial for the government to further strengthen retail investor trust, in part through: (i) maintaining an effective framework of corporate governance and protection of shareholder rights; and (ii) reducing cases of fraud and malpractice ([96]).

([95]) See relevant Press release AKAT.

([96]) For examples of past cases of malpractice, see p. 7 in this private survey (in Czech) on the Czech market for unlisted corporate bonds.

The role of domestic institutional investors

The country's growing fund-management industry tends to invest more in the domestic capital markets than EU peers invest in their own domestic capital markets. Czech investment-fund industry assets grew by circa 34% in 2023 compared with 2022 and continued to grow by another 26% in 2024. As of end-2024, the assets invested in domestic and foreign investment funds offered in Czechia amounted to CZK 1 653 bn (i.e. equivalent to circa 21.7% of 2023 GDP or EUR 66 bn) allocated as follows: (i) 11.5% in equity funds; (ii) 26.4% in bond funds; (iii) 12.1% in mixed funds; (iv) 18% in real estate funds; and (v) 31.9% in other funds ([97]). According to the Czech Capital Market Association, approximately 69% of the country's investment-fund assets are invested in domestic assets and 31% in foreign-domiciled assets ([98]). In 2023, Czech asset managers allocated about 50% of their equity and bond holdings to domestic bonds and equities, a substantially greater home bias than the EU average ([99]).

The investment portfolio of Czech insurers is mostly composed of bond holdings. The Czech insurance sector mainly invests in government bonds, mostly domestic. Government bonds account for 44.2% of total assets held by Czech insurers (compared with 19.5% for the EU as a whole) ([100]), with another 6.6% held in cash and deposits. Equities accounted for 7.7% of total insurance fund assets, and corporate bonds for 11.2%. Investment funds accounted for another 21% of Czech insurers' investment portfolio, of which 45.5% was in equity funds but only 0.5% in private-equity funds.

The domestic pension-fund industry has an even more conservative investment profile than the insurance industry, with a greater focus on Czech government bonds. As of end-of 2023, 67.3% of the assets of the voluntary pillar 3 pension funds were invested in government bonds. Bank deposits are the second largest investment asset held by pension funds, at 16.9%. Equities account for only 4.6% of pension-fund assets, investment funds for 4.2% and corporate bonds for another 6.8%. This conservative investment policy is due to the investment guarantee provided by the legacy funds (see above). The new, so-called "participation," funds are growing rapidly and are more dynamic in terms of their investment strategies, with only 31% of their assets in government bonds, as of end-2023. However, the new funds accounted for only about 27% of the overall sector as of end-2023.

Domestic institutional investors provide little in the way of funding for start-ups and venture-capital investors. A recent paper by the Centre for European Policy Studies showed that pension funds in Czechia accounted on average for only 1% of private-equity and venture-capital funds raised annually in the country over 2007-2023, a figure that falls substantially short of the 19% for the Baltic states or +20% shares for Nordic Member States ([101]).

Recent policy changes may facilitate a shift towards the new pension funds and less conservative investment strategies. This shift could include pension funds taking direct or indirect positions in unlisted equity. The recent policy changes included:

i) the abolition of the state contribution for persons receiving a retirement pension and an overall increase in the lower and upper limits to obtain the state contribution when investing in pension funds;

ii) improved mobility allowing people to switch their pension investments more easily between legacy and new pension funds;

iii) the creation of an alternative participation fund, the fee policy and investment strategy of which can be set more freely than the existing funds, making it easier to invest in private-equity funds, among others.

([97]) Source: ČNB ARAD.

([98]) Source: Czech Capital Market Association (AKAT ČR).

([99]) See Exhibits 4.4 and 4.5 in EFAMA Asset Management in Europe, facts and figures December 2024.

([100])Source: EIOPA Insurance Statistics.

([101])Source: Closing the gaping hole in the capital market for EU start-ups – the role of pension funds – CEPS.

The depth of venture and growth capital

The local venture-capital and growth-capital markets are not developed enough to meet the financing needs of innovative firms. A large part of the innovation in Czechia is driven by foreign-owned companies and relies on funding from abroad ([102]). The average value of annual private-equity investment in Czechia relative to nominal GDP went up to 0.2% in 2021-2023 from 0.1% in 2015-2020, but this is still much lower than the equivalent EU average of 0.6%. The average value of annual venture-capital investment relative to nominal GDP also went up, rising to 0.03% in 2021-2023 from 0.01% in 2015-2020, but this too is still much lower than the equivalent EU average of 0.08%. Given the limited venture-capital and private-equity activity in Czechia, there is a financing gap for early-stage innovative firms in need of capital with high risk tolerance, throughout their life-cycle.

Czechia has put in place some policies to promote start-up funding. To address this issue, Czechia formulated an innovation strategy for 2019-2030 and a strategy to support SMEs for the period 2021–2027. The Czech recovery and resilience plan (RRP) also includes measures to support the financing of start-ups ([103]), while start-up support is also provided by CzechInvest, an entity under the Ministry of Industry and Trade. The recent amendment of the Income Tax Act ([104]), which postpones the moment of taxation of employee stock options, is a first effort to improve the attractiveness of Czechia's employee stock-option framework relative to EU and international peers ([105]).

However, further policy action may be needed in the future. Additional measures may be needed to ensure the employee stock-option framework is flexible enough to be used by most Czech start-ups (see Annex 3 and 4). Moreover, there is still no comprehensive legal framework in Czechia to facilitate the creation and growth of start-ups as in other Member States, on the basis of a clear definition of what is an eligible start-up. Further measures to promote and facilitate IPO activity could also improve the ability of successful start-ups to scale-up, while offering an attractive exit option to venture-capital and private-equity investors. Moreover, the limited venture-capital financing in the country is partly driven by the already-low participation of institutional investors, including pension funds (see previous section).

Financing the green transition

The financing needs for Czechia's green transition pose a challenge, especially when it comes to mobilizing private capital to close the financing gap. The Czech economy has above-average emissions intensity and the necessary investment costs for decarbonisation by 2050 are estimated at about CZK 3.5 tn (EUR 140 bn), of which only about CZK 1–1.2 tn (EUR 40-48 bn) are identified from public sources including EU funds ([106]). Between now and 2030, Czechia aims to help promote green finance to bridge this gap. Despite this goal, Czechia's issuance of bonds with environmental, social, and governance objectives as a share of total bond issuance was lower in H1 2024 than its three-year average of circa 10% and is low compared to most EU peers ([107]). Therefore, it will be crucial to mobilise private investment through stable regulatory frameworks and appropriate risk-sharing instruments. Public resources need to be deployed in a targeted and cost-effective manner, with a clear focus on maximising leverage and ensuring value for money.

([102])Source: Supporting FinTech Innovation in the Czech Republic, OECD (2023).

([103])Namely: (i) three pilot co-investment funds to develop pre-seed investments, strategic technologies and university spin-offs; and (ii) the new quasi-equity instruments by the Czech National Development Bank.

([104])Section 6(14) of the Income Tax Act initially applicable as of 1 January 2024 and later further amended as of 1 July 2024.

([105])According to rankings provided by the Not Optional campaign, Czechia's framework for employee stock options scores much lower than countries such as France, the Baltic states or the UK.

([106])See p. 31 of Czech Republic IMF 2023 Article IV Consultation.

([107])Source: AFME CMU Key Performance Indicators, Seventh Edition, November 2024.

Table A5.1: **Financial indicators**

		2017	2018	2019	2020	2021	2022	2023	2024-Q3	EU
Banking sector	Total assets of MFIs (% of GDP)	141.1	134.0	131.0	138.9	140.8	129.4	126.7	135.7	248.4
	Common Equity Tier 1 ratio	16.8	17.1	18.2	20.3	19.8	18.7	18.8	18.5	16.6
	Total capital adequacy ratio	18.1	18.3	19.7	22.1	21.2	20.3	20.6	20.5	20.1
	Overall NPL ratio (% of all loans)	2.8	2.1	1.7	1.9	1.7	1.4	1.2	1.2	1.9
	NPL (% loans to NFC-Non financial corporations)	7.5	5.4	4.3	4.8	4.3	3.6	2.7	2.8	3.5
	NPL (% loans to HH-Households)	2.9	2.3	1.9	2.0	1.7	1.4	1.4	1.5	2.2
	NPL-Non performing loans coverage ratio	45.3	53.1	55.4	50.6	52.2	52.8	52.5	50.5	42.1
	Return on equity[1]	13.0	13.3	13.9	6.7	10.6	14.4	13.7	15.4	10.0
	Loans to NFCs (% of GDP)	20.6	20.0	19.4	19.6	19.6	18.0	17.4	17.9	30.0
	Loans to HHs (% of GDP)	30.6	30.1	30.0	32.3	33.5	31.0	28.6	29.2	44.5
	NFC credit annual % growth	6.1	6.3	3.9	-0.6	8.1	6.8	8.1	4.2	0.8
	HH credit annual % growth	8.4	7.9	6.6	6.8	10.2	6.6	4.8	5.1	0.7
Non-banks sector	Stock market capitalisation (% of GDP)	-	-	-	9.8	13.3	9.3	9.8	9.5	69.3
	Initial public offerings (% of GDP)	0.00	0.01	0.00	0.00	0.04	0.01	0.00	-	0.05
	Market funding ratio	48.3	47.2	46.1	46.1	41.8	41.0	39.8	-	49.6
	Private equity (% of GDP)	0.03	0.36	0.11	0.13	0.32	0.20	0.15	-	0.41
	Venture capital (% of GDP)	0.00	0.01	0.01	0.01	0.05	0.03	0.02	-	0.05
	Financial literacy (composite)	-	-	-	-	-	-	44.5	-	45.5
	Bonds (as % of HH financial assets)	2.5	1.9	1.9	1.9	1.7	2.6	2.7	-	2.7
	Listed shares (as % of HH financial assets)	2.3	3.0	2.9	2.8	2.9	2.3	2.5	-	4.8
	Investment funds (as % of HH financial assets)	6.7	6.6	7.1	6.9	8.1	8.5	10.7	-	10.0
	Insurance/pension funds (as % of HH financial assets)	11.2	10.6	10.4	9.8	9.5	8.9	8.2	-	27.8
	Total assets of all insurers (% of GDP)	9.4	8.6	7.8	8.0	7.8	6.2	5.9	6.2	54.8

1-3 | 4-10 | 11-17 | 18-24 | 25-27 Colours indicate performance ranking among 27 EU Member States.

(1) Annualised data

Credit growth and pension funds EU data refer to the EA average.

Source: ECB, ESTAT, EIOPA, DG FISMA CMU dashboard, AMECO.

Financial literacy

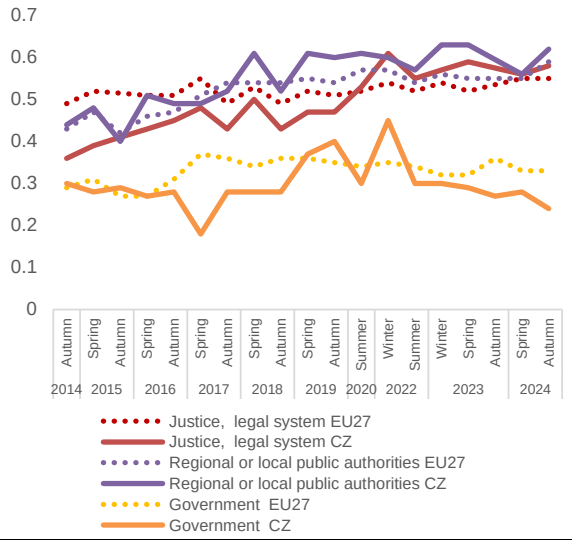
Financial literacy in Czechia is still slightly below the EU average, despite initiatives to promote financial education. Financial literacy is crucial for both encouraging retail investors to participate in capital markets and familiarising SMEs with alternatives to bank financing. Financial education has been included in educational programmes in Czech elementary schools since 2008, but the level of financial literacy in the country remains slightly lower than the EU average. A 2023 Eurobarometer survey ([108]) showed that only 17% of Czech citizens displayed a high level of financial literacy, 66% a medium level, and the remaining 16% a low level, compared with the EU average of 18% for a high level of literacy, 64% for a medium level, and 18% for a low level. This leads to an overall financial-literacy indicator for Czechia of 44.5 vs an EU average score of 45.5. The 2024 edition of the Czech Banking Association's financial-literacy index showed that the weakest scores are achieved by the 18-34 age group and people with only a primary education or an apprenticeship-level education. A national strategy for financial education has been implemented since 2010 and was updated (version 2.0) in 2021. The Czech Ministry of Finance also manages an informational website about financial literacy for consumers and a national registry of ongoing financial education projects.

([108])Source: Monitoring the level of financial literacy in the EU - July 2023 - Eurobarometer survey, Section 1.4, Graph F3

Czechia's institutional framework influences its competitiveness. Trust in central government remains below the EU average. Despite efforts to reduce administrative burden, regulatory governance challenges remain. Structural weakness of local government, coordination, and implementation are key hurdles for Czechia's public administration. The country lags in provision of digital public services, though the share of users has increased. A civil service reform is undergoing, but challenges in attracting and retaining skilled professionals persist.

Public perceptions

Graph A6.1: **Trust in justice, regional / local authorities and in government**



(1) EU27 from 2019; EU28 before
Source: Standard Eurobarometer surveys

Trust in public institutions remains near the EU average but varies significantly (Graph A6.1). Trust in local and regional authorities, as well as in the justice system is relatively strong. However, trust in the central government is much lower at 0.24, below the EU average of 0.33. 58% of citizens believe that reducing bureaucracy would boost trust in public administration, compared to 52% across the EU. Additionally, 43% want the administration to engage in more communication with the citizens (EU: 31%) ([109]).

The perceived quality of government at regional level remains below the EU average ([110]). Czechia has the most fragmented municipal structure in the EU, with the highest number of municipalities per capita. Strong coordination is needed, particularly in areas where municipalities have greater competences, e.g. building permits, non-tertiary education and care, and social services. A new model for municipal collaboration (community of municipalities) was introduced in 2024. ([111]). It allows municipalities to share staff and perform jointly tasks. However, the interest remains limited ([112]).

Quality of legislation and regulatory simplification

Performance in developing and evaluating legislation is below the EU average. Regulatory impact assessments are well embedded in the legislative process. Recent updates to law-making rules have incorporated assessments related to sustainability and gender balance. However, there are many exceptions to the overall application of the rules for impact assessment and quality is often low. The use of tools like stakeholder engagement and ex post evaluation of legislation shows a visible gap with respect to the EU average due to weaker methodology, transparency, and quality controls (Graph A6.2). To address the outstanding gap, Czechia is intending to introduce new uniform requirements for ex post evaluations in 2025 to ensure policy impacts are reviewed more comprehensively ([113]).

([109]) Understanding Europeans' views on reform needs - April 2023 - Eurobarometer survey.

([110]) Inforegio - European Quality of Government Index

([111]) https://spolecenstviobci.gov.cz/

([112]) Community overview | spolecenstviobci.gov.cz

([113]) Review of regulatory effectiveness from 2025 | ria.vlada.cz

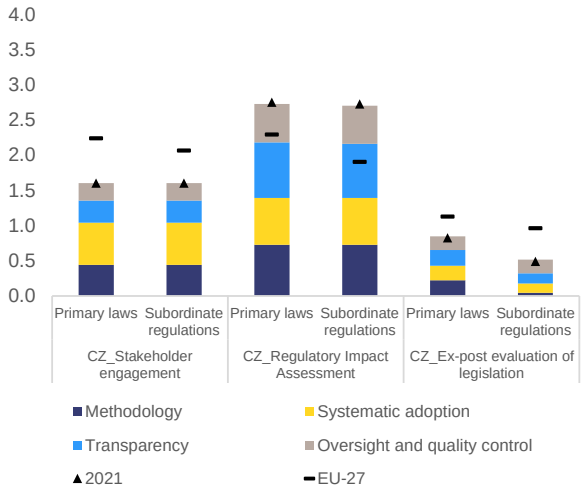
Table A6.1: **Selected indicators on administrative burden reduction and simplification**

When developing new legislation, regulators are required to …	Ex ante impact assessment of legislation		Ex post evaluation of legislation	
	Identify and assess the impacts of the baseline or 'do nothing' option.	○	Is required to consider the consistency of regulations and address areas of duplication.	○
	Identify and assess the impacts of alternative non-regulatory options.	●	Is required to contain an assessment of administrative burdens.	●
	Quantify administrative burdens of new regulations.	◑	Is required to contain an assessment of substantive compliance costs.	○
	Quantify substantial costs of compliance of new regulations.	◕	Compares the impact of the existing regulation to alternative options.	○
	Assess macroeconomic costs of new regulations.	◕	Periodic ex post evaluation of existing regulations is mandatory.	◕
	Assess the level of compliance.	○	Government uses stock-flow linkage rules when introducing new regulations (e.g., one-in one-out).	○
	Identify and assess potential enforcement mechanisms.	◕	A standing body has published an in-depth review of specific regulatory areas in the last 3 years.	○
			In the last 5 years, public stocktakes have invited businesses and citizens to assess the effectiveness, efficiency, and burdens of legislation.	○

● Yes / For all primary laws ◕ For major primary laws ◑ For some primary laws ○ No / Never

(1) This table presents a subset of iREG indicators focusing on regulatory costs. The indicators refer to primary legislation.
Source: OECD (2025), Regulatory Policy Outlook 2025 [https://doi.org/10.1787/56b60e39-en] and Better Regulation across the European Union 2025 (forthcoming).

Graph A6.2: **Indicators of Regulatory Policy and Governance (iREG)**



Source: OECD (2025), Regulatory Policy Outlook 2025 and Better Regulation across the European Union 2025 (forthcoming).

Parliamentary rules of procedure can be improved to ensure higher legislative quality. Laws initiated by parliament – which account for some 22% of new laws – are not bound by mandatory impact assessments or broad stakeholder involvement. The right to extended debate on legislative proposals has affected negatively the work of the Chamber of Deputies – a backlog of 200 proposals were transferred from the previous to the new mandate ([114]).

Simplification efforts have focused on reducing administrative burdens and enhancing transparency. The government has adopted its third ([115]) 'anti-bureaucratic' package to reduce regulatory burden and is currently preparing a fourth package (see Annex 4). The introduction of tools for real-time data-sharing across ministries and the launch of the 'e-Sbírka' digital legislative collection in 2024 were other positive steps. However, there remains room for Czechia to further strengthen its mechanisms for simplifying regulations. To illustrate, when evaluating primary legislation, there is no requirement to consider the consistency of regulations and address areas of duplication, quantify or assess administrative burdens and substantive costs of compliance of such legislation. Moreover, periodic ex post evaluation

([114]) https://www.irozhlas.cz/zpravy-domov/vetsine-cechu-snemovni-obstrukce-vadi-nejvice-volicum-piratu-vladnich-stran-ale_2501220500_jgr

([115]) https://vlada.gov.cz/cz/clenove-vlady/pri-uradu-vlady/michal_salomoun/aktualne/dalsi-uleva-od-byrokracie--vlada-schvalila-treti-antibyrokraticky-balicek-pripraveny-ministrem-michalem-salomounem-213338/

Table A6.2: **Key Digital Decade targets monitored through the Digital Economy and Society Index**

		Czechia			EU-27	Digital Decade target by 2030
		2022	2023	2024	2024	EU-27
Digitalisation of public services						
1	**Digital public services for citizens**	**75**	**76**	**76**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
2	**Digital public services for businesses**	**81**	**84**	**84**	**85**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
3	**Access to e-health records**	**na**	**47**	**51**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030

Source: State of the Digital Decade report 2024

of existing regulations is not mandatory (table A6.1).

The OECD product market regulation indicators show that Czechia's licensing system is aligned with some, but not all, best practices. For example, although the government keeps an up-to-date online inventory of all permits and licences required/issued to businesses by public bodies, there is no requirement for the government to regularly assess whether such licences and permits are still required or should be withdrawn (see also Annex 4). Unlike 19 other EU Member States, Czechia does not have a dedicated institution for promoting pro-productivity policies.

Social dialogue

Social dialogue in Czechia has an institutional basis in the form of the Tripartite Council. The Council of Economic and Social Agreement of the Czech Republic (RHSD ČR) is a voluntary negotiation body uniting the government, trade unions, and employers to reach consensus on key economic and social issues. While employers' association membership remains stable or growing, trade union membership is declining.([116])

In 2024, social partners opposed their classification as lobbyists and pushed for greater involvement in investment planning, criticising policy transparency. Despite active participation that followed in some policy areas, disagreements over the consultation processes persisted. The Operational Programme Employment has launched two calls for proposals worth EUR 28 million to support employer-employee collaboration on labour relations, workplace safety, and collective bargaining.

Digital public services

Czechia has made slight progress with provision of digital public services yet stays below the EU average (Table A6.2) Performance for digital services to citizens is 76.3% (EU 79%) and for businesses 83.8% (EU 85%). Access to e-health records remains a significant challenge, with Czechia scoring just 51.1 out of 100, the second lowest in the EU, compared to the EU average of 79.1.

The share of e-Government users stands around the EU average (76.7% vs. 75%), while that of e-ID users lags behind (28.5% vs. 41.1%) ([117]). The country successfully rolled out a national eID system under the eIDAS regulation. However, Czechia has not yet set up and notified eID systems for legal persons under the eIDAS regulation. This means that Czech businesses cannot authenticate themselves to access public

([116])For an analysis of the involvement of Czechia's social partners at national level in the European Semester and the Recovery and Resilience Facility, see Eurofound (2025), National-level social governance of the European Semester and the Recovery and Resilience Facility.

([117])Digital Decade 2024: Country reports | Shaping Europe's digital future

services provided by other Member States, including those enabled by the Once-Only Technical System ([118]).

Czechia is advancing towards seamless, automated exchange of authentic documents and data across the EU. It has developed the necessary infrastructure and is beginning the process of connecting the first authorities to the Once-Only Technical System, part of the EU Single Digital Gateway ([119]).

Civil service

The civil service is undergoing significant reform to enhance professionalism and capacity. Amendments to the State Civil Service Act have introduced limits on career tenure and streamlined hiring processes for senior civil servants. These amendments have made the recruitment of new civil servants more flexible by extending the validity period of shortlists and opening up recruitment for specific profiles (e.g. in IT) to persons with only a secondary education ([120]). An entrance examination was introduced under an amendment to the Act on Officials of Territorial Self-Governing Units (regional and municipal) ([121]). Both laws (national and regional) are intended to adjust HR management practices to the needs of individual authorities. As responsibility for state officials and self-government officials (regional and municipal) is divided between different government entities, stronger coordination is needed to streamline attractiveness and resource efficiency. Although the potential of these reforms is promising, Czechia has not established adequate monitoring to evaluate its effects.

Despite these advancements, challenges remain in attracting and retaining skilled professionals, particularly for specialised positions. While the Czech civil service is younger than the average of the EU, the share of staff under the age of 50 is declining. Moreover, the proportion of civil servants with higher education qualifications fluctuates below the EU average (CZ 45.8%, EU 54% in 2024([122]). The participation rate of civil servants in adult learning has increased to the EU average (CZ 18.6%; EU 18.9%). At the same time, in 2024, no specific steps were taken to further develop the skills of civil servants. the human resources policy is still fragmented and lacks the necessary data to achieve comprehensive reform. In 2024, an initial survey of 21 243 state-level civil servants, representing some 30% of all civil servants, provided useful input for a forthcoming HR action plan, financed under the recovery and resilience plan ([123]).

While women account for a significant proportion of the public sector workforce, they continue to be underrepresented in senior management positions (only 28.1%), placing Czechia among the bottom four EU Member States for gender parity([124]). Implementing comprehensive strategies to attract and retain a diverse talent pool will be crucial for enhancing the effectiveness and responsiveness of Czechia's public administration.

Integrity

Companies consider corruption to be a problem when doing business, while there are concerns regarding high-level cases. In Czechia, 67% of companies consider that corruption is widespread (EU average 64%), while 43% consider that corruption is a problem when doing business (EU average 36%) ([125]). Moreover, only 26% of companies believe that people and businesses caught bribing a senior official are appropriately punished (EU average 31%) ([126]). High-level corruption cases remain a point of attention due to delays in some proceedings.

([118])European Commission, *Once-Only Technical System Acceleratormeter*, Ec.europa.eu.

([119])European Commission, *Once-Only Technical System Acceleratormeter*, Ec.europa.eu.

([120])Ministry of the Interior of the Czech Republic. Legislation - Civil service

([121])Education in territorial units - amendment to the Act on Civil Servants and Implementing Regulations as of 1 January 2025 - Ministry of the Interior of the Czech Republic

([122])Eurostat, 2025, EU Labour Force Survey.

([123])Survey Official's View - Civil Service

([124])European Institute for Gender Equality, 2024. link

([125])Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([126])Ibid.

Nevertheless, a number of investigations involving both former and current high-level officials are ongoing, and additional cases have been detected ([127]). Enforcement in foreign bribery cases remains limited despite the legal framework being in place ([128]). Furthermore, public procurement is seen as an area at high risk of corruption in Czechia ([129]). 29% of companies (EU average 27%) think that corruption has prevented them from winning a public tender or a public procurement contract in practice in the last three years ([130]). A methodology for measuring corruption risks has been developed, under which the key risk areas for corruption were identified as foreclosures and, to some extent, sport, construction and health ([131]).

Czechia is about to adopt legislation for a public register for lobbyists, it being one of the few Member States not to have already done so. In March 2024, the government approved a draft law on lobbying – now entered into the legislative procedure – which would introduce lobbying rules, including a transparency register with obligations for both lobbyists and lobbied persons to register their contacts.

Justice

The justice system is performing efficiently. The disposition time in civil and commercial cases at first instance decreased from 134 in 2022 to 126 days in 2023 and is one of the lowest in the EU. While the clearance rate of administrative cases at first instance dropped from 126% in 2022 to 111% in 2023, the estimated time needed to resolve such cases decreased from 225 days in 2022 to 212 days in 2023. The quality of the justice system is considered to be good overall, with an advanced level of digitalisation. Procedural rules enabling digital tools in courts are in place and some digital solutions to initiate and follow proceedings, especially in civil, commercial and administrative cases, are already available. However, the introduction of an e-file system in courts faces delays. As regards judicial independence, no systemic deficiencies have been reported ([132]).

([127])See the 2024 country-specific chapter for Czechia of the Rule of Law Report, p. 11.

([128])Ibid, pp. 11-12

([129])Ibid., p. 17.

([130])Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([131])See the 2024 country-specific chapter for Czechia of the Rule of Law Report, p 17.

([132])For more detailed analysis of the performance of the justice system in Czechia, see the upcoming 2025 EU Justice Scoreboard (forthcoming) and the 2024 Rule of Law Report.

Czechia's faces challenges regarding its clean industry transition and climate mitigation: Czechia has not yet capitalised on its opportunities for supporting net zero manufacturing, in particular on batteries. Its automotive sector is in a profound transformation, and energy-intensive industries have been facing challenges linked to high energy prices and global competition, while its manufacturing industry is relatively greenhouse gas emissions intensive. Czech manufacturing is heavily reliant on importing critical raw materials. Its resource productivity remains well below the EU average, and its circular economy framework is still to be fully implemented. Much of Czechia's reusable and recyclable waste is still being incinerated, and its industry continues to release large amounts of air and water pollutants. This annex reviews the areas in need of urgent attention in Czechia's clean industry transition and climate mitigation, looking at different dimensions.

Strategic autonomy and technology for the green transition

Czechia's manufacturing capacity across all net zero technologies remains limited, even though the batteries sector holds substantial potential. Czechia's manufacturing capacity currently amounts to between 1 000 and 1 100 MW/y for battery and storage technologies (a negligible share of total EU capacity)([133]). As home to one of the largest hard rock lithium deposits in Europe, Czechia has potential to become a key player in the lithium market. Mining and production of lithium hydroxide is expected to commence in 2026. Opportunities arise also from Czechia's strong automotive sector in the transition to electric vehicles. Czechia's coal-transitioning regions present an opportunity for net zero manufacturing investment and skill transfers. These regions have available brownfield sites and benefit from EU funds support. Czechia could also benefit from regional cooperation with other Member States from central and eastern Europe, both in the field of batteries and in heat pumps. Alongside Poland and Slovakia, Czechia is emerging as a key actor in heat pump manufacturing and is home to 12 specialised factories.

Czechia has committed to supporting net zero manufacturing through some proposals and policy measures, but these do not sufficiently and coherently leverage all opportunities. The new overarching economic strategy([134]) considers clean and sustainable technologies as one of the most important sectors of the future. The Czech hydrogen strategy([135]) was revised in July 2024 to support the development of a renewable hydrogen-based ecosystem in Czechia. The Czech Battery Cluster founded in 2022 has facilitated the cooperation between public and private stakeholders to support the development of a battery economy. In terms of financial incentives, a new programme supporting strategic investments was endorsed in December 2024. It promotes key investments in clean technologies such as batteries, solar panels, wind turbines, heat pumps and electrolysers. However, while the national public procurement strategy for 2024-2028 highlights environmentally responsible public procurement as a priority, no further incentives or structures have been put in place to foster the scale-up of net zero manufacturing capacity, either by streamlining permitting processes or by fostering resilience criteria in auctions for instance. The lack of a relevantly skilled workforce represents also an important bottleneck. The policy framework remains scattered and thus does not provide a comprehensive support.

Transforming the car industry

Czechia's automotive industry – its largest industry sector - is facing strong competition and significant challenges in the transition to electric vehicles. The sector, representing around 9% of Czech GDP, 26% of the Czech industrial production, and 23% of Czech exports, is undergoing a profound transformation, driven by

([133])European Commission: Directorate-General for Energy, *The net-zero manufacturing industry landscape across the Member 2025*, https://data.europa.eu/doi/10.2833/2181110.

([134])Hospodarska-strategie_shrnuti-priorit-a-klicovych-oblasti.pdf, October 2024.

([135])Czech Ministry of Industry and Trade, Vodíková strategie ČR aktualizace, July 2024.

digitalisation, automation, and the shift towards electric vehicles and away from internal combustion engines. As part of these trends, the least skilled workers are being replaced with robots, while the educational requirements for medium and highly skilled employees are constantly increasing. The automotive industry directly employs over 180 000 people in Czechia, while up to half a million are in associated sectors. In light of projected changes to the Czech labour market([136]), it would be beneficial for Czechia to work with carmakers and trade unions to implement continuous reskilling and upskilling measures for current employees, and to put measures in place to attract foreign skilled professionals to fill emerging skill gaps.

Critical raw materials

Czech manufacturing depends heavily on imports of critical raw materials needed for the green and digital transitions. Czechia is among the top three EU producers of critical raw materials([137]) such as coking coal and feldspar. However, it is heavily reliant on imports of critical raw materials needed for the green and digital transition. With 32.4% of material inputs stemming from imports in 2023, compared to an EU average of 22%, Czechia is particularly vulnerable to supply chain disruptions. In 2023, the main critical raw materials imported by Czechia from non-EU countries, in terms of trade values, were coking coal (primarily from the United States and Canada), vanadium (from the Russian Federation), phosphorus (from Kazakhstan), and titanium (from Ukraine). Czechia's import concentration([138]) was the fourth highest among EU Members in 2023. This presents significant challenges for sustainability and resilience, such as supply chain risks, environmental degradation and social concerns.

In connection with the EU Critical Raw Materials Act, a programme for the national exploration of critical raw materials deposits was approved by the government. The aim of the programme is to complete a full review of the country's strategic raw materials reserves by May 2026. Regarding the circular use of materials as a way to reduce dependence on imports, a positive shift towards more sustainable materials management can be observed in Czechia. Its circular materials use rate has almost doubled over the last decade and has been around the EU average since 2020.

Czechia's reserves of strategic raw materials such as lithium and manganese create a significant opportunity for its industry. The Cínovec lithium project and the Chvaletice manganese project can benefit both Czechia and the EU, if proven to be economically viable. The Cínovec lithium deposit is one of the largest in Europe and represents 3-5% of the world's total lithium reserves([139]). Production could start between 2026 and 2028. The Chvaletice manganese project, for the re-processing of a deposit of a million tonnes of manganese, was approved at the environmental impact assessment stage and testing started in 2024. According to the project promoter, construction could start in the second half of 2026, and full operation in 2028 or 2029.

The Czech government and the European Commission declared the lithium deposit in Cínovec and the manganese deposit in Chvaletice as deposits of strategic importance. This would enable faster approval of the projects, attract investors and speed up permitting procedures. Since both projects provide key raw materials for the production of batteries for electric cars, Czechia can leverage this advantage to create jobs, diversify the economy, secure its energy supply, and become a leader in the European battery industry. Furthermore, the country could benefit from the untapped potential of smaller deposits of graphite, tin, tungsten, copper and other raw materials.

([136])A study of the Boston Consulting Group predicts that by 2030, the Czech labour market will undergo significant changes, resulting in approximately 330 000 employees losing their jobs due to the elimination of their positions, while over half a million new jobs will be created. Boston Consulting Group, Aspen Institute, 2022, *Budoucnost českého pracovního trhu*.

([137])European Commission, Raw material Information System, country profile Czechia.

([138])The import concentration index measures how much a country relies on a limited number of sources for a basket of critical raw materials. Source: COMEXT.

([139])GEOMET s.r.o, *České lithium pro čistou energii.*

Czechia's waste management plan with outlook to 2035([140]), the Circular Czechia 2040 strategy([141]) and the raw material policy for minerals and their resources([142]) cover issues linked to critical raw materials. Czechia focuses on key products that contain a high level of critical raw materials, such as batteries (extended producer responsibility, collection systems, recovery of critical raw materials); electrical and electronic equipment (repair, refurbishment, extended producer responsibility, collection systems); vehicles (extended producer responsibility); construction and demolition waste (recycled materials); and mining waste (recycling critical raw materials).

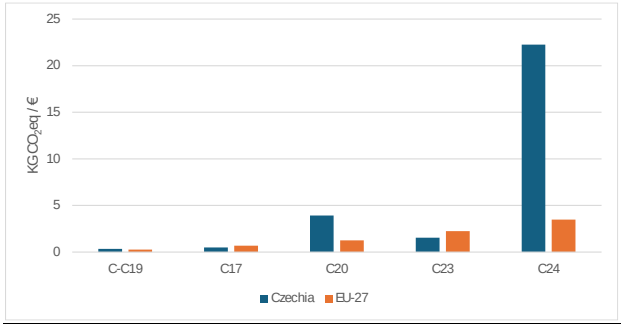
Czechia scores well in the recycling of e-waste and end-of-life vehicles. It is a frontrunner in the recycling of e-waste, a key source of critical raw materials, with a recycling rate of 92,8 % in 2022 compared to the EU average of 80,7 %. It is a top performer in the reuse and recycling of end-of-life vehicles, with a rate of 117.2% in 2022 compared to the EU average of 89.1%.

Climate mitigation

Industry decarbonisation

A rather high share of greenhouse gas emissions in Czechia's manufacturing industry comes from industrial processes. 17% of Czechia's total greenhouse gas emissions come from industry ([143]). With 340 g CO2eq per euro of GVA, the emissions intensity of Czechia's manufacturing production is about 25% higher than the EU total (270 g/€). Since 2017, the emissions intensity of Czechia's manufacturing production improved by 10%, less than in the EU on average (20%). A major share of Czechia's manufacturing greenhouse emissions – 58% – comes from industrial processes and product use, and the remainder primarily comes from industrial processes. In the EU overall, these shares are inverse, with 57% related to energy use.

Graph A7.1: **GHG emission intensity of manufacturing and energy-intensive sectors, 2022**



Source: Eurostat.

Both for energy and industrial process-related emissions, greenhouse emissions intensity in Czechia has improved less than in the EU on average ([144]). Between 2017 and 2022, the energy-related greenhouse gas emissions intensity of Czechia's manufacturing industry increased by 8 %, while in the EU overall, it improved by 16%. The rise in the energy-related greenhouse emissions intensity of manufacturing production started in 2020, with a peak in 2021. In the same period, the share of electricity and renewables in final energy consumption in manufacturing was broadly stable, around 39%, while the energy intensity of manufacturing saw variations between 1.4 and 1.7 GWh/€ of GVA, about 20% or more above levels in the EU overall. The emissions intensity from industrial processes and product use saw a decrease by 5% between

([140])Czech Ministry of Environment, 2022, *Plán odpadového hospodářství České republiky pro období 2015 – 2024 s výhledem do roku 2035.*

([141])Czech Ministry of Environment, 2021, *Strategický rámec cirkulární ekonomiky České republiky 2040.*

([142])Czech Ministry of Industry and Trade, 2017, *Raw Material Policy for Minerals and Their Resources.*

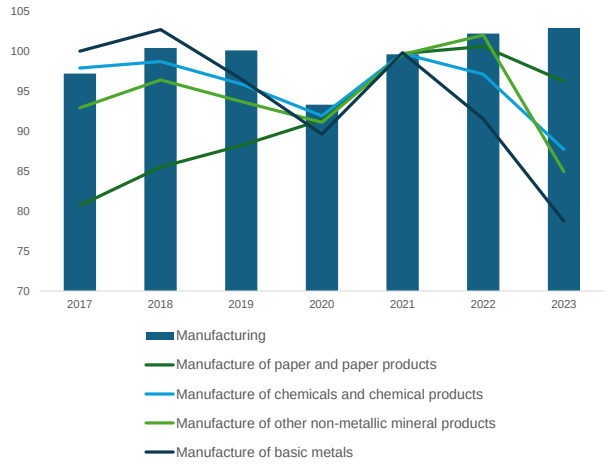
([143])In 2023. Manufacturing includes all divisions of the "C" section of the NACE Rev. 2 statistical classification of economic activities. In the remainder of this section, unless indicated otherwise, data on manufacturing refer to the divisions of the NACE section C excluding division C19 (manufacture of coke and refined petroleum products), and the year 2022. The source of all data in this section is Eurostat; data following the UNFCCC Common Reporting Framework (CRF) are from the European Environment Agency (EEA), republished by Eurostat.

([144])For the GHG emissions intensity of GVA related to energy use and industrial processes and product use respectively, GHG emissions are from inventory data in line with the UNFCCC Common Reporting Format (CRF), notably referring to the source sectors CRF.1.A.2 – fuel combustion in manufacturing industries and construction and CRF.2 – industrial processes and product use. The CRF.1.A.2 data broadly correspond to the NACE C and E sectors, excluding C-19. GVA data (in the denominator for both intensities) are aligned with this sectoral coverage. Therefore, they are not fully consistent with the data referred to in other part of this section.

2017 and 2022, much below EU-wide improvements, with an average of 23%.

High energy prices and global competition put pressure on energy-intensive industries and their decarbonisation plans. While having eased since 2023, electricity prices for industries remain high in the EU compared to non-EU countries. in Czechia, they are above the EU average and have increased by 145% since 2019 ([145]) (see Annex 8). Production of these industries has declined by more than 12% since 2021.

Graph A7.2: **Manufacturing industry production: total and selected sectors, index (2021 = 100), 2017-2023**



Source: Eurostat

Reduction of emissions in the effort sharing sectors

Czechia is projected to reach its 2030 target for the effort sharing sectors with the climate mitigation policies currently in place ([146]). GHG emissions from Czechia's effort sharing sectors in 2023 are expected to have been 5.7% below the level of 2005. By 2030, current policies are projected to reduce them by 26.9% relative to 2005 levels; additional policies considered in Czechia's final updated national energy and climate plan are projected to achieve further reductions of 8.9 percentage points. Hence Czechia is projected to overachieve its effort sharing target of a 26% reduction by 9.8 percentage points ([147]).

Swift action on decarbonising transport and buildings appears particularly exigent in Czechia. Between 2005 and 2023, greenhouse gas emissions from road transport increased by 21% in Czechia, while decreasing by 5% in the EU overall. From buildings, they decreased by 22%, much less than the 33% decrease in the EU overall. Speeding up climate mitigation in these sectors would help protect households, businesses and transport users in Czechia from the impact of the forthcoming carbon price.

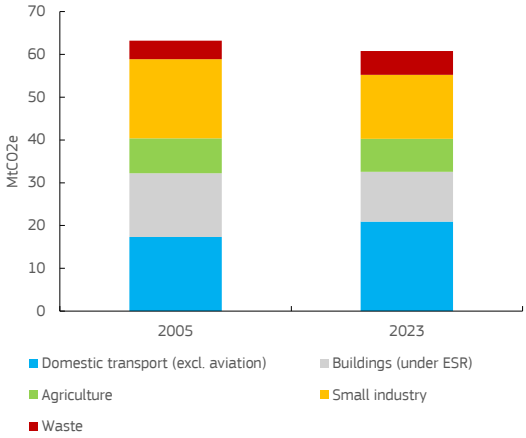
Supporting high-speed rail infrastructure deployment in Czechia could be an avenue to promote a modal shift from road to rail and cut transport emissions. The deployment of the high-speed rail is a prime transport infrastructure objective in Czechia having a support of the whole political spectrum. Czechia has a very ambitious plan covering all main transport axes. The construction of the first sections is starting this year.

([145])Eurostat, *Electricity price for non-household consumers.* (nrg_pc_205).

([146])The national greenhouse gas emission reduction target is set out in Regulation (EU) 2023/857 (the Effort Sharing Regulation). It applies jointly to buildings (heating and cooling); road transport, agriculture; waste; and small industry (known as the effort sharing sectors).

([147])The emissions from effort sharing sectors for 2022 are based on approximated inventory data. The final data will be established in 2027 after a comprehensive review. Projections on the impact of current policies ('with existing measures', WEM) and additional policies ('with additional measures', WAM) as per Czechia's final updated national energy and climate plan.

Graph A7.3: **Greenhouse gas emissions in the effort sharing sectors, 2005 and 2023**



Source: European Environment Agency

Sustainable industry

Circular economy transition

Despite positive trends, there is room for accelerating Czechia's circular transition. At 12.8% in 2023, Czechia's circular material use was above the EU average but far behind that of EU leaders. Czechia's resource productivity, with EUR 1.21 per kg of material consumed in 2023, remained well below the EU average. Even though Czechia's resource productivity has improved slightly over the past decade, the gap between its results and the EU average has not decreased. It would be beneficial for Czechia to redouble its efforts to minimise negative environmental impacts and reduce dependence on volatile raw material markets.

In 2021 Czechia adopted Circular Czechia 2040, a strategic framework for its transition to a circular economy by 2040, as part of a reform introduced by the Czech recovery and resilience plan ([148]). The implementing action plan for 2022-2027 was adopted in June 2023. The plan specifies the measures to be rolled out by 2027 to achieve the strategic goals of Circular Czechia 2040 in 10 priority areas: products and design; industry, raw materials, construction, energy; bioeconomics and food; consumption and consumers; waste management; water; research, development and innovation; education and knowledge; economic instruments; circular cities and infrastructure. The action plan identifies initiatives for each priority area, ranging from awareness raising to financial support.

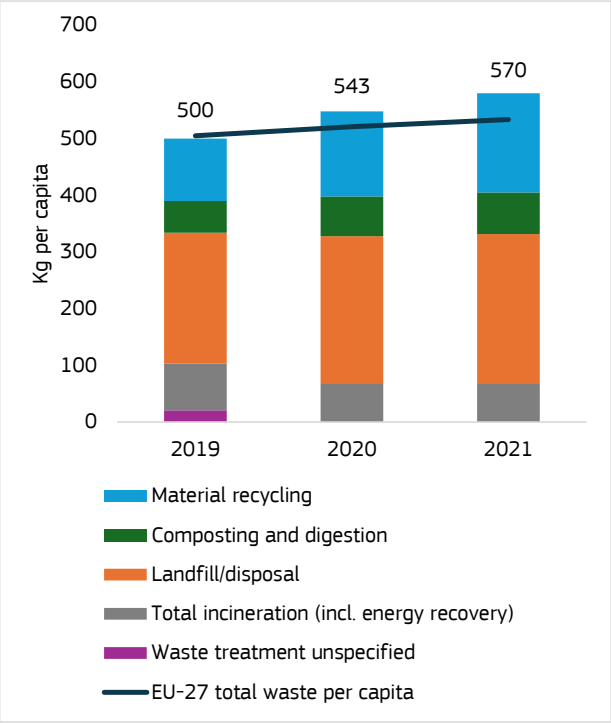
More can be done to divert reusable products and recyclable waste from landfilling and incineration. With 570 kg of municipal waste generated per capita in 2021, Czechia is above the EU average (see Graph A7.4). With a recycling rate of 43.3% in 2021, Czechia remains below the EU average for municipal waste recycling. It is at risk of not meeting the 2035 target of maximum 10% of municipal waste being landfilled. At 45% in 2021, Czechia's recycling rate for plastic packaging waste was above the EU average. In 2022, 72.2% of construction and demolition waste was recycled in Czechia, which remains well below the EU average. Czechia's material footprint in 2023 was 18.6 tonnes per capita, which is above the EU average.

Investment in the circular transition has been insufficient. Czechia is estimated ([149]) to need total additional investment of at least EUR 470 million per year for the circular economy transition, including for waste management. To close the circular economy gap, an additional EUR 108 million is needed for recent initiatives, such as eco-design for sustainable products; packaging and packaging waste; labelling and digital tools; critical raw materials recycling; and measures proposed under the amended Waste Framework Directive. Another EUR 304 million is needed in further investment to unlock Czechia's circular economy potential.

([148])Czechia's updated recovery and resilience plan, 2023, https://www.planobnovycr.cz/ke-stazeni.

([149])European Commission, DG Environment, *Environmental investment needs & gaps assessment programme*, 2025 update. Expressed in 2022 prices.

Graph A7.4: **Municipal waste treatment**



Source: Eurostat

Zero pollution industry

Czechia has significantly reduced air pollution, which is now decoupled from GDP growth, but more can be done to reduce industrial air pollution damage and intensity and industrial releases to water and their intensity. In 2023, no exceedances above the limit values established by the Ambient Air Quality Directive ([150]) were registered in Czechia. However, the target values for ozone concentrations were not met for several air quality zones, and the target value for benzo(a)pyrene concentration was exceeded in three air quality zones ([151]). The 2020-2029 emission reduction commitments under the national air pollution control programme have been met, and Czechia is on track to meet the commitments for 2030 onwards as well.

Czechia's industry continues to release large amounts of air and water pollutants. As regards industrial air pollutants, Czechia comes in fourth place for emissions intensity in the EU (above the EU average of EUR 27.5 / thousand EUR of gross value added (GVA)) and it has the sixth highest damage to health and the environment. The main contributors to emissions to air are the energy sector for nitric oxide (NO_X), sulfur dioxide (SO_2) and heavy metals; and the waste sector for dioxins. As regards industrial emissions of heavy metals to water, Czechia is in tenth position in the EU for emission intensity (above the EU average intensity of 0.864 kg / billion EUR GVA) and also has the tenth highest amount of emissions. The main contributors to emissions to water in Czechia are the energy sector for heavy metals; the pulp, paper and wood sector for total phosphorus and total organic carbon; and the chemical sector for total nitrogen.

The costs of pollution remain far higher than investment in pollution prevention and control. Based on 2022 data, 6 900 deaths in Czechia are attributed each year to fine particulate matter ($PM_{2.5}$); 730 deaths to nitrogen dioxide (NO_2); and 1 800 deaths to ozone (O_3) ([152]). The costs related to all industrial air pollutants in Czechia are estimated at EUR 17.8 billion ([153]). In contrast, to meet its objectives for pollution prevention and control and to address the health and economic costs of pollution, Czechia needs an additional EUR 1 billion per year (0.38% of GDP), mostly for air pollution control.

([150]) Directive 2008/50/EU on ambient air quality and cleaner air for Europe.

([151]) European Environment Agency, Eionet Central Data Repository.

([152]) Latest available annual estimates by the European Environment Agency. In terms of years of life lost (YLL), this implies 70 700 years for $PM_{2.5}$, 7 500 for NO_2, and 18 500 for O_3.

([153]) The latest available data (Value of Statistical Life (VSL) methodology) from Czechia are from 2020. Source: European Environment Agency, 2024, *The costs to health and the environment from industrial air pollution in Europe – 2024 update*, Link.

Table A7.1: **Key clean industry and climate mitigation indicators: Czechia**

Strategic autonomy and technology for the green transition				Czechia					EU-27	
Net zero industry										
Operational manufacturing capacity 2023										
- Solar PV (c: cell, w: wafer, m: module), MW	-			- Electrolyzer, MW		0				
- Wind (b: blade, t: turbine, n: nacelle), MW	700-750 (t)			- battery, MWh		1000-1100				
Automotive industry transformation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Motorisation rate (passenger cars per 1000 inhabitants), %	522	540	554	576	579	582	597	↗	539	561
New zero-emission vehicles, electricity motor, %	0.14	0.28	0.31	1.65	1.54	2.13	3.09	↗	1.03	8.96
Critical raw materials	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material import dependency, %		32.8	32.7	31.1	33.2	32.9	32.4	↘	24.2	22.6

Climate mitigation				Czechia				Trend	EU-27	
Industry decarbonisation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2017**	**2022**
GHG emissions intensity of manufacturing production, kg/€	0.38	0.39	0.36	0.38	0.4	0.34	0.33	↘	0.34	0.27
Share of energy-related emissions in industrial GHG emissions	61.7	60.0	61.4	61.4	59.0	55.4	57.1	↘	44.8	42.5
Energy-related GHG emissions intensity of manufacturing and construction, kg/€	173.4	166.5	154.5	180.5	226.4	186.8	-	↗	158.4	132.9
Share of electricity and renewables in final energy consumption in manufacturing, %	37.8	38.1	39.3	38.5	38.3	39.9	41.8	↗	43.3	44.2
Energy intensity of manufacturing, GWh/€	1.56	1.52	1.44	1.61	1.69	1.46	1.29	↘	1.29	1.09
Share of energy-intensive industries in manufacturing production						9.3				7.3
GHG emissions intensity of production in sector [...], kg/€										
- paper and paper products (NACE C-17)	0.53	0.53	0.54	0.48	0.47	0.50	0.43	-	0.73	0.68
- chemicals and chemical products (NACE C20)	3.83	3.65	3.52	2.83	5.23	3.93	3.73	-	1.25	1.26
- other non-metallic mineral products (NACE C23)	1.66	1.60	1.60	1.66	1.56	1.54	1.62	-	2.53	2.24
- basic metals (NACE C24)	4.60	6.20	5.05	5.45	12.43	22.26	13.07	-	2.79	3.49
Reduction of effort sharing emissions		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2023**
GHG emission reductions relative to base year, %					-5.3	-6.7	-5.7			
- domestic road transport		8.5	9.5	2.1	9.1	11.8	20.7	↗	1.4	5.2
- buildings		-8.9	-12.8	-14.5	-11.2	-19.4	-21.5	↘	21.4	32.9
	2005				**2021**	**2022**	**2023**	**Target**	**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %	65.0				61.5	60.6	61.2	-26.0	0.9	9.8

Sustainable industry				Czechia				Trend	EU-27	
Circular economy transition		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material footprint, tonnes per person		17.8	17.3	16.0	18.3	19.5	18.6	↘	14.7	15.0
Circular material use rate, %		10.5	10.6	11.5	11.0	11.3	12.8	↗	11.6	11.1
Resource productivity, €/kg		1.3	1.3	1.4	1.5	1.7	1.9	↗	2.1	2.3
Zero pollution industry										
Years of life lost due to PM2.5, per 100,000 inhabitants		1,048	708	621	794	972	-	↗	702	571
Air pollution damage cost intensity, per thousand € of GVA					75.0					27.5
Water pollution intensity, kg weighted by human factors per bn € GVA						1.0				0.9

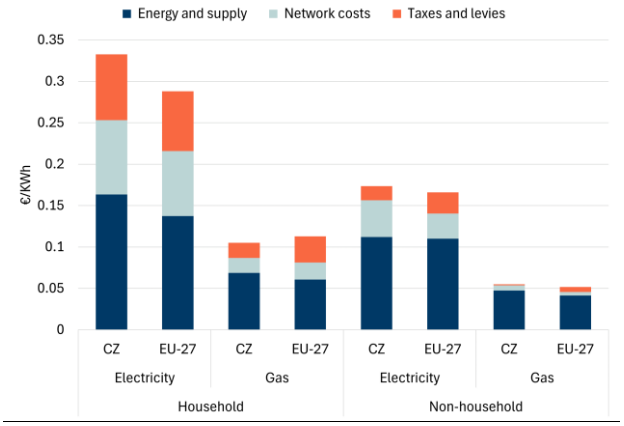
Source: **Net zero industry:** European Commission: The net-zero manufacturing industry landscape across Member States: final report, 2025. **Automotive industry transformation:** Eurostat. **Critical raw materials:** Eurostat. **Climate mitigation:** See footnotes in the "climate mitigation" section; reduction of effort sharing emissions: EEA greenhouse gases data viewer; European Commission, Climate Action Progress Report, 2024. **Sustainable industry:** Years of life lost due to PM2.5: Eurostat and EEA, Harm to human health from air pollution in Europe: burden of disease status, 2024. Air pollution damage: EEA, EU large industry air pollution damage costs intensity, 2024. Emissions covered: As, benzene, Cd, Cr, Hg, NH3, Ni, NMVOC, NOX, Pb, dioxins, PM10, PAH, SOX. Water pollution intensity: EEA, EU large industry water pollution intensity, 2024. Releases into water covered from cadmium, lead, mercury, nickel. Other indicators: Eurostat.

This annex outlines the progress made and the ongoing challenges faced in enhancing energy competitiveness and affordability, while advancing the transition to net zero. It examines the measures and targets proposed in the final updates to the national Energy and climate plans (NECPs) for 2030.

The deployment of renewable energy sources and flexibility of the grids remain low. This is especially due to the lack of support instruments and slow roll-out of smart meters. However, important legislative steps have been taken to streamline permitting and empower consumers (LEX RES I, II and III). Progress in energy efficiency in buildings remains limited, despite various programmes supporting the decarbonisation of heating.

Energy prices and costs

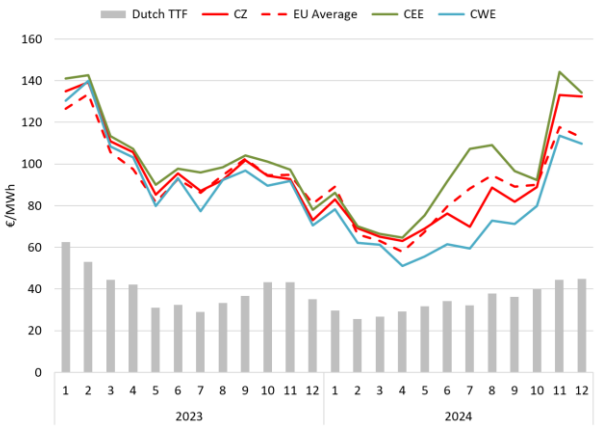
Graph A8.1: **Retail energy price components for household and non-household consumers, 2024**



(i) For household consumers, consumption band is DC for electricity and D2 for gas. Taxes and levies are shown including VAT.
(ii) For non-household consumers, consumption band is ID for electricity and I4 for gas. Taxes and levies are shown excluding VAT and recoverable charges, as these are typically recovered by businesses.
Source: Eurostat

Czechia's retail energy prices dropped slightly in 2024, remaining above the EU average, except for household electricity price, which were the 5th highest in the EU. On the one hand, taxes and levies (excluding VAT), skewed toward electricity, made up 9,9% of electricity prices and 2,4% of gas prices for non-household consumers (significantly lower than the EU averages of 15,4% and 11,6% respectively). On the other hand, network costs, higher than the EU average, accounted for 21,2% of the final price for electricity (compared to 15,5% at EU average) and 9,4% for gas (compared to 7,7% at EU average) for non-household consumers. Retail prices for household consumers also remained above the EU average, and this was particularly true for electricity, where retail prices continued to increase. While network costs as well as taxes and levies were below the EU average for both gas and electricity, the energy and supply component of retail prices for household remained slightly higher than the EU average (49.1% compared to 47.8% for electricity and 65,4% compared to 53,9% for gas).

Graph A8.2: **Monthly average day-ahead wholesale electricity prices and European benchmark natural gas prices (Dutch TTF)**



(i) the Title Transfer Facility (TTF) is a virtual trading point for natural gas in the Netherlands. It serves as the primary benchmark for European natural gas prices.
(ii) CEE and CWE respectively provide average prices in the central-western European (Belgium, France, Germany, Luxembourg, the Netherlands and Austria) and central-eastern European (Poland, Czechia, Slovakia, Hungary, Slovenia and Romania) markets.
Source: S&P Platts and ENTSO-E

With an average of 85 EUR/MWh in 2024 ([154]), Czechia's wholesale electricity prices remained in line with the EU average (84.7 EUR/MWh). Overall prices declined early in the year amid falling natural gas costs, but they picked up in the spring/summer and surged in the winter, outpacing increases in broader Central Western European (CWE) markets. In the summer, prolonged and more intense heatwaves led to higher consumption (+1% in summer 2024 vs

([154])Fraunhofer (ENTSO-E data).

summer 2023) while lower coal output (-11% in summer 2024 vs summer 2023) driven by rising CO_2 costs and limited non-fossil flexibility further tightened the supply-demand balance in a context of increasing wholesale gas prices. However, growing solar production (+37% in summer 2024 vs summer 2023), increased hydropower (+3%([155]) in summer 2024 vs summer 2023) and higher imports of cheaper electricity from Germany([156]) (and, to a lesser extent, Austria) helped stabilise prices and prevented Czechia from diverging as much from CWE markets as other Central Eastern European (CEE) countries. In the winter, an increased load (+3% in winter 2024 vs winter 2023) due to colder-than-expected temperatures, reduced regional renewable output from the Dunkelflaute ([157]), and diminished nuclear power in Czechia (-4% in winter 2024 vs winter 2023) led to ramped-up and expensive natural gas-fired generation (+64% in winter 2024 vs winter 2023). These conditions triggered price spikes (especially during peak demand hours, when solar output declined but demand remained high) that exceeded those observed in CWE markets. Despite these trends, Czechia's average electricity price over the year still declined compared with 2023. There was an even greater difference in average daytime prices, probably due to the uptake in solar output both domestically (+38% in 2024) and in neighbouring markets ([158]).

Flexibility and electricity grids

Czechia is well interconnected with most of its neighbours and has a high level of cross-border trade, but challenges persist at distribution level in terms of grid deployment. Czechia is in the Core([159]) capacity calculation region (CCR) and is market-coupled on all its borders with other members of this CCR. The average wholesale prices show a high level of convergence with the average regional electricity prices. Member States should ensure that a minimum of 70% of technical cross-border capacity is available for trading and Czechia complied with this requirement for 100% of the hours([160]) – the only country in this region to achieve this. The interconnection rate reached 27% in 2024. To further support interconnectivity, Czechia is pursuing electricity interconnection projects with Germany and Slovakia. Internal infrastructure was upgraded in 2024 with the new 400 kV Vernerov-Vitkov line, which was also included in the first PCI/PMI list under the new TEN-E Regulation. However, further efforts to strengthen the grid infrastructure are needed – especially on the distribution grid level, where the number of refused connection agreements due to insufficient connection capacity or supply security reasons rose significantly between 2022 and 2023([161]) . With regard to hydrogen infrastructure, Czechia adopted an updated hydrogen strategy in mid-2024, which acknowledges Czechia's participation in the Central European Hydrogen Corridor.

Progress regarding streamlining permitting for energy infrastructure remains uncertain. Since January 2024, Czechia has significantly reformed the Construction Act, by introducing the Transport and Energy Authority (which covers strategic infrastructure projects – including in the energy sector) and a portal (the Builder's Portal) to digitalise the construction-permitting procedure. This digitalisation process is not on track, however, and could be delayed until 2027. This raises concerns about prolonging the current system, which continues to hinder construction timelines for grid infrastructure and affects performance on climate and energy goals. Spatial planning also remains unreformed (see also Chapter 2).

Lack of grid capacity remains a key bottleneck, because a significant backlog of unmaterialised renewable energy projects is preventing the connection for others. To address this challenge, the recently adopted LEX

([155])ENTSO-E.

([156])Net imports increased by 58% in summer 2024 vs 2023.

([157])In November-December 2024, electricity generation from wind power decreased by -51% in Austria, -29% in Czechia and -45% in Germany compared to the same period in 2023.

([158])Yearly electricity data, Ember (generation and consumption data throughout the paragraph).

([159])Core is the capacity calculation region (CCR) which covers Belgium, Czechia, Germany, France, Croatia, Hungary, the Netherlands, Austria, Poland, Romania, Slovenia and Slovakia (and, once connected, Ireland). A CCR is a group of countries that calculate cross-border electricity trade flows together.

([160])ACER market monitoring report.

([161])Monitoring of the Czech NRA, available at Monitoring připojování výroben elektřiny do distribuční soustavy v České republice 2021-2023 | eru.cz.

RES III includes a binding maximum timeline for RES project grid connection to be ensured within the connection agreement (as required by Czechia's recovery and resilience plan (RRP)).

Constraints on grids resulted in increased occurrence of negative prices. ACER data indicate that these represented 134 hours in 2023. This led to a rising interest from energy distributors in installing 'energy dissipators' to consume surplus electricity (particularly electricity from solar sources), with a potential capacity of 1 000 MW.

Challenges remain, but Czechia has taken some steps to support non-fossil flexibility. Czechia has made a commitment to further promote the development of demand-side response and energy storage in order to increase the flexibility of its energy system. It has adopted a legal framework (LEX RES III) that allows aggregation (including independent aggregation) on wholesale markets. In terms of storage, the deployment of batteries remains however at an early stage (0,04 GW operating). A state aid scheme of EUR 279 million, approved in March, will help accelerate the roll-out by an additional 1.5GWh of energy storage projects. In addition, Czechia is also putting in place a new entity responsible for data provisions and exchange in the electricity market: a central Electricity Data Centre (EDC). This platform should further enable services such as aggregation, and energy sharing for energy communities. However, the full implementation of the EDC functionalities is currently delayed.

An incomplete legislative framework and slow smart meter roll-out are hampering consumer engagement, which remains rather limited (despite recent steps). In 2024, Czechia adopted legislation on renewable energy communities and citizen energy communities. This provided a clearer framework, leading to a positive trend in the development of energy communities. However, secondary legislation to enable their full participation in the energy market has not been adopted yet. Most consumers are on fixed-price retail contracts and supplier-switching was below EU average (only 4.2% in 2023([162])). Both the roll-out of smart meters (below 10%) and the percentage of prosumers households (3%) remain low. This indicates limited consumer engagement in the energy market. Czechia recently adopted legislation (LEX RES III), which should strengthen it (especially as regards demand response, energy communities, dynamic pricing and smart grids) as well as comparison tools that allow consumers to easily find a better offer. However, without a completed smart meter roll-out, customers are facing difficulties in providing flexibility services, even though wholesale markets will be open for demand response (by independent aggregation in the near future). A postponed tariff reform is further delaying the implementation of dynamic pricing.

In 2023, electricity accounted for 21.1% of Czechia's final energy consumption (FEC) (below the EU average of 22.9%) and this share has remained largely stagnant in the last decade([163]) , partly due to an unfavourable electricity-to-gas price ratio that disincentivizes electrification and cost-effective decarbonization. Electricity accounts for 20.7% and 32.9% of households' and industry's FEC respectively (see also the Clean Industry and Climate Mitigation Annex). For the transport sector, this share remains negligible at 2.2%. Further progress in electrification across sectors is required in order to cost-effectively decarbonise the economy and bring the benefits of affordable renewable generation to consumers. In 2024's second semester, household electricity prices in Czechia were among the highest in the EU, with electricity costing 2.9 times more per unit than gas before taxes and 3.2 times more after (EU average: 2.3). Taxes and levies made up 25,4% of electricity prices (vs. 19,3% for gas). For energy-intensive industries, prices were slightly above the EU average (€0.18/kWh vs. €0.17/kWh), with electricity costing 2.9 times more than gas before taxes and 3.1 times more after, further discouraging the electrification of industry and heating.([164])

([162])Report by ACER and CEER.

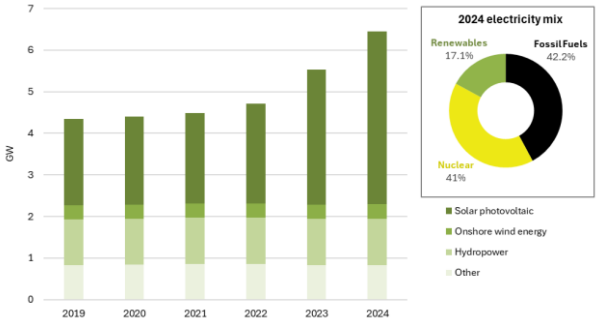
([163])The CAGR (compound annual growth rate) was 0.6% between 2013 and 2023. The minimum/maximum shares were 19.8% and 21.1% respectively. Source: Final energy balances, Eurostat.

([164])Analysis based on Eurostat data for the first semester of 2024. For household consumers, consumption band is DC for electricity and D2 for gas, which refer to medium-sized consumers and provide an insight into affordability. For non-household consumers, consumption band is ID for electricity and I4 for gas, referring to large-sized consumers, providing

Renewables and long-term contracts

Renewables deployment progresses at a slow pace. In 2024, renewable energy accounted for 17% of Czechia electricity mix. This was a slight increase from 15% in 2023([165]) but remains still far below the EU's overall RES share of 47%. Installed renewables capacity grew by 16,6% in 2024, the total renewable energy capacity thus reaching 6.453 MW([166]) (see Graph A6.1) in Czechia. As regards the steady acceleration of solar deployment, the total installed capacity in 2024 represented 4159 MW (+908 MW, an almost 28% increase on 2023). In contrast, wind installed capacity in Czechia grew modestly (+13 MW, representing a 3,7% increase), reaching 356 MW in 2024.

Graph A8.3: **Czechia's installed renewable capacity (left) and electricity generation mix (right)**



"Other" includes renewable municipal waste, solid biofuels, liquid biofuels, and biogas.
Source: IRENA, Ember

Czechia has made some progress in speeding up RES permitting in 2024, but further steps are needed. Czechia is expected to adopt a decision on renewables acceleration areas for wind and solar PV by Spring 2025. This needs to be complemented with an update of the national spatial planning, which is currently facing strong resistance at the local and regional levels. The Single Environmental Opinion Act also streamlines the environmental permitting procedures. The Transport and Energy Construction Authority (DESU) has been established to deal with the permitting of major energy infrastructure and renewable projects. Czechia has also taken steps to increase the digitalisation of the permit-granting procedure through the Builder's Portal, but this does not yet cover the whole permitting procedure. The Commission has an ongoing infringement proceeding against Czechia for non-transposition into national legislation of the permitting provisions of Directive 2023/2413 on the promotion of energy from renewable sources.

Czechia has not set more ambitious targets for renewables in its final NECP. Czechia's proposed contribution to the EU's 2030 renewable energy target is still 30%, below the value of 33% arising from the formula set in the Governance Regulation. By 2030, Czechia aims to have installed 1.2 GW of onshore wind capacity and 8 GW of solar PV capacity.

Czechia made little progress in terms of support to renewable energy sources in 2024, especially when it comes to auctions, contracts for difference (CfDs) and power purchase agreements. However, as part of the European Wind Power Action Plan, Czechia made a commitment to have 70 MW installed onshore wind capacity by 2026. No auctions took place in 2024, but annual auctions for 330 MW of wind power are planned for 2025, 2026 and 2027. Further solar rooftop deployment is foreseen within the framework of the RRP. Despite some recent progress, PPAs are not very common in Czechia (the very first corporate PPA in Czechia was concluded in 2021). In 2024, a large PPA was concluded (a 10-year contract for the construction of a 37 MW PV plant).

Energy efficiency

Czechia has made progress towards helping to achieve the EU's 2030 energy efficiency targets. In 2023, both its primary energy consumption (PEC) and final energy consumption (FEC) decreased on 2022 levels (by 8.1% and 5.9% respectively). FEC decreased especially in three main sectors (in industry by 9.4%, in the residential sector by 11.7% and in services by 7.2%) but increased in transport by 3.0%. The recast Energy Efficiency Directive (EED) requires Czechia to try to reach a PEC of 29.18 Mtoe and a FEC of 20.35 Mtoe by 2030. According to NECPR

an insight into international competitiveness (price used for the calculation excludes VAT and other recoverable

([165])Yearly electricity data, Ember.

([166])IRENA 2025: Renewable Energy Capacity Statistics 2025

2023, Czechia achieved new annual energy savings of 120 ktoe/year.

Climate-corrected final energy consumption of households in Czechia decreased by only 1.26% between 2018 and 2022. This indicates some progress but highlights the need for Czechia to significantly intensify its efforts to achieve its 2030 target of reducing building energy consumption by 8% compared with 2020 (as outlined in its long-term renovation strategy). Czechia is actively supporting energy-efficient and deep renovations through its New Green Savings Programme (*Nová Zelená Úsporám*), which provides financial incentives for households (including vulnerable households) to invest in energy-saving measures. The 2024 reform of the programmes ensures a more targeted approach that focuses on more complex renovations, but 20% of the cost is not covered. Renovation of public buildings also remains a challenge.

In 2022, heating and cooling represented 85% of Czechia's residential final energy consumption. Approximately 56 000 heat pumps were sold in 2023, a decrease of 11% on the previous year. One of the main barriers has been the fact that electricity in Czechia was 2.8 times more expensive than gas in 2023 and this difference increased to 3.1 times in the first half of 2024 – so end users save energy but do not make any considerable financial savings if they choose a heat pump for heating. When it comes to the decarbonisation of district heating, which covers 40% of households, support provided by the RRP and Modernisation Fund includes support for the shift from coal to energy-efficient CHP and renewables (HEAT Programme).

Czechia has an effective supporting national financing framework which mobilises energy efficiency investments that are mainly composed of grants (79%) and blended schemes (4%). The use of financial instruments dedicated to energy efficiency accounted for 17% of its RRP. Czechia continued the implementation of several relevant financing measures, such as the New Green Savings Programme. In 2024, Czechia launched Energy Savings II (a subsidy scheme with the aim of reducing the energy demand of business buildings, production and technological processes) and also a grant which focuses on support for the reconstruction and modernisation of public lighting systems (with the option of installing innovative elements). In terms of supported sectors, Czechia's RRP covers widely the building sector, including residential and public buildings as well as industry.

Security of supply and diversification

Czechia made substantial progress in addressing its reliance on Russian oil. The completion of the TAL Plus pipeline in January 2025 means that Czechia is on track to be independent from Russian oil supply by mid-2025.

Despite progress on renewables, Czechia's overall energy mix in 2023 remained heavily reliant on fossil fuels. Coal accounted for 27.3% of gross inland consumption, oil for 24.5% and natural gas for 14.7%([167]). Nuclear and renewables (together with biofuels) contributed 19.3% and 13.4%([168]) respectively. This reliance underscores the importance of Czechia's ongoing efforts to diversify its energy sources, to phase out coal and strengthen its energy security.

Nuclear energy has a key role to play (along with renewables) in decarbonising the Czech economy, securing energy supply and providing affordable energy for consumers. The government plans to further expand the share of nuclear in Czechia's energy mix by up to 25-33% (currently 15%) in primary energy sources and up to 46-58% (against 37% in 2022) in gross electricity production by 2040. To meet these targets, both the construction of up to four new nuclear reactors and the development of small modular reactors (mainly at former sites) are planned. In July 2024 the Korean consortium (led by KHNP) was selected to build two nuclear reactors in Dukovany, however the signature of the contract is still pending. A second phase of power upgrades in Dukovany was completed in 2024, increasing the power output of the plant to 512 MWe. This is expected to boost annual production by approximately 300 000 MWh. The government has also approved a strategic partnership with Rolls-Royce to develop SMRs. Czechia has moreover secured alternative nuclear fuel supplies by concluding supply contracts with

([167])Electricity and heat are excluded to avoid double counting focusing on primary energy sources.

([168])Gross Inland Consumption 2023, Energy Balances - Eurostat

Westinghouse and Framatome. While these steps will reduce reliance on nuclear fuel originating in Russia, Czechia remains amongst the most dependant Member States with Russian-designed VVER reactors. It is important for Czechia to develop a national plan to fully phase out its dependency on Russian nuclear fuel, as foreseen by the REPowerEU Roadmap adopted on 6 May 2025.

Fossil fuel subsidies

In 2023, environmentally harmful([169]) fossil fuel subsidies without a planned phase-out before 2030 represented 0.09%([170]) of Czechia's GDP([171]), below the EU weighted average of 0.49%. Tax measures accounted for 73.1% of this volume, while income/price support and direct grants

represented 25.1% and 1.8%, respectively. However, Czechia's 2023 Effective Carbon Rate([172]) averaged EUR 65.00 per tonne of CO_2, below the EU weighted mean of EUR 84.80([173]).

([169])Direct fossil fuel subsidies that incentivise maintaining or increasing in the availability of fossil fuels and/or use of fossil fuels.

([170])Numerator is based on volumes cross-checked with the Czech authorities. For all Member States, it includes public R&D expenditures for fossil fuels as reported by the IEA (Energy Technology RD&D Budgets) and excludes, for methodological consistency, excise tax exemption on kerosene consumed in intra-EU27 air traffic.

([171])2023 Gross Domestic Product at market prices, Eurostat.

([172])The Effective Carbon Rate is the sum of carbon taxes, ETS permit prices and fuel excise taxes, representing the aggregate effective carbon rate paid on emissions.

([173])OECD (2024), Pricing Greenhouse Gas Emissions 2024

Table A8.1: **Key Energy Indicators**

	Czechia				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1828**	**0.2091**	**0.3139**	**0.3327**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	53.6%	58.9%	58.9%	49.1%	36.6%	54.3%	55.6%	47.8%
Network costs	23.2%	21.0%	22.9%	27.0%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	23.2%	20.1%	18.2%	23.9%	36.7%	20.3%	19.6%	25.0%
VAT	14.9%	23.3%	17.6%	17.3%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.0562**	**0.0883**	**0.1115**	**0.1052**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	76.5%	68.0%	70.7%	65.4%	43.7%	61.0%	64.5%	53.9%
Network costs	8.5%	14.6%	11.9%	17.2%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	14.9%	17.4%	17.4%	17.4%	33.8%	21.7%	18.4%	27.8%
VAT	14.8%	17.3%	17.3%	17.3%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.0944**	**0.1688**	**0.1757**	**0.1735**	**0.1242**	**0.1895**	**0.1971**	**0.1661**
Energy & supply	50.5%	66.9%	67.7%	53.4%	43.0%	66.5%	63.0%	55.8%
Network costs	24.7%	12.1%	14.3%	21.2%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	11.9%	4.4%	0.7%	9.9%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0320**	**0.0820**	**0.0702**	**0.0551**	**0.0328**	**0.0722**	**0.0672**	**0.0517**
Energy & supply	72.7%	76.2%	74.9%	71.2%	66.2%	77.3%	77.3%	68.7%
Network costs	9.7%	5.1%	6.1%	9.4%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	4.1%	1.6%	1.9%	2.4%	12.5%	6.1%	7.3%	11.6%
Wholesale electricity price (EUR/MWh)	100.4	246.6	101.1	85.1	111.0	233.2	99.1	84.7
Dutch TTF (EUR/MWh)	*n/a*	*n/a*	*n/a*	*n/a*	46.9	123.1	40.5	34.4

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Electricity Production (GWh)	**87,056**	**88,038**	**87,035**	**81,525**	**85,016**	**84,851**	**77,004**	-
Combustible Fuels	52,783	52,338	50,474	44,933	47,677	47,346	39,458	-
Nuclear	28,340	29,921	30,246	30,043	30,731	31,022	30,410	-
Hydro	3,040	2,679	3,175	3,437	3,620	3,083	3,427	-
Wind	591	609	700	699	602	641	702	-
Solar	2,199	2,365	2,316	2,294	2,250	2,626	2,892	-
Geothermal	-	-	-	-	-	-	-	-
Other Sources	103	125	124	118	136	132	115	
Gross Electricity Production [%]								
Combustible Fuels	60.6%	59.4%	58.0%	55.1%	56.1%	55.8%	51.2%	-
Nuclear	32.6%	34.0%	34.8%	36.9%	36.1%	36.6%	39.5%	-
Hydro	3.5%	3.0%	3.6%	4.2%	4.3%	3.6%	4.5%	-
Wind	0.7%	0.7%	0.8%	0.9%	0.7%	0.8%	0.9%	-
Solar	2.5%	2.7%	2.7%	2.8%	2.6%	3.1%	3.8%	-
Geothermal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Other Sources	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	-
Net Imports of Electricity (GWh)	**-13,037**	**-13,907**	**-13,097**	**-10,153**	**-11,075**	**-13,529**	**-9,184**	-
As a % of electricity available for final consumption	-21.4%	-22.7%	-21.4%	-17.2%	-17.8%	-22.6%	-16.0%	-
Electricity Interconnection [%]	**19.3%**	**21.7%**	**25.4%**	**27.5%**	**24.3%**	**28.6%**	**25.3%**	**27.0%**
Share of renewable energy consumption - by sector [%]								
Electricity	13.7%	13.7%	14.0%	14.8%	14.5%	15.5%	16.4%	-
Heating and cooling	19.7%	20.6%	22.6%	23.5%	24.3%	25.8%	27.8%	-
Transport	6.6%	6.6%	7.8%	9.4%	6.7%	6.2%	5.7%	-
Overall	14.8%	15.1%	16.2%	17.3%	17.6%	18.1%	18.6%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**38.8%**	**40.0%**	**41.8%**	**41.7%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	12.8%	13.9%	14.1%	14.9%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	101.2%	96.9%	99.9%	99.4%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	86.0%	92.1%	113.4%	100.1%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	100.0%	100.0%	79.4%	8.1%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	48.8%	50.0%	56.0%	58.2%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	10.1%	4.3%	1.2%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**8.7**	**8.3**	**8.7**	**8.8**	**9.5**	**7.6**	**6.8**
Gas Consumption year-on-year change [%]	2.8%	-5.3%	5.0%	1.6%	7.2%	-19.4%	-11.3%
Gas Imports - by type (in bcm)	**8.9**	**8.0**	**9.5**	**7.6**	**8.7**	**8.6**	**6.8**
Gas imports - pipeline	8.9	8.0	9.5	7.6	8.7	8.6	6.8
Gas imports - LNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas Imports - by main source supplier [%]							
Norway	0.8%	0.5%	0.3%	0.0%	0.0%	17.2%	87.0%
Russia	99.2%	99.5%	99.7%	100.0%	100.0%	79.4%	8.1%

Source: Eurostat, ENTSO-E, S&P Platts

Czechia faces significant challenges in climate adaptation, particularly in developing a comprehensive climate adaptation strategy and enhancing water resilience. It has well-established specific environmental policies, such as policies for soil, water, forests and air. However, the overall approach to adaptation is often fragmented. Responsibilities are shared across ministries, including the Ministry of the Environment and the Ministry of Agriculture, lacking clarity. Improving water resilience is a key priority, especially to tackle forms of pressure such as industrial emissions and untreated wastewater. Action to improve natural water retention and implement nature-based solutions is crucial to boost resilience against floods, droughts and erosion and to support climate change adaptation more broadly.

Climate adaptation and preparedness

Czechia faces significant climate adaptation challenges and substantial economic impacts from weather and climate-related extreme events such as floods, droughts and heatwaves. Between 1980 and 2023, economic losses reached EUR 18.5 billion, with only 12% covered by insurance. Flood events were particularly damaging, accounting for EUR 10.2 billion of these losses ([174]). The risk of floods caused by a combined effect of heavy precipitation and low water retention of soils has significantly increased (in terms of exposure of both the population and property). During the floods of summer 2024, Czechia demonstrated a very good level of preparedness in terms of prompt weather forecasts, an efficient early warning system and effective cooperation under its Integrated Rescue System. However, the floods showed that some key causes of the fatalities and damage still need to be tackled. For example, current conventional agriculture and forestry practices deteriorate the quality of soil, decrease water retention in soils and prevent forests from becoming resilient. These practices not only exacerbate the impacts of floods, but also of water and wind erosion, landslides, heatwaves, droughts, etc. Droughts pose a major threat to Czech ecosystems, with 26.5% of the country severely affected by drought in 2018. The health impacts of extreme heat have become more pronounced, with heat-related mortality increasing from an average of 16 deaths per 100 000 inhabitants between 2003-2012 to 28 deaths between 2013-2022. These challenges underscore the need for cohesive adaptation strategies to boost resilience against such extreme events.

Czechia's adaptation policy, defined by its national strategy and action plan, is developing, but faces implementation challenges due to unclear responsibilities among ministries. Czechia's adaptation policy is embedded in two key documents: the national adaptation strategy and the national action plan on adaptation. Czechia is in the process of conducting a national climate risk assessment, with a significant focus on drought risk. While the policies focusing on individual environmental aspects (such as the protection of soil, water, forests or air) are well established in the key ministries, implementation of a comprehensive adaptation policy is not yet at that stage. The two key documents form a comprehensive adaptation policy, but implementation often consists of a sum of separate policies (see above), rather than mutually reinforcing measures based on a climate risk assessment. The division of responsibilities for implementing the adaptation policy is neither clear within the Ministry of the Environment, nor between the Ministry of the Environment, the Ministry of Agriculture and other authorities. At sub-national level, some self-governing regions have drafted climate change adaptation plans or strategies. Implementation is generally at the initial phase, with further action needed. Only 29% of the Czech population live in areas covered by the EU Covenant of Mayors. Several local action groups have worked rather efficiently to implement adaptation measures since they are not limited to individual municipalities and can work, for instance, at river-basin level. This work merits further support. Climate adaptation at landscape level also merits support as it enables action to tackle all key aspects at the same time (soils, water retention, forests, biodiversity, etc.) to deliver tangible results. The educational and social aspects of climate change adaptation should be promoted.

([174])EEA, 2024, *Economic losses from weather- and climate-related extremes in Europe*, Link.

Water resilience

Czechia's action to improve flood resilience should continue. The major floods of September 2024, which caused significant damage in several regions, demonstrate the urgency. The economic losses caused by floods in the country between 1980 and 2023 are estimated at EUR 10.2 billion. Improving sustainable water management and flood protection, prioritising nature-based solutions and restoring rivers is crucial to maintain the competitiveness of many economic sectors. Specific measures are in preparation or ongoing under Czechia's 2nd flood risk management plans, which now include nature-based solutions and cross-reference work on floods under Czechia's updated climate change adaptation strategy. Czechia is not one of the EU Member States subject to major water stress. The Water Exploitation Index Plus (WEI+) was 3.2 in 2022. Manufacturing (40%) and the public water supply (35%) were the sectors accounting for the highest shares of water consumption in 2022. Czechia's water productivity is above the EU average at EUR 159 per m^3 of abstracted water in 2022.

The water quality of Czechia's surface water and groundwater bodies is on a downward trend in terms of ecological and chemical status. Czechia's third river basin management plans, covering 2022-2027, show a decrease in the number of surface water bodies with good (or better) ecological status/potential from 18.8% (under the second plan) to only 5.9% (third plan). Even if this partly due to better monitoring, it is also clear that the country severely struggles with eutrophication, particularly in lakes. The sources of pressure are industrialised large-scale agriculture, which makes heavy use of fertilisers, and waste waters polluting rivers and lakes with nutrients causing eutrophication. In terms of the chemical status of surface water bodies, there has been an even greater deterioration between the 2nd and the 3rd RBMPs, falling from 70% to only 38.9% of surface water bodies in good chemical status. Again, this is partly due to better monitoring, but also due to ubiquitous and persistent bio-accumulative and toxic substances, which are difficult to tackle. The sources are discharges not connected to the sewerage network, pollution from agriculture and urban waste waters.

Although 93.7% of Czechia's groundwater bodies are reported to be in good quantitative status in the third plan, 13% are at risk of failing to achieve good quantitative status by 2027. The sources of pressure are water abstraction for the public water supply, industrial and agricultural uses. Czechia is one of the EU Member States with the highest share of groundwater bodies (72.4%) failing to meet good chemical status. This is mainly due to pollution from agriculture (pesticides, nitrates and ammonium). Non-agricultural pollutants have been on a sustained upward trend, including arsenic, nickel, cadmium, nitrates (from burning fossil fuels) and aluminium.

Czechia's wastewater treatment remains a cause for concern. Despite improvements in compliance over the years, in particular thanks to EU funding, Czechia has experienced difficulties in implementing the Urban Wastewater Treatment Directive. Incomplete implementation forced the Commission to take legal action against Czechia in 2020 and issue a reasoned opinion. These identified agglomerations failing to provide a collecting system, or failing to provide secondary treatment, or failing to ensure more stringent treatment ([175]). The infringement proceeding is ongoing. Overall, Czechia's compliance rate in 2020 was 78%. The Directive was revised in 2024 ([176]), bringing in new requirements such as additional treatment of micropollutants in urban wastewater. Czechia has until 31 July 2027 to transpose it into its legal system.

To meet the environmental targets under the EU water legislation, Czechia has a gap in investment in water of EUR 498 million per year (0.18% of GDP), with over half related to waste water (338 million per year). Czechia's annual water investment needs reach an estimated EUR 1.56 billion (in 2022 prices), see Graph A9.2. This comprises both the water industry and water protection/management. The largest part of the total annual need, EUR 958 million, is for wastewater management, including additional costs to implement the revised Directive. Czechia's current annual water investments for the 2021-2027 period are estimated to be around EUR 1 billion per year (in 2022 prices). Of the total

([175]) Czechia responded to the reasoned opinion in 2020, presenting its views on the various compliance issues raised by the Commission.

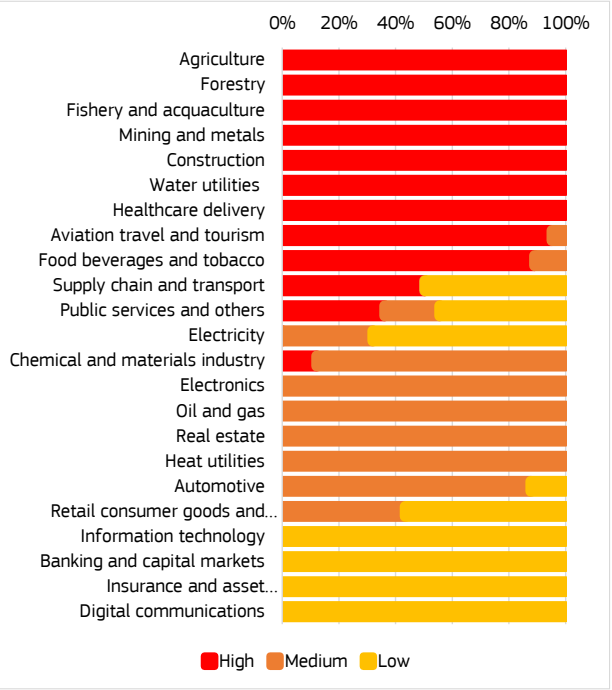
([176]) Directive 2024/3019, of 27 November 2024.

financing, 11.2% is provided by the EU multiannual financial framework (mostly through cohesion policy), with a further 4.8% from the Recovery and Resilience Facility, reaching 16% combined. European Investment Bank financing is around 0.7% of the total, while the bulk of financing comes from national sources (83.4%) ([177]).

Biodiversity and ecosystems

The state of nature and ecosystems in Czechia remains under pressure, affecting climate resilience. With a long history of industrialisation, Czechia has one of the most fragmented landscapes in the EU. According to the latest available data (2018), only 19.4% of Czechia's habitats have a good status, higher than the EU average of 14.7%. Data show only a slight improvement since the previous reporting period. Similarly, the conservation status of species, with 30% reported as having a good status (higher than the EU average of 27.5%) shows only a slight improvement. This situation has severe implications for Czechia's climate resilience, as the loss of biodiversity impairs ecosystems' ability to provide services that help mitigate the effects of climate change, such as regulating water cycles, maintaining soil health and sequestering carbon.

Graph A9.1: **Direct dependency(1) on ecosystem services(2) of the gross value added generated by economic sector in 2022**



(1) Dependency based on the sector's own operations, excluding value chain operations within countries and across international value chains. A high dependency indicates a high potential exposure to nature-related shocks or deteriorating trends, which means that the disruption of an ecosystem service could cause production failure and severe financial loss.
(2) Ecosystem services are the contributions of ecosystems to the benefits that are used in economic and other human activity, including provisioning services (e.g. biomass provisioning or water supply), regulating and maintenance services (e.g. soil quality regulation or pollination), and cultural services (e.g. recreational activities).
Source: Hirschbuehl et al., 2025, *The EU economy's dependency on nature*, Link.

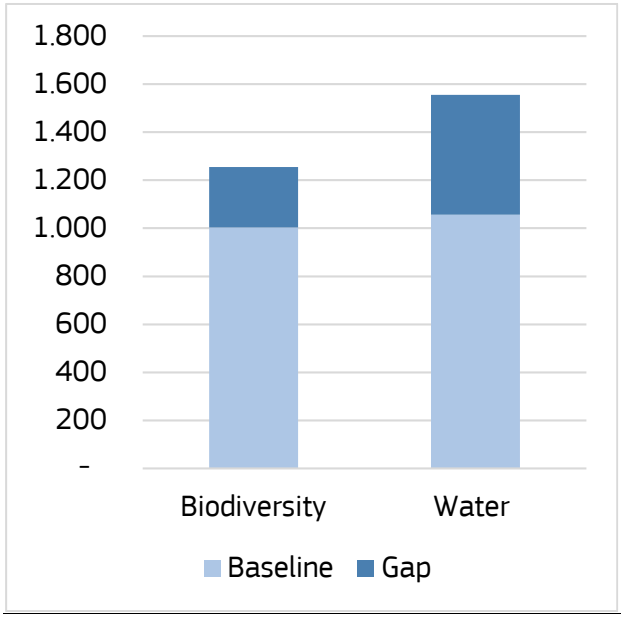
Nature degradation creates significant risks to the economy and to competitiveness as Czechia is one of the Member States with a high level of dependency on ecosystem services. 44% of Czechia's gross value added is highly and directly dependent on ecosystem services, equal to the EU average. Several sectors such as agriculture, forestry, fisheries, mining, construction, water utilities and healthcare delivery (see Graph A9.1) are particularly dependent on ecosystem services. 100% of the gross value added generated by these sectors is directly dependent on ecosystem services. This means that failure to maintain the capacity of ecosystems to deliver services could entail significant costs or even stop production in these sectors. Protecting and restoring key ecosystems would help maintain the long-term competitiveness of these sectors.

([177])Water investment levels are estimated by tracking EU funds, EIB projects and national expenditure (EPEA accounts, Eurostat).

Focused action on nature protection and restoration is necessary to meet Czechia's nature restoration targets. Czechia's most recent biodiversity strategy (2016-2025) was adopted in 2016. It sets out four priorities for the protection and sustainable use of biodiversity ([178]). Czechia is currently in the process of updating its national biodiversity strategy and action plans. In July 2024, it uploaded into the online reporting tool of the Convention on Biological Diversity ([179]) two preliminary new national targets (on protected areas and on ecosystem integrity, connectivity and management). In 2021, 21.9% of the country was protected (including Natura 2000 and other nationally designated protected areas), below the EU average of 26%.

Czechia's investment needs for biodiversity and ecosystems are estimated to be EUR 1.3 billion per year (in 2022 prices) for the 2021-2027 period (see Graph A9.2). The current level of financing for biodiversity and ecosystems conservation in Czechia is around EUR 1 billion per year. The investment gap (EUR 251 million per year, corresponding to 0.09% of Czechia's GDP) undermines the country's commitment to global biodiversity agreements and its long-term economic and social development.

Graph A9.2: **Investment needs and gaps in EUR million, in 2022 constant prices**



Source: European Commission, DG Environment, Environmental investment needs & gaps assessment programme, 2025 update.

Sustainable agriculture and land use

Czechia's carbon removals fall short of the level of ambition needed to meet its 2030 target for land use, land-use change and forestry (LULUCF). Carbon removals declined slowly in recent decades before decreasing sharply and turning into emissions between 2017 and 2019. To meet its 2030 LULUCF target, additional carbon removals of -0.8 million tonnes of CO_2 equivalent (CO_2eq) are needed ([180]). The latest available projections show a gap to target of 0.2 million tonnes of CO_2eq for 2030 ([181]). Therefore, additional measures are needed to reach the 2030 target.

Czechia's agriculture is still a notable source of greenhouse gas emissions and continues to have a significant impact on air, water and soils. In 2022, agriculture generated 8.4 million tonnes of CO_2eq, accounting for around 7.1% of the country's total emissions. This includes 4 million tonnes of CO_2eq from livestock.

([178])Ministerstvo životního prostředí, 2016, *Strategie ochrany biologické rozmanitosti České republiky 2016–2025*, Link.

([179])Convention on Biological Diversity Reporting Tool, Link.

([180])National LULUCF targets of the Member States in line with Regulation (EU) 2023/839.

([181])Climate Action Progress Report 2024, COM/2024/498.

The utilised agricultural area (UAA) in Czechia remained stable between 2012 and 2023 at 3.5 million hectares.

Nutrient loss from agriculture, mainly from mineral fertilisers and manure, pose a significant environmental concern and a threat to human health. This is reflected in the country's nitrogen balance of 62.9 kg of nitrogen per hectare of UAA (in 2021). According to data collected under the Nitrates Directive, 11.7% of groundwater monitoring stations in Czechia recorded average nitrate concentrations above 50 mg/l between 2016 and 2019, exceeding the healthy threshold for human consumption. Although the livestock density index was 0.47 in 2020, below the EU average of 0.75, ammonia emissions have been on a downward trend between 2018 (76.2 thousand tonnes annually) and 2022 (68.7 thousand tonnes annually). 51% of monitoring sites in Czechia reported (based on 2017-2022 data) levels of pesticides in surface waters that exceed that threshold, significantly above the European average of 29% ([182]). Czechia is transitioning to a sustainable food system by implementing policies to reduce the environmental impact of agriculture. In 2022, 4.7% of its agricultural land had landscape features such as woods and non-productive grasslands, below the EU average of 5.6%. Organic farming, which reduces the use of synthetic fertilisers and pesticides, has steadily increased in Czechia since 2005, making up 16% of agricultural land in 2022.

Under its common agricultural policy (CAP) strategic plan, Czechia aims to reach 21.3% of UAA under organic farming by 2030. This is achievable if the current growth trend in organic farming surface continues over the coming years. According to the latest aid application data under 2024 CAP strategic plan, the areas under organic farming represents 590 thousand hectares, which is 25 000 hectares more than in 2023 and reaching 16.7% of UAA. Under the result indicator R.12 – Adaptation to climate change, Czechia plans for 42% of UAA (1.5 million hectares of agricultural land) to be subject to environmental measures to improve agricultural adaptation to climate change such as whole-farm eco-schemes, grassing of arable land or new title agroforestry. Other measures such as catch crops or integrated production contribute significantly to result indicator R.21 – Protection of water quality, where 25.4% of UAA (895 thousand hectares) is covered.

([182])EEA, 2024, Pesticides in rivers, lakes and groundwater in Europe, Link.

Table A9.1: **Key indicators tracking progress on climate adaptation, resilience and environment**

Climate adaptation and preparedness:	Czechia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Drought impact on ecosystems *[area impacted by drought as % of total]*	26.46	10.19	1.74	0.03	5.86	0.27	6.77	2.76
Forest-fire burnt area (1) *[ha, annual average 2006-2023]*	88	88	88	88	88	88		
Economic losses from extreme events *[EUR million at constant 2022 prices]*	159	-	184	689	80	22	24 142	62 981
Insurance protection gap (2) *[composite score between 0 and 4]*	-	-	-	-	1.25	1.50		
Heat-related mortality (3) *[number of deaths per 100 000 inhabitants in 2013-2022]*	28	28	28	28	28			
Sub-national climate adaptation action *[% of population covered by the EU Covenant of Mayors for Climate & Energy]*	20	21	22	25	27	29	41	44

Water resilience:	Czechia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Water Exploitation Index Plus, WEI+ (4) *[total water consumption as % of renewable freshwater resources]*	4.3	3.4	2.4	2.3	3.2	-	4.5	4.5
Water consumption *[million m^3]*	388	376	348	351	356	-		
Ecological/quantitative status of water bodies (5) *[% of water bodies failing to achieve good status]*								
Surface water bodies	-	-	-	94%	-	-	-	59%
Groundwater bodies	-	-	-	6%	-	-	-	93%

Biodiversity and ecosystems:	Czechia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Conservation status of habitats (6) *[% of habitats having a good conservation status]*	19.4	-	-	-	-	-	14.7	-
Common farmland bird index *2000=100*	70.6	68.5	67.7	63.5	-	-	72.2	74.4
Protected areas *[% of protected land areas]*	-	-	-	22	22	-	-	26

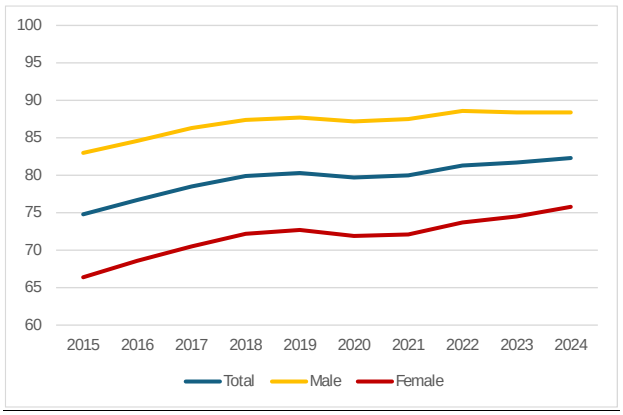
Sustainable agriculture and land use:	Czechia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Bioeconomy's added value (7) *[EUR million]*	10 188	10 690	10 707	11 458			634 378	716 124
Landscape features *[% of agricultural land covered with landscape features]*	-	-	-	-	5	-		
Food waste *[kg per capita]*	-	-	91	108	101	-		
Area under organic farming *[% of total UAA]*	14.8	15.2	15.3	15.6	16.0		7.99	-
Nitrogen balance *[kg of nitrogen per ha of UAA]*	94.7	75.6	56.9	62.9	-	-		
Nitrates in groundwater (8) *[mgNO_3/l]*	18.0	17.7	18.7	18.5	-	-		
Net greenhouse gas removals from LULUCF (9) *[Kt CO_2-eq]*	- 12	6 493	9 700	6 588	3 378	-	- 256 077	- 240 984

(1) The data show the average for the timespan 2006-2023 based on EFFIS - European Forest Fire Information System.
(2) Scale: 0 (no protection gap) – 4 (very high gap). EIOPA, 2024, Dashboard on insurance protection gap for natural catastrophes.
(3) van Daalen, K. R. et al., 2024, The 2024 Europe report of the Lancet Countdown on health and climate change: unprecedented warming demands unprecedented action, The Lancet Public Health.
(4) This indicator measures total water consumption as a percentage of the renewable freshwater resources available for a given territory and period. Values above 20% are generally considered to be a sign of water scarcity, while values equal or greater than 40% indicate situations of severe water scarcity.
(5) European Commission, 2024, 7th Implementation Report from the Commission to the Council and the European Parliament on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) (Third River Basin Management Plans and Second Flood Risk Management Plans).
(6) For this indicator, the EU average includes figures for the UK under the previous configuration, EU-28.
(7) European Commission, 2023, EU Bioeconomy Monitoring System dashboards.
(8) Nitrates can persist in groundwater for a long time and accumulate at a high level through inputs from anthropogenic sources (mainly agriculture). The EU drinking water standard sets a limit of 50 mg NO_3/L to avoid threats to human health.
(9) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2024 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 – Annex IIa.
Source: Eurostat, EEA.

Czechia continues to have one of the highest employment rates in the EU but faces persistent challenges. Labour shortages remain significant, with job vacancy rates among the highest in the EU. Despite strong overall employment figures, women encounter barriers to employment, limiting workforce participation and inclusivity. Disadvantaged groups, including Ukrainian refugees, people of Roma background and persons with disabilities, also struggle to access jobs. Job transition rates remain low and the tax system disproportionately burdens low-income and part-time workers, exacerbating economic inequality. Additional efforts to ensure reskilling and upskilling could help workers access better-paid jobs, meet the demand for new skills, and boost Czechia's competitiveness. Czechia also saw one of the steepest declines in real wages, which remain below 2019 levels despite signs of recovery.

Czechia continues to have one of the highest employment rates in the EU. In 2024, the employment rate for people aged 20-64 reached 82.3.%, significantly above the EU average of 75.8%, keeping the country on track to meeting its target of 82.2% in 2030. Czechia's labour market is also characterised by a significantly low unemployment rate, which stood at 2.6% in -2024, one of the lowest in the EU, and is projected to increase only slightly to 2.7% by 2026 ([183]).

Graph A10.1: **Employment rate by sex**



Source: Eurostat

Despite strong overall employment figures, women continue to face barriers in the labour market. At 12.6 percentage points (pps) in 2024, the gender employment gap remains one of the widest among Member States (EU: 10 pps). Furthermore, the gender pay gap was 18 pps in 2023 (EU: 12 pps). Only 7.3% of children under the age of 3 were enrolled in formal childcare in 2024, an increase of nearly 3pps from 2023 but still far below the EU average of 39.2%. This low enrolment rate significantly contributes to the gender employment gap, as it limits women's participation in the labour market. The European Structural and Investment Funds and the Recovery and Resilience Facility are helping create affordable and accessible childcare, but challenges persist in ensuring sufficient capacity and quality in all regions. Further efforts are needed to strengthen data collection, scale up national funding for quality assurance, and improve cooperation and coordination across early childhood education and care services for children ([184]).

Reducing disincentives to women's employment is key to addressing labour shortages and promoting a more inclusive labour market. In 2023, Czechia introduced a 5% tax reduction in social security contributions for part-time employment of target vulnerable groups, including parents and informal carers. In 2024, a tax reform restricting the use of the dependent spouse tax credit to households where one spouse is caring for a child under the age of three was introduced to reduce financial disincentives for second earners. In 2024, the percentage of part-time contracts increased again by 0.8 pp to 7.6% (EU average 17.2%) and the gender employment gap declined by 1.3 percentage point (pp.) in 2024. Nevertheless, more can also be done in the areas of taxation, parental leave (which extends to up to three years), and flexible work arrangements to overcome existing disincentives to women's employment. An estimated 200 000-300 000 people, primarily women, provide unpaid informal care to people in need, and half of them are unable to take up full-time employment because of this. Addressing these systemic challenges is crucial for reducing labour shortages and ensuring that the labour market is more inclusive.

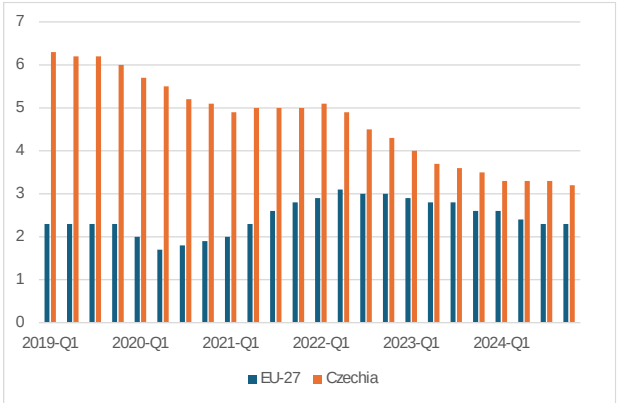
([183]) Economic forecast for Czechia - European Commission

([184]) Consolidated Recommendation Report For the 'Developing a Comprehensive Framework for the Monitoring and Evaluation of Early Childhood Education and Care in the Czech Republic'.

Disadvantaged groups, including Ukrainian refugees, people of Roma background and persons with disabilities, continue to face challenges in accessing employment. In 2024, 80% of economically active Ukrainian refugees were in employment but 50% reported that their work did not correspond to their qualification. Furthermore, 47% struggle with financial stress, 37% with unstable employment and 33% with a lack of legal or social protection.([185]) Roma citizens remain particularly vulnerable, and only an estimated 45% of working-age Roma are employed, whereas the percentage of people in employment in the general population is 82.3% in 2024. The same is true for other age groups and whereas the share of the general population aged 15 to 29 that is not in employment, education or training in 2024 is 8.6% (EU: 11%), the rate among young Roma people (16-24) was 47% in 2021([186]). The disability employment gap was 21.7. pps in 2024 (EU: 24 pps). In December 2024, Czechia set an employment goal of 45% for persons with disabilities. To achieve this target, in 2024 Czechia approved measures to support social enterprises, cooperatives and non-profits employing persons with disabilities by providing access to funding and improving regulatory conditions.

Czechia faces high job vacancy rates as companies struggle to find workers with the right skills. Over 80% of companies reported difficulties finding workers with the right skills (vs EU: 77%) and reported labour shortages were particularly high in the construction sector([187]). In 2023, the job vacancy rate exceeded 3.5% despite a slight decline from previous years. The country had one of the highest vacancy rates in the EU in manufacturing (3.4% vs EU: 1.8%), construction, (6.5% vs 3.1%) and transportation and storage (4.5% vs 2.2%). By Q4-2024, the job vacancy rate stood at 3.2% (EU: 2.3%), with industry (3.0% vs EU: 1.6%), trade and transport (4.1% vs 2.1%) and services (4.7% vs 2.5%) all exceeding EU averages. By contrast, the vacancy rates in information and communication (1.6% vs EU: 2.9%) and finance and insurance (0.8% vs 1.7%) were below the EU average ([188]). In 2024, labour shortages were reported for several occupations requiring specific skills related to the green transition, including refuse sorters, forestry and related workers, and mixed crop and livestock farm labourers (see Annex 12). Czechia's potential to help the EU reach its Digital Decade target for ICT specialists remains untapped with only limited progress shown. ICT specialists accounted for only 4.5% of total employment in 2024, below the EU average of 5.0%, marking an increase from the previous year (4.3%). Women remain underrepresented, comprising only 13.0% of ICT specialists ([189]). Legal migration currently plays a relatively small factor in addressing labour shortages, with only about 300 000 foreign-born workers in 2023, which represents about 6% (vs 14%) of all employed people. The European Social Fund Plus (ESF+) is investing EUR 293 million to improve access to employment for jobseekers with a particular focus on disadvantaged groups in the labour market and the recovery and resilience plan is investing EUR 275 million for upskilling and reskilling.

Graph A10.2: **Quarterly job vacancy rates, seasonally adjusted**



Source: Eurostat

The labour market exhibits limited job transition rates. The quarterly probability of job changes or transitions to unemployment is approximately 1.5% (EU: 3.1%). Some of the reasons for this are low levels of unemployment support, which encourages quick job choices, the fact that skills development offers limited job or wage benefits and limited regional mobility. This

([185])The Voice of Ukrainians: Integration of Ukrainian Refugees: Labour Market, Housing, Czech Language Proficiency, and Children's Education

([186])FRA report 2021 new data available soon

([187])Eurofound (2024), *Company practices to tackle labour shortages*, Publications Office of the European Union, Luxembourg.

([188])Home Page | Euro indicators dashboard.

reduces efficiency when allocating human resources, allowing low-productivity sectors to persist due to low wages, while emerging, high-productivity industries struggle to attract skilled labour. The 2025 amendment to the Czech Higher Education Act simplifies academic recognition, but regulated professions still require lengthy adaptation periods. This can in some instances restrict competition and raise barriers to entry into certain professions, without necessarily a corresponding increase in expertise or quality ([190]).

Real wages rebounded in 2024 after significant losses in 2022 and 2023. Nominal wages grew by 5.9% in 2024 and are projected to grow by 6.5% in 2025. Real wages rose by 3.4% in 2024 and are projected to increase by 4.0% in 2025 ([191]), driven by continued growth in nominal wages, combined with rapid disinflation, from 12.0% in 2023 to 2.7% in 2024. Despite this recovery, real wages remain below 2019 levels by more than 5%, one of the steepest losses in the EU compared to pre-pandemic levels. The statutory minimum wage increased by more than 28% between Q1-2022 and Q1-2025 in nominal terms and only by about 2% in real terms over the same period due to high inflation. The transposition of Directive (EU) 2022/2041 on adequate minimum wages contributed to the increase in the minimum wage. At the same time, the transposition removed guaranteed wages for workers in the private sector, raising concern among trade unions. Concerns have grown about deteriorating cost competitiveness for Czechia. Further efforts to increase productivity growth represent a sustainable way towards further real wage growth which could help to address remaining social challenges.

Czechia's labour taxation system disproportionately burdens low-income workers and part-time employees, contributing to economic inequality and limiting workforce participation. The tax wedge on labour is relatively high for workers on low wages. Indeed, the Czech personal income tax system tends to be flat, with tax wedges being only marginally lower for those earning less. Relatively high tax burdens on low-income earners increase distortions in both labour demand and supply and can complicate the hiring of low-skilled workers. A recent study suggests that reducing labour taxation including social security contributions for low-income workers could lift up to 29 000 people above the poverty line and incentivise up to 50 000 employees to transition from informal or precarious work arrangements to standard employment, addressing inefficiencies in the labour market ([192]).

The share of people working in emission intensive industries remains significant and employment in environmental sectors limited. Between 2011 and 2023, the emissions intensity of the workforce declined from 23.1 tonnes of greenhouse gases to 16.2 tonnes of greenhouse gases per worker, but it remains one of the highest among Member States (EU: 12.3 tonnes per worker). Furthermore, in 2024, energy intensive industries employed 7.1% of the workforce, one of the highest rates in the EU, whereas the environmental goods and services sector employed in 2022 only 2.9% of people employed (EU: 3.3%).

Social conditions in Czechia exhibit a relatively low overall risk of poverty and social exclusion despite increasing challenges, particularly among children and Roma communities. Energy poverty remains comparatively low, but the country grapples with significant issues in ensuring housing affordability. Moreover, the Czech long-term care system remains heavily focused on residential care. The high level of indebtedness of many households remains a key social challenge and, for many people, continues to be an obstacle to accessing the job market. Addressing these challenges will contribute to achieving inclusive growth and enhancing the country's competitiveness.

The risk of social exclusion remains low in Czechia, despite a slight increase. In 2024, the rate of people at risk of poverty or social exclusion (AROPE) remained well below the EU average (11.3% vs 21%). Poverty and social exclusion tend to be concentrated in specific regions, with Ústecký, Moravskoslezský and Karlovarský kraj being the most affected. Czechia's poverty reduction target is to reduce the number of people at risk of poverty or social exclusion by 120 000

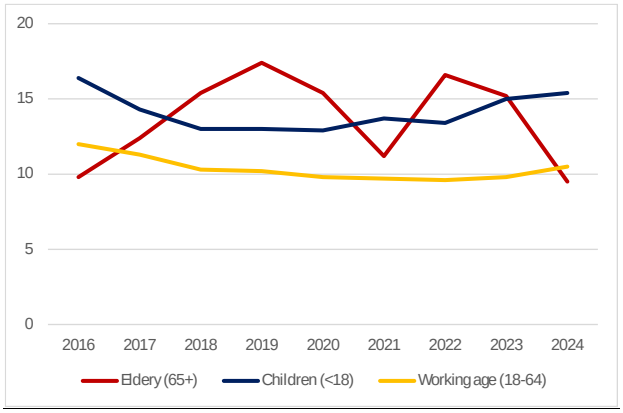
([190])navrhy-NERV.pdf.

([191])Based on the European Commission Autumn 2024 economic forecast.

([192])Navrhujeme chytřejší danění zaměstnanců. Pomůže pracovnímu trhu, rozvoji chudších regionů i omezení chudoby.

by 2030, with a specific goal of reducing the number of children in this category by 50 000. While the overall population at risk of poverty or social exclusion decreased by 17 000 between 2019 and 2023, the number of children at risk rose sharply by 55 000, highlighting the growing challenge to meet the national target. In order to mitigate the impact of poverty on children, Czechia is implementing the European Child Guarantee (ECG) as part of its 2022 action plan. The European Social Fund Plus (ESF+) is investing EUR 434 million over the 2021-2027 period to foster active inclusion and equal opportunities.

Graph A11.1: **Persons at risk of poverty or social exclusion by age**



Source: Eurostat

House prices have increased steadily, more than doubling over the last decade. Having grown by 19.7% and 16.9% in 2021 and 2022, house prices decreased by 1.7% in 2023, adjusting to the higher interest rate environment. The growth in house prices resumed in 2024, with recent data signalling an increase of 5.9% in Q3-2024, year-on-year. As of end-2024, house prices were estimated to be overvalued by around 20%. The increase in mortgage rates had a moderating effect on mortgage credit, and house transactions stabilised at a low level in 2023. Building permits decreased by 7.1% and 16.3% in 2022 and 2023, which is expected to limit new housing supply going forward.

Overall housing affordability has deteriorated over the past decade. The house price-to-income ratio has increased steadily over the past 10 years with a mild decrease in 2023. At the end of 2023, the standardised house price-to-income ratio stood 15% above its long-term average, reflecting a deterioration in housing affordability with possible structural implications for the domestic economy. Borrowing capacity of households that considers both household incomes and interest rates grew much less than house prices. Considering the cost of mortgage funding, the borrowing capacity of households worsened significantly over the past decade as well, since an average household needs a significantly higher share of its annual income for mortgage payments. While the rental market is rather small, the ratio of new rents to incomes increased over the last decade especially in the city centres. The rental affordability deteriorated as well and the ratio of new rents to incomes is very high, especially in the cities, which has an adverse impact on labour mobility. The ratio of dwellings per capita (housing stock) has increased by 4% since 2015, as the increase in the number of dwellings outpaced population growth (+8% vs. +4% since 2015). However, this ratio remains relatively low in EU comparison. The ratio of house completions per capita has increased over the past years and stands close to the EU average. The public rental housing sector is one of the lowest in the EU, while the construction of affordable rental housing has been very low in the last decades. The problem is exacerbated by structural factors. Residential building permits have decreased over the past years, which could indicate limited new housing supply looking ahead. Stringent urban planning and inefficient permitting procedures are generally believed to be the main reason for insufficient new housing supply, which is also reflected in a very low and persistently declining housing transactions. Other issues include planning permission processes, insufficient municipal incentives to build affordable housing, a poorly targeted welfare system and suboptimal tax incentives (low property taxes, mortgage deductibles, taxation of rent). This has led to limited housing options, rising energy costs and an increasing burden on lower-income households. The housing cost overburden rate in Czechia increased by more than 2 percentage points to 9.2% between 2022 and 2024, bringing it above the EU average of 8.2%. In 2024, the percentage of the population living in an overcrowded household in Czechia was 16.6%, very close to the EU average of 16.9%. There are over 100,000([193]) homeless people in Czechia. and over 200 000 long-term unoccupied dwellings, 7.5% of all

([193]) OECD Country Note: Data on homelessness in Czechia

apartments are unoccupied([194]). While new legislation on affordable housing and construction projects is being negotiated, it is unclear how much impact this will have for children and marginalised groups, such as Roma. In January 2025, the European Committee of Social Rights (ECSR) found that Czechia violated Article 16 of the 1961 European Social Charter by failing to ensure adequate safeguards for vulnerable groups, particularly Roma families, as regards access to housing and eviction protections. The ECSR highlighted issues such as insufficient social housing, ineffective legal remedies, and obstacles preventing low-income and disadvantaged groups from accessing housing benefits. Additionally, it ruled that the State's failure to provide adequate protections against discriminatory housing practices disproportionately affects Roma families, further violating Article 16 in conjunction with the Charter's non-discrimination clause.

Despite some progress in terms of total numbers, over indebtedness and debt enforcement continues to push many into poverty and undeclared work in Czechia. The number of people in debt enforcement proceedings has decreased from 646 000 to 615 000 between 2023 and 2024, reflecting some progress in addressing indebtedness. Additionally, 95 965 individuals are currently undergoing debt relief. However, the absolute numbers remain high and factors such as high repayments, property seizure risks, bureaucratic hurdles, and the challenge of surviving on the minimum living allowance after deductions deters many debtors from entering debt relief. Approximately 400 000 people in Czechia are trapped in multiple debt enforcement proceedings with no viable path to resolution. Key measures to improve the situation include making debt relief more accessible, more tailored and less burdensome coupled with increased efforts to legalise incomes, and improved State regulation against profiteering from debt enforcement.

The Roma population faces severe and worsening risks of social exclusion. The AROPE rate for Roma increased from 58% in 2016 to 77% in 2021. For Roma children, the situation is even worse, with 85% at risk in 2021, up from 65% in 2016 ([195]). These figures underline the importance of addressing systemic inequality and social exclusion within Roma communities. The Roma population in Czechia is estimated at 250 000 ([196]) but the lack of specific data collection for this population makes targeted measures difficult. Introducing ethnic data collection would allow for targeted policy measures to support this most vulnerable group and would make it easier to assess and monitor the situation, including in the context of ongoing policy reforms supporting inclusive education. In April 2024, the Czech government adopted a non-binding definition of 'antigypsyism,' or anti-Roma attitudes recognising both individual and institutional discrimination against Roma people but without legal enforcement measures. Compliance with the Race Equality Directive is essential to ensure equal treatment and prevent discrimination in all aspects of society, including education. Effective implementation of the directive helps address structural inequalities and promotes inclusive policies that safeguard the rights of all individuals.

The social integration of Ukrainians in Czechia remains uneven. While 80% of economically active individuals are employed, many work below their qualifications and only 20% of households have incomes above the Czech median. While most children attend Czech schools and over two-thirds demonstrate good Czech language skills, adult social inclusion remains a challenge. As more refugees plan to stay long-term, improving language teaching, job opportunities and social inclusion remains key ([197]).

The Czech long-term care system is characterised by a high emphasis on residential care. Public long-term care expenditure on residential care in 2022 was 60.2% (EU average: 46.2%) but the percentage of home care spending within long-term care was only 8.3% (EU average: 28.8%). The deinstitutionalisation process in Czechia faces challenges due to a slow legislative implementation, limited repurposing of existing

([194]) Ministry for Regional Development: Structure of Vacant Dwellings in the Czech Republic and Tools for Their Activation Used in OECD Countries

([195]) Roma in 10 European countries. Main results – Roma Survey 2021.

([196]) Government of the Czech Republic: Roma national minority

([197]) The Voice of Ukrainians: Integration of Ukrainian Refugees: Labour Market, Housing, Czech Language Proficiency, and Children's Education

facilities and insufficient data collection. For community-based services, there is a deficit of between 15 000 to 30 000 care places (out of the current 75 000). High reliance on residential services, a declining capacity of community-based services (from 120 000 in 2015 to 104 000 in 2023)([198]) which disincentivises investments by private providers, and low salaries are further challenges in the Czech care sector ([199])([200]). The recovery and resilience plan (RRP) and the ESF+ are investing EUR 365 and 197 million, respectively, to improve equal and timely access to quality, sustainable and affordable services over the 2021-2027 period but private investment as well as sufficient national resources are essential for their long-term sustainability. A new long-term care law, coming into force in March 2025 as part of the RRP, aims to integrate healthcare and social care, set quality standards, promote home-based and community-based care, and ensure adequate funding.

A reform of the social benefits system, consolidating four means-tested benefits into one single payment, will come into force in 2025. In Czechia, 93.5% of people aged 18-64 that are at risk of poverty and living in a (quasi-)jobless household received benefits in 2023 (EU: 83.5%). Nevertheless, the current benefits system is complex and has inefficiencies in certain areas, with housing allowances that are not aligned to local rents and small income increases leading to sharp benefit cuts. The reform aims to simplify processes and boost self-sufficiency through work incentives but it is important to monitor the impacts of the reform on the most vulnerable people.

Energy poverty remains low in Czechia. The percentage of the population unable to keep their homes adequately warm is significantly lower than the EU average (4.9% in 2024 vs 9.2%), although this figure is higher than in 2022 by 2 pps. Structural issues, such as leaks, damp or rot, affect a limited proportion of the population (8.5% vs 15.5% for the EU in 2023). To address energy poverty, Czechia has launched national energy efficiency programmes. However, the country's current policies primarily focus on social and consumer protection measures, with fewer targeted initiatives addressing the structural causes of energy poverty.

([198])Statistical yearbook of the Ministry of Social Affairs..

([199])Problémy sociálně-zdravotního pomezí v terénních službách – kde brát inspiraci? (Díl 1).Initiative for Effective Healthcare: Problems at the Social-Health Interface in Field Services – Where to Find Inspiration?

([200])a4-financovani-terenni-sluzby-2023-final.pdf.

Czechia's potential to transform into a knowledge economy is limited by growing inequalities in basic skills, low tertiary educational attainment, including in science, technology, engineering and mathematics (STEM) fields, and low levels of adult learning. The education and training system needs to better equip young people and adults with relevant skills to tackle rapidly changing labour market needs linked to the green and digital transitions and the increasing demand for highly skilled professionals in technical fields and natural sciences.

Persistently low participation in early childhood education and care (ECEC) negatively impacts skills development and perpetuates social inequalities early in life. In 2023, 85.3% of children aged three to the start of compulsory primary education participated in ECEC, which is one of the lowest rates in the EU (average: 94.6%) and well below the EU target of 96%. Despite their legal entitlement to a place in ECEC, attendance is particularly low among three-year-olds (74.0%, EU: 89.0% in 2022), partly due to insufficient kindergarten capacity as well as tax and benefit disincentives. Only a small percentage of children younger than three participate in formal childcare (7.3%, EU: 39.2% in 2024). Low-income families face financial obstacles in accessing quality ECEC. Many kindergartens do not have the capacity to admit younger children, and the alternative children's groups have higher fees. Czechia has committed to increasing ECEC capacity, and new facilities are financed via the Recovery and Resilience Facility (RRF). However, the ECEC system remains fragmented, hindering effective capacity forecasting and equal foundational learning opportunities for all children. With support from the Technical Support Instrument (TSI), Czechia aims to improve data collection to identify supply and demand and create a common quality and monitoring framework for all types of ECEC.

Deteriorating performance in basic skills hampers the future workforce's innovation potential and employability. While Czech students perform above the EU average in mathematics, reading and science, these historically good results are on the decline. Although reading performance has remained stable over the years, trends in mathematics and science are more worrying. According to the results of the 2022 OECD Programme for International Student Assessment (PISA), one out of four 15-year-old students (25.5%) does not reach the basic proficiency level in mathematics, and this proportion has grown over the past decades. In reading and science, the shares of underachievers are 21.3% and 18.8% respectively, below the EU average, but over the EU level target of 15%. The 2023 TIMSS (Trends in International Mathematics and Science Study) results among the younger generations (fourth and eighth graders) also show an increase of the share of pupils performing at the lowest level. In September 2025, a pilot implementation of the revised curricula will start in Czech schools. The reform is expected to strengthen, among other things, the development of STEM concepts and critical thinking in education, and it will introduce foreign language from the first grade. To implement curricular innovation effectively, teachers and school leaders could benefit from comprehensive support to prevent struggling students from falling further behind.

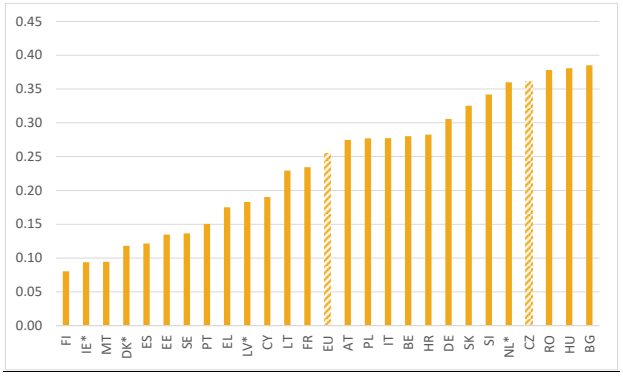
Czechia continues efforts to make the teaching profession more attractive, but there are still shortages in critical subjects. As part of the comprehensive reform of initial teacher training, the practical component of teacher education has been strengthened. In 2024, the Ministry of Education published a new teacher competence framework that has become part of the accreditation criteria for teacher education programmes. As a result of a sectoral agreement, the government aims to increase teacher base salaries by 7% in 2025. However, salary progression is slow, especially for less experienced teachers. 13.8% of teachers in primary education intend to leave the profession ([201]). Among younger teachers, the main reasons for this are related to salaries and equipment shortages ([202]). Teacher shortages in STEM subjects – mathematics, physics, chemistry and computer science – remain critical in multiple regions. In 2025, Czechia plans to start financing the employment of school psychologists, special education professionals and social pedagogues from the state budget, which is a major move towards the institutionalisation of these positions

([201]) Straková, J. and Simonová, J. (2024), 'Why do teachers leave schools? Evidence from lower secondary schools in the Czech Republic', International Journal of Educational Management, Vol. 38 No 5, pp. 1 444-1 458.

([202]) Ibid.

to improve the inclusiveness of the education system.

Graph A12.1: **Isolation of high-achieving students (top 25%) in mathematics from all students (PISA 2022)**



Source: OECD PISA 2022

Inequalities in education are widening, contributing to skills gaps in the workforce. While the proportion of young people leaving education without obtaining an upper secondary certificate is consistently low across the country (5.4%) and below the EU target of 9%, it remains high (11.6%) in regions affected by poverty and the housing crisis (Karlovy Vary and Ústí nad Labem). Close to half of disadvantaged students (48.5%) underachieved in mathematics in PISA 2022, which is an increase compared to 2018 (38.5%). The difference in mathematics performance linked to differences in social and economic status is the second highest in the EU (51 points vs the EU average of 40.6 points), pointing to deeply ingrained inequalities that the school system fails to offset. There is a great difference between school types and pathways. Almost 60% of students enrolled in vocational fields not leading to a high school diploma do not reach a basic level of mathematical literacy ([203]). Moreover, only half of those students demonstrate a basic level of creative thinking (as opposed to almost all students in general secondary education). At the same time, students in elite multi-year grammar schools largely outperform their peers in basic schools: over half of eighth graders achieved high levels of mathematical knowledge according to the 2023 TIMSS. This highlights significant differences in skills and innovative potential across secondary school pathways, with negative implications for the job prospects of vocational and technical graduates.

([203]) Czech School Inspectorate, 2023, PISA 2022 National report.

The segregation of Roma pupils at all levels of education persists despite legislative and administrative changes. Czechia has formally abolished 'practical' schools, which favoured an overrepresentation of Roma pupils. However, it continues to allow for ethnic segregation through the disproportionate and often unjustified enrolment of Roma students in classes that teach a reduced version of the curriculum, which is intended for students with mental disabilities ([204]). In 2024, the Commission sent an additional letter of formal notice to Czechia for failing to comply with the Race Equality Directive. With support from the RRF, Czechia is creating a support programme for vulnerable schools and is working on a funding index that accounts for disadvantaged pupils. Collecting disaggregated data on Roma pupils will be crucial to evaluating the impact of measures on desegregation.

A comprehensive reform of secondary education aims to better equip students with in-demand skills and to reduce early tracking. Czechia tracks students early compared to other countries, and permeability between educational pathways is low. In addition, interest among students in general upper secondary tracks leading to higher education has grown over the past decades, but the number of schools offering such programmes has not kept track([205]). In 2022, 32% of students in upper secondary education were enrolled in general education, below the EU average of 51%. Announced in 2024, a wide-sweeping reform of secondary education, will introduce a new, experimental educational pathway (lyceum) combining general secondary education with later specialisation in professional subjects. One of the integrated study areas of the new pathway is applied STEM education.

Czechia has one of the highest vocational enrolment rates in the EU, but work-based experience is among the lowest. A high proportion of students in medium-level education are enrolled in vocational education and training (VET) programmes (70.7% vs 52.4% in the EU in 2023). In 2024, only 13.4% of recent vocational graduates in Czechia had work-based learning experience, far below the EU average of 65.3%. Nevertheless, the employment rate for recent VET

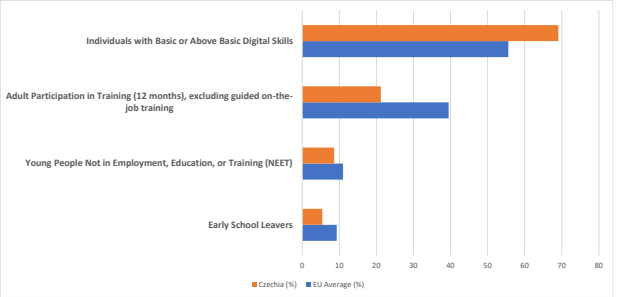
([204]) PAQ and STEM, 2023, Research report.

([205]) OECD (2025), *OECD Economic Surveys: Czechia 2025*, OECD Publishing, Paris

graduates was high at 88.3% (EU 80.0%) for the same year. Recent VET reforms aim to improve the quality and labour market relevance of this field. The strategic measures for improving VET focus on making it a more attractive career choice by strengthening STEM education, polytechnic training and career counselling, starting from primary education. Whereas many enter VET after primary school, with technical fields, such as technology, manufacturing and construction, being the most popular choices (39%), fields like ICT only attract 6.4% of students ([206]). A key objective is to ensure that at least 60% of VET graduates gain work-based learning experience by 2025, boosting their employability and career readiness. Efforts are being made to modernise educational programmes by incorporating labour market data through initiatives such as 'Kompetence 4.0,' which focuses on aligning training with emerging industry requirements, including digital and green skills. Additionally, legislative support and financial incentives, such as tax deductions for companies offering practical training, are being introduced to encourage stronger collaboration between employers and educational institutions, ensuring students are better equipped for evolving job market demands.

Persistently low tertiary attainment and weak student support limit the supply of highly skilled professionals. By 2026, a 16% increase is predicted in the overall demand for tertiary-educated workers and a 26% increase in technical fields, such as civil engineering, ICT and natural sciences ([207]). In 2024, only 33.5% of Czechs aged 25-34 had a tertiary education degree (EU: 44.2%), with particularly low rates among men (26.1% vs 41.3% for women; the average difference in the EU is 11.2 pps). In response to the growing demand for high-skilled workers in the healthcare and education sectors, the government provides targeted funding for tertiary institutions in these fields, but a long-term funding reform to support a more general expansion of higher education, aligned with industry needs, is yet to be developed.

Graph A12.2: **Key skills indicators**



Source: Eurostat

Financial barriers contribute to high drop-out rates. About 70% of students work during term time, one of the highest rates in the EU, with two thirds working to cover living cost ([208]). Affordable housing is a major challenge for university students. Just 2% of their income comes from government grants, compared to a 12% average according to the Eurostudent survey. Students from disadvantaged backgrounds therefore often struggle to access and complete higher education. 23.5% of first-year students drop out annually at the programme level (2024), and 13.4% leave higher education permanently ([209]). Study success rates are higher among general education graduates than among VET graduates ([210]). A comprehensive reform of needs-based grants would be beneficial to diversify the student body and help students succeed.

Policy efforts to boost the number of STEM graduates are limited despite growing skill shortages in these fields. The proportion of young STEM graduates (aged 20-29) per 1 000 of the population is below the EU average of 23 at 15.8. The share of students enrolled in STEM fields at tertiary level is slightly below the EU average (25% vs 27.1%) and has declined since 2017. This is concerning, especially given the generally low tertiary education attainment rate. In 2023, 42.0% of pupils enrolled in medium-level vocational education and training (VET) in Czechia were in STEM fields, compared to 36.3% EU-wide. Under its recovery and resilience plan, Czechia will launch new accredited study programmes in high-demand

([206]) Ministry of Education, Youth and Sport, 2024, Strategy for vocational education.

([207]) OECD (2025), *OECD Economic Surveys: Czechia 2025*, OECD Publishing, Paris

([208]) Hauschildt, Kristina (Ed.), Christoph Gwosć, Hendrik Schirmer, Sylvia Mandl, Cordelia Menz, 2024. *Social and Economic Conditions of Student Life in Europe*, EUROSTUDENT 8 Synopsis of Indicators 2021-2024.

([209]) Data from Ministry of Education, 2025

([210]) OECD (2025), *OECD Economic Surveys: Czechia 2025*, OECD Publishing, Paris

and fast-growing fields (such as applied informatics, information and network security, quantum informatics and AI) as well as new courses and academic and lifelong learning programmes relevant to the green transition.

Skills shortages pose challenges to Czechia's competitiveness. More than 80% of companies and 90% of small and medium-sized enterprises report difficulties finding workers with the right skills ([211]). In 2024, labour shortages were reported in several occupations requiring specific skills needed for the green transition, including electrical engineers, electricians, civil engineers, and forestry and agricultural workers ([212]). Moreover, the ability of workers to contribute to the green transition varies significantly. While 54% of respondents feel they have the skills to contribute to the green transition, 37% do not, highlighting substantial potential for upskilling to equip more people for a sustainable and digital economy ([213]). Czechia has untapped potential to boost the EU's Digital Decade ICT specialist target but lags with limited progress, as ICT specialists represent 4.5% of total employment in 2024 - below the EU's 5.0% average. Women make up just 13.0% of ICT specialists in Czechia - one of the lowest shares in the EU. In 2021, 77.0% of businesses struggled to fill ICT vacancies (vs EU: 62.8%) ([214]). Reducing these shortages through targeted skills development, vocational training and workforce mobility measures is essential. Moreover, aligning policies across ministries to equip the workforce with skills for fair twin transitions poses a challenge.

Czechia performs well in digital skills, but some population groups still require further training. In 2023, 69.1% of the population had at least a basic level of digital skills (EU 55.6%). The share is particularly high among young people (16-19) at 92.3%. Data from the International Computer and Information Literacy Study (ICILS) corroborates strong digital skills among the younger generations, as Czech eighth graders ranked the highest among participating EU countries. However, 28% of students did not reach the baseline proficiency level (EU: 43%). The gap in digital skills between students with lower and higher parental education is smaller than the EU average, indicating that Czechia has been successful in narrowing this gap through targeted support for vulnerable pupils, including with RRF support. The differences in digital skills among adults are greater, with 42.1% of older adults (55-74) and 58.6% of adults with lower levels of education reporting at least a basic level of digital skills, both falling behind the general population.

Adult participation in lifelong learning remains low, limiting the development of skills for the green and digital transitions. In 2022, only 21.2% of adults aged 25-64 participated in formal or non-formal learning in the previous 12 months, compared to the EU average of 39.5%. This is 23.8 pps short of the national 2030 target of 45%. According to the analysis of the 2022 Adult Education Survey by the Czech Statistical Office, formal education is the least common type of adult learning, with only an 8% participation rate (EU 12%) ([215]). Non-formal learning is more common, with 40% of adults aged 18-69 participating in at least one activity, slightly under the EU average of 42%. Most non-formal learning is work-related, driven by employer or legal requirements (57%), followed by efforts to improve job performance (51%) and personal interest in acquiring new skills or knowledge (18%). In Czechia, 16% of adults score at the lowest levels in literacy, numeracy and problem-solving: 25% struggle with basic reading, 21% face difficulties with multi-step arithmetic problems and 29% struggle with complex problem-solving. Only a small share excels in these areas ([216]). The Ministry of Labour and Social Affairs is piloting individual learning accounts through the 'Database of Re-training and Further Training Courses'. After the pilot, the database will be managed by the Labour Office, ensuring long-term support for reskilling initiatives and signalling Czechia's commitment to lifelong learning and workforce development. More effective and widespread campaigns seem necessary to increase engagement with individual learning accounts and adult learning more generally.

([211]) Eurofound (2024), Company practices to tackle labour shortages, Publications Office of the European Union, Luxembourg.

([212]) European Labour Authority, *EURES Report on labour shortages and surpluses 2024*, 2025.

([213]) https://data.europa.eu/data/datasets/s2672_97_4_sp527_eng?locale=en.

([214]) ICT specialists - statistics on hard-to-fill vacancies in enterprises - Statistics Explained.

([215]) Education and Training Monitor 2024.

([216]) Education GPS - Czechia - Adult skills (Survey of Adult Skills, PIAAC, 2023).

Table A13.1:**Social Scoreboard for Czechia**

Equal opportunities and access to the labour market	Adult participation in learning (during the last 12 months, excl. guided on the job training, % of the population aged 25-64, 2022)	21.2
	Early leavers from education and training (% of the population aged 18-24, 2024)	5.4
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	69.1
	Young people not in employment, education or training (% of the population aged 15-29, 2024)	8.6
	Gender employment gap (percentage points, population aged 20-64, 2024)	12.6
	Income quintile ratio (S80/S20, 2024)	3.32
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2024)	82.3
	Unemployment rate (% of the active population aged 15-74, 2024)	2.6
	Long term unemployment (% of the active population aged 15-74, 2024)	0.8
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2023)	121.7
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2024)	11.3
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2024)	15.4
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2024)	40.6
	Disability employment gap (percentage points, population aged 20-64, 2024)	21.7
	Housing cost overburden (% of the total population, 2024)	9.2
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2024)	7.3
	Self-reported unmet need for medical care (% of the population aged 16+, 2024)	0.5

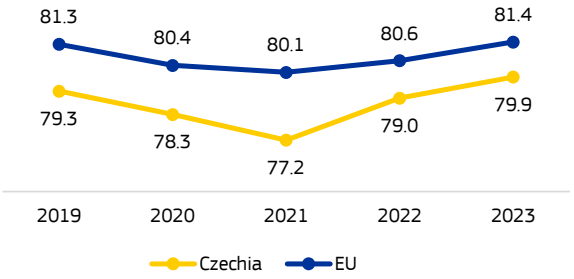
Critical situation | To watch | Weak but improving | Good but to monitor | On average | Better than average | Best performers

(1) Update of 5 May 2025. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2025 for details on the methodology (https://employment-social-affairs.ec.europa.eu/joint-employment-report-2025-0).

Source: Eurostat

The performance of the Czech health system leaves room for improvement, notably in light of Czechia's low life expectancy at birth linked to high levels of treatable and preventable mortality. These issues are being addressed by the ongoing reforms to strengthen primary healthcare, make health services more integrated, and digitalise the health system with the support of the Recovery and Resilience Facility and cohesion funds.

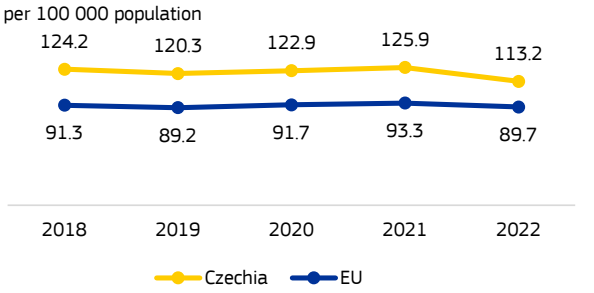
Graph A14.1: **Life expectancy at birth, years**



Source: Eurostat (demo_mlexpec)

Life expectancy at birth in Czechia remains below the EU average but has rebounded above its pre-COVID-19 level. In 2023, life expectancy at birth stood at 79.9 years, 1.5 years below the EU average. There is a clear gender gap, with women living 6 years longer than men. However, women only live 1.2 years more than men in good health. In 2022, the leading causes of death were circulatory diseases ('cardiovascular diseases'), followed by cancer and respiratory diseases. Compared to other EU countries, Czechia has room to improve in preventable and treatable mortality, which is also reflected in its relatively high cancer mortality rate (258 per 100 000 population in 2022 vs an EU average of 235). Lung cancer remains the most frequent cause of death by cancer, followed by colorectal and pancreatic cancer. Czechia also has among the highest absenteeism rates in the EU ([217]). Furthermore, 51% of Czechs are unsatisfied with waiting times and 39% with pharmaceutical shortages ([218]). Czechia participates in EU4Health-funded joint actions aimed at cancer and other non-communicable diseases prevention (including cardiovascular, diabetes and mental health), health workforce planning, clinical trials, medicine shortages, anti-microbial resistance, the European Health Data Space and European Reference Networks for rare diseases. In February 2025, the Ministry of Health introduced a new National Cardiovascular Plan for 2025–2035 to strengthen prevention ([219]). A new screening for abdominal aortic aneurysms in men aged 65–67 ([220]) and the "Be Fit 24" program for overweight children aged 6–11 ([221]) have been launched, fully covered by the health insurance funds. The plan also includes new guidelines supporting the effectiveness of the general practitioners' preventive examinations.

Graph A14.2: **Treatable mortality**



Age-standardised death rate **(mortality that could be avoided through optimal quality healthcare)**
Source: Eurostat (hlth_cd_apr)

Spending on health in Czechia, including on capital formation in the health system, is low. In 2022, health spending per inhabitant was far below the EU average with the largest shares going to outpatient and inpatient care (around 33% and 30% of total health expenditure respectively). The share of healthcare expenditure covered by public funds stood at around 85% of overall health spending, above the EU average of 81.3%. Moreover, Czechia has a relatively high number of hospital beds (565 per 100 000 population in 2022, above the EU average of 444). Around 52% of all out-of-pocket payments are for

([217]) https://ec.europa.eu/eurostat/databrowser/view/lfsi_abt_q__custom_15509084/default/table?lang=en

([218]) https://silapacientu.cz/wp-content/uploads/2024/11/NAPO-KZP-VSE-Studie_2024.pdf

([219]) https://mzd.gov.cz/tiskove-centrum-mz/ministerstvo-zdravotnictvi-predstavilo-novy-narodni-kardiovaskularni-plan-pro-obdobi-2025-2035-za-cil-ma-posilit-prevenci-a-snizit-podil-cechu-s-nemocemi-srdce-a-cev

([220]) https://mzd.gov.cz/tiskove-centrum-mz/cesko-spousti-pilotni-program-casneho-zachytu-tikajici-bomby-v-tele-screening-na-casny-zachyt-vydute-brisni-aorty

([221]) https://mzd.gov.cz/tiskove-centrum-mz/bud-fit-24-novy-program-pomaha-detem-s-nadvahou-ke-zdravejsimu-zivotnimu-stylu

Table A14.1:**Key health indicators**

	2019	2020	2021	2022	2023	EU average* (latest year)
Cancer mortality per 100 000 population	272.4	268.0	257.0	258.4	n.a.	234.7 (2022)
Mortality due to circulatory diseases per 100 000 population	529.6	557.8	525.6	505.5	n.a.	336.4 (2022)
Current expenditure on health, purchasing power standards, per capita	2 323	2 666	3 021	2 908	n.a.	3 684.6 (2022)
Public share of health expenditure, % of current health expenditure	84.9	88.2	86.8	85.0	85.0	81.3 (2022)
Spending on prevention, % of current health expenditure	3.2	3.9	8.4	5.2	n.a.	5.5 (2022)
Available hospital beds per 100 000 population**	570	572	575	566	n.a.	444 (2022)
Doctors per 1 000 population*	4.1	4.1	4.3	4.3	n.a.	4.2 (2022)*
Nurses per 1 000 population*	8.1	8.2	8.3	8.3	n.a.	7.6 (2022)*
Mortality at working age (20-64 years), % of total mortality	16.6	15.1	16.0	15.3	15.4	14.3 (2023)
Number of patents (pharma / biotech / medical technology)	22	25	21	11	29	29 (2023)***
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants****	16.9	13.4	13.7	17.1	18.1	20.0 (2023)

*The EU average is weighted for all indicators except for doctors and nurses per 1 000 population, for which the EU simple average is used based on 2022 (or latest 2021) data except for Luxembourg (2017). Doctors' density data refer to practising doctors in all countries except Greece, Portugal (licensed to practise) and Slovakia (professionally active). Density of nurses: data refer to practising nurses (EU recognised qualification) in most countries except France and Slovakia (professionally active) and Greece (hospital only). **'Available hospital beds' covers somatic care, not psychiatric care. ***The EU median is used for patents. ***Source:*** Eurostat database; European Patent Office; ****European Centre for Disease Prevention and Control (ECDC) for 2023.

retail pharmaceuticals, followed by dental services ([222]). Comparatively high unmet needs for medical examination are reported in rural areas. Capital formation, measured by capital expenditure on health as a percentage of GDP is among the lowest in the EU, hovering far below the EU average in recent years. This is reflected in the low availability of key diagnostic (medical imaging) technology. Under the Czech recovery and resilience plan (RRP), EUR 1.22 billion will go towards health, notably: (i) setting up an oncological institute; (ii) increasing training for professionals; (iii) preventive screening; (iv) intensive care medicine; (v) cardiovascular diseases; and (vi) research and development.

As regards public health, Czechia's high rate of preventable mortality is a cause for concern. In 2022, the share of spending on prevention dropped from its 2021 level of 8.4% to 5.2% of total spending on health, relatively close to the EU average of 5.5%. In the same year, the use of antibiotics in the community and hospital sectors was well below the EU average. Areas for further improvement include: (i) lowering alcohol use among adults (or by raising taxes, for example ([223])); (ii) increasing the daily intake of fruit and vegetables; and (iii) increasing physical activity rates. Vaping is also a cause for concern, with adult and particularly young adult vaping rates among the worst in the EU ([224]). Overall, preventable mortality has decreased by 11% over the last decade but is still well above the EU average (2022).

Czechia had more doctors and nurses than the EU average in 2022. It counted 831 practising nurses per 100 000 inhabitants, above the EU average of 756. For several years, doctor density in Czechia (around 4.3 per 1 000 population in 2022) has been just above the EU average of 4.2 per 1 000. However, there is a greater concentration of doctors in the capital region and in other major cities than in remote and sparsely populated regions, which contributes to the high rate of unmet needs for medical care in rural areas. The number of recently graduated doctors is above the EU average. By contrast, only 18% of all practising doctors were aged between 55 and 64 in 2022, which is below the EU average. Regarding nurses, the number of nursing graduates is among the lowest in the EU and more than a quarter of nurses are aged 55 and over. The number of nursing graduates per population has increased over the past decade, but this has been driven largely by a growing number of graduates from training programmes that provide lower nurse qualifications. Czech doctors, nurses and other health workers obtained permanent pay rises in 2021, 2022 and 2024. The government has taken action to increase the number of students in medical schools and offers subsidies for opening primary care offices in underserved areas. Czechia's RRP includes upskilling opportunities for health professionals.

Czechia's health system has untapped potential to drive innovation and foster industrial development in the EU medical sector. Czechia is among the EU countries

([222])*OECD/European Commission (2024),* Health at a Glance: Europe 2024 - State of Health in the EU Cycle, pp. 186-187.
([223])https://www.paqresearch.cz/post/daneni-alkoholu/
([224])Health at a Glance: Europe 2024, Chapter 4.

reporting low public spending on health research and development ([225]). This is reflected in the low number of European patents granted: 29 in 2023 in the combined areas of pharmaceuticals, biotechnology and medical technologies ([226]), exactly on par with the EU median of 29. Reported clinical trial activity is also at an average level ([227]). The RRP will support research and development for priority areas of medical sciences and related social sciences.

Czechia aims to accelerate the digitalisation of its health system, **with extensive support from EU programmes.** It has among the lowest shares in the EU of people accessing their personal health records online. However, it is above the EU average on the use of telemedicine/ online health services (excluding phone) instead of in-person consultations. Czechia's recovery and resilience plan includes measures to enhance digital solutions in the healthcare sector. Additionally, the country intends to dedicate funding toward e-health services and applications, along with further investment in the digitalisation of healthcare, using resources from the 2021-2027 cohesion funds.

([225])For further details, see Annex 3.
([226])European Patent Office, Data to download | epo.org.
([227])EMA (2024), Monitoring the European clinical trials environment, p. 9.

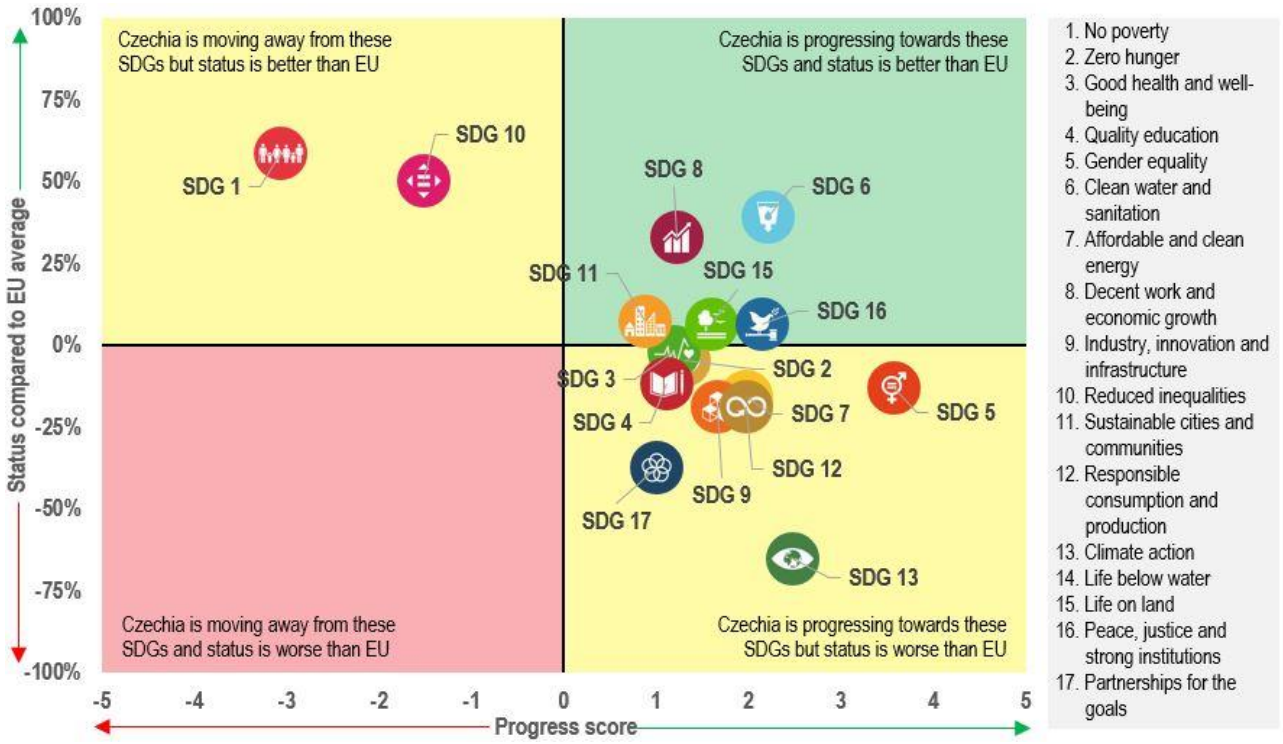
ANNEX 15: SUSTAINABLE DEVELOPMENT GOALS

This Annex assesses Czechia's progress on the Sustainable Development Goals (SDGs) along the dimensions of competitiveness, sustainability, social fairness and macroeconomic stability. The 17 SDGs and their related indicators provide a policy framework under the UN's 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in the EU.

Czechia performs particularly well on SDG 8 (Decent work and economic growth), although it still needs to catch up with the EU average on other SDGs related to *competitiveness* (SDGs 4 and 9). Czechia's long-term unemployment rate (SDG 8) was 0.8% in 2023, well below the EU average (2.1% in 2023). Czechia also recorded a change in its employment rate (SDG 8) from 81.7% of the population aged 20 to 64 in 2023 to 82.3% in 2024, above the EU average of 75.8%. Additional efforts should be made on research and innovation (SDG9). The percentage of GDP spent on R&D decreased from 1.95% in 2020 to 1.83% in 2023, well below the EU average of 2.24%. While Czechia is performing better than the EU average on early leavers from education and training (SDG 4; 6.4% of the population aged 18 to 24 in 2023, compared to 9.5%), it needs to catch up on tertiary education and digital skills.

While Czechia has improved on all SDGs related to *sustainability*, it is still lagging behind the EU average on SDG 13 (Climate action). Net greenhouse gas emissions are higher (SDG 13; 11.4 tonnes per capital in 2022) than the EU average (7.3 tonnes per capital in 2022), while the share of

Graph A15.1: **Progress towards the SDGs in Czechia**



For detailed datasets on the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for details on extensive country-specific data on the short-term progress of Member States: Key findings – Sustainable development indicators - Eurostat (europa.eu). A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past five years. The calculation does not take into account any target values, as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.

Source: Eurostat, latest update of 28 April 2025. Data refer mainly to the period 2018-2023 or 2019-2024. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

renewable energy in gross final energy consumption (18.6% in 2023) is still below the EU average (24.6% in 2023). The circular material use rate (SDG 12) improved, from 11.3% of material input for domestic use in 2022 to 12.8% of material input for domestic use in 2023. The average CO_2 emissions per km from new passenger cars (SDG 12) decreased, from 144.9 g CO_2 per km in 2020 to 136 g CO_2 in 2023, but remained above the EU average (107.6 g CO_2 in 2023). Energy productivity (SDG 12) improved slightly, from EUR 4.81 per kgoe in 2022 to EUR 5.23 per kgoe in 2023 but remained below the EU average (EUR 9.84 per kgoe in 2023). On a more positive note, the country has continued to decarbonise its energy mix by increasing its share of renewable energy (SDG 7; from 15,1 % in 2018 to 18,6 % in 2023).

Czechia performs very well and is continuing to improve on a number of SDGs related to *social fairness* (SDGs 1 and 10). At the same time, there is a need for improvement on SDGs 3, 4 and 7, and for a strong focus on SDG 5 (Gender equality). Czechia performs particularly well on SDG 1 (No poverty) and SDG 10 (Reduced inequalities), with both significantly above the EU average (SDG 1; 63.9% and SDG 10: 64.3%, even if the latter figure is a decrease on the 2023 value of 71.5%). Czechia's positive stance on reducing poverty (SDG 1) is reflected in a number of indicators such as people at risk of poverty or social exclusion, the severe material and social deprivation rate, and the in-work at-risk-of-poverty rate, all of which significantly outperform the EU average. Czechia's share of the population unable to keep their homes adequately warm (SDG 7; 2.9% of the population in 2022) remains below the EU average (9.3% of the population in 2022). However, there is some room for improvement, mainly on SDG 5 (Gender equality) as regards employment and leadership positions. There have been some positive trends in closing the gender gap (SDG 5; from 21.1% of average gross hourly earnings of men in 2017 to 17.9% in 2022). This remains above the EU average of 12.7% in 2022.

Czechia continues to improve on all SDGs related to *macroeconomic stability* (SDGs 8, 16, 17) but still needs to catch up with the EU average on certain indicators related to SDG 16 (Peace, justice and strong institutions) and SDG 17 (Partnerships for the goals). The Czech government spends less general government total expenditure on law courts than the EU average (SDG 16; EUR 76.8 per capita in 2022, against an EU average of EUR 113.7). Czechia maintains very positive macroeconomic standards, reflected mainly in low general government gross debt (SDG 17; 43.6% in 2024), which is significantly below the EU average (81.0% in 2024). The official development assistance (SDG 17) which had reached 0.38% of GNI in 2022 due to large-scale support for Ukrainian refugees, has since decreased to 0.24% GNI in 2023 -far lower than the EU average of 0.56% GNI- and to 0.17% in 2024([228]). Czechia could do more on the share of environmental taxes in total tax revenues (SDG 17), which decreased in recent years from 5.7% of total tax revenues in 2017 to 4.6% in 2023.

As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other annexes.

([228]) OECD, Preliminary official development assistance levels in 2024, Paris, 16 April 2025

Czechia faces structural challenges in a wide range of policy areas as identified in the country-specific recommendations (CSRs) addressed to the country as part of the European Semester. They refer, among other things, to taxation policies, active labour market policies, the supply of childcare services, education and skills, business environment, quality of public administration, research and innovation, housing, energy and transport.

The Commission has assessed the 2019-2024 CSRs considering the policy action taken by Czechia to date and the commitments in its recovery and resilience plan (RRP). At this stage, Czechia has made at least 'some progress' on 63% of the CSRs ([229]), and 'limited progress' on 37% (Table A16.2).

EU funding instruments provide considerable resources to Czechia by supporting investments and structural reforms to increase competitiveness, environmental sustainability and social fairness, while helping to address challenges identified in the CSRs. In addition to the EUR 9.2 billion funding from the Recovery and Resilience Facility (RRF) in 2021-2026, EU cohesion policy funds ([230]) are providing EUR 21 billion to Czechia (amounting to EUR 26.7 billion with national co-financing) for 2021-2027 ([231]) to boost regional competitiveness and growth. Support from these instruments combined represents around 9.5% of 2024 GDP ([232]). The contribution of these instruments to different policy objectives is outlined in Graphs A16.1 and A16.2. This substantial support comes on top of financing provided to Czechia under the 2014-2020 multiannual financial framework, which financed projects until 2023 and has had significant benefits for Czechia's economy and society. Project selection under the 2021-2027 cohesion policy programmes is advanced, while implementation of selected projects has also gained momentum, enabling substantial investment.

The Czech RRP contains 105 investments and 58 reforms to stimulate sustainable growth and support the digital transformation and transition towards a low-carbon and climate-resilient economy. A year before the end of the RRF timespan, implementation is on its way with 47% of the funds disbursed. At present, Czechia has fulfilled 38% of the milestones and targets in its RRP ([233]). Increased efforts are needed to ensure completion of all RRP measures by 31 August 2026. The implementation faces challenges, with the absorption of funds particularly constrained by limited administrative capacity at some of the implementing bodies as well as suboptimal use of financial instruments. This is particularly visible in areas such as the green and digital transitions.

Czechia also receives funding from several other EU instruments, including those listed in table A16.1. Most notably, the common agricultural policy (CAP) provides Czechia with an EU contribution of EUR 5.6 billion under the CAP strategic plan for 2023-2027 ([234]). Operations amounting to EUR 258.2 million ([235]) have been signed under the InvestEU instrument backed by the EU guarantee, improving access to financing for riskier operations in Czechia.

([229])10% of the 2019-2024 CSRs have been fully implemented, 8% substantially implemented, and some progress has been made on 45%.

([230])In 2021-2027, cohesion policy funds include the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus and the Just Transition Fund. The information on cohesion policy included in this annex is based on adopted programmes with the cut-off date of 5 May 2025.

([231])European territorial cooperation (ETC) programmes are excluded from the figure.

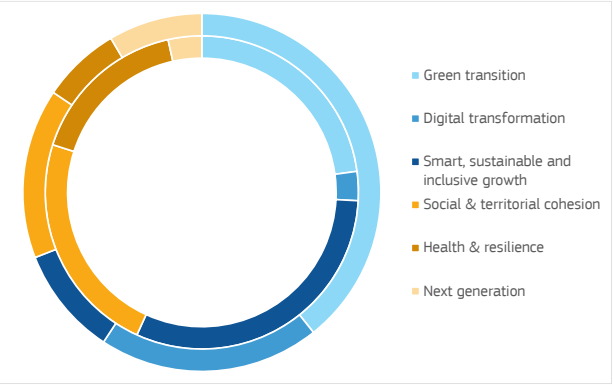
([232])RRF funding includes both grants and loans, where applicable. GDP figures are based on Eurostat data for 2024.

([233])As of mid-May 2025, Czechia has submitted 3 payment requests.

([234])An overview of Czechia´s formally approved strategy to implement the EU's common agricultural policy nationally can be found at: https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/czechia_en

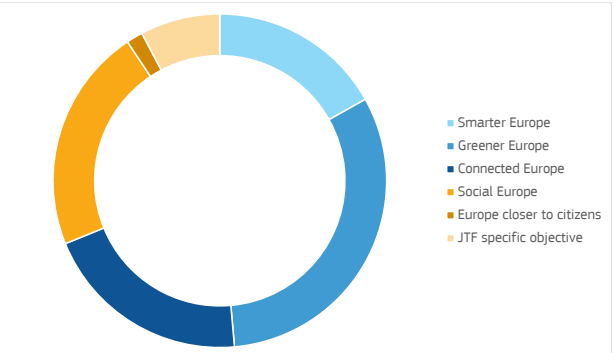
([235])Data reflect the situation on 31.12.2024.

Graph A16.1: **Distribution of RRF funding in Czechia by policy field**



(1) Each RRP measure helps achieve the aims of two of the six policy pillars of the RRF. The primary contribution is shown in the outer circle, while the secondary contribution is shown in the inner circle. Each circle represents 100% of the RRF funds. Therefore, the total contribution to all pillars displayed on this chart amounts to 200% of the RRF funds allocated.
Source: European Commission

Graph A16.2: **Distribution of cohesion policy funding across policy objectives in Czechia**



Source: European Commission

Cohesion policy funds aim to increase the productivity and competitiveness of Czech firms and improve the business environment. The European Regional Development Fund (ERDF) will contribute to the digitalisation of the country's private and public sectors, providing over 500 businesses, 30 000 households and almost 180 public institutions with enhanced access to very high-capacity broadband. The Just Transition Fund will support over 2 200 businesses in restructuring for the transition to a low-carbon economy while preserving jobs, and for diversification of the economy in the Czech regions most affected by the transition to a climate neutral economy. The European Social Fund Plus (ESF+) is investing EUR 180 million to support job transformation amid the green and digital transition. ESF+ funds support digital skills training, corporate programmes, career guidance and business-education partnerships.

Other funds are contributing to competitiveness in Czechia, for instance through open calls. The Connecting Europe Facility has financed strategic investments for instance in rail infrastructure and the development of alternative fuel infrastructure and the modernisation of inland waterways; energy market integration, decarbonisation of the energy system and security of energy supply, in particular, the diversification of natural gas sources and routes in Czechia; as well as deployment of 5G connectivity along transport paths, enabling connected, automated cross border mobility along sections of the Munich-Prague 5G corridor or between the Czechia and Poland along the Baltic-Adriatic 5G corridor. Horizon Europe has supported research and innovation, from scientific breakthroughs to scaling up innovations, with Digital, Industry and Space and Climate, Energy and Mobility as top priorities. The Technical Support Instrument (TSI) assisted in the preparation of the Social Climate Plan for Czechia, the mapping out of tax administration reforms and to improve Czechia's administration and SME support strategy.

Czechia's RRP also contains ambitious measures to improve the business environment and competitiveness. As part of the measures covered by payment requests submitted over the past year, Czechia made public services for citizens and businesses operational via the Single Digital Gateway, increased the number of eGovernment services, strengthened the digitalisation of services for the justice system and published a call for projects to strengthen the cybersecurity of critical public information systems. Czechia also launched a regulatory sandbox to test innovative products of companies focusing on digital innovation in the fields of fintech and digital ledger technology. Furthermore, Czechia amended the Energy Act to incentivise electricity-sharing and the development of energy communities. The reform simplified the permitting process for renewable energy by eliminating the requirement for permits for small-scale installations and streamlining permits for large ones.

EU funds are playing a significant role in promoting environmental sustainability and green transition in Czechia during the current seven-year EU budget (multiannual financial framework). The ERDF and the Cohesion Fund are financing additional capacity for wastewater treatment, which will benefit over 91 000 people. Similarly, the funding will enable Czechia to expand its waste-recycling capacity by nearly 175 000 tonnes/year and thereby make greater use of the secondary materials which are key elements in the EU's environmental and competitiveness policy. Czechia's CAP strategic plan allocates EUR 756.4 million (54% of rural development funding) to environmental and climate objectives and EUR 1.24 billion (30% of direct payments) to eco-schemes, supporting biodiversity, organic farming and sustainable practices. With the help of the CAP Plan, sustainability objectives are supported by promoting biodiversity protection through eco-schemes, such as dedicating 7% of arable land to non-productive areas and limiting pesticide use near water bodies, or specific new support for landscape features. Moreover, Czechia aims to grow its organic farming share from 15.6% to 21.3%.

Czechia's RRP, including the REPowerEU chapter, has a comprehensive set of reforms and investments for the green transition. Measures covered by the payment requests submitted over the last year include, among others, the implementation of 450 small watercourses and water reservoir projects, 20 water retention in forests projects and the adoption of a national and regional waste management plan. Czechia also carried out an assessment of the path towards decarbonisation of district heating and trajectories of sustainable use of bioenergy and supply of biomass and provided a concrete plan for investment in heat/power generation facilities that do not use solid fossil fuels as a heat source. To improve energy efficiency, Czechia renovated public and residential buildings and supported the revitalisation of former industrial sites (brownfields). Measures were also taken to modernise public transport and make it more sustainable, including the electrification of 40 km of railway lines to reduce emissions, reconstruction of three existing railway lines totalling 26 km, the renovation of eight station buildings to improve their quality of service and energy efficiency performance.

Promoting fairness, social cohesion and improving access to basic services are among the key priorities of EU funding in Czechia. The ESF+ allocates EUR 15 million to support Roma communities by promoting community work, early childhood services, and parental skills. It funds NGOs to enhance Roma participation in elections, combat hate speech, and address domestic and gender-based violence. Additionally, it strengthens Roma and pro-Roma NGOs through training, organisational development, and collaboration with public authorities. These efforts contribute to the Roma Integration Strategy 2021-2030, tackling structural challenges like anti-Gypsyism and child poverty. The ERDF will expand and modernise the country's educational system infrastructure, affecting 22 177 pupils in their classrooms.

Czechia´s RRP contains several reforms and investments related to fairness and social policies. To boost digital and green skills, Czechia created a database of reskilling and upskilling courses, aiming to upskill or reskill at least 65 000 people in digital skills and another 65 000 in Industry 4.0, and launched a call for projects promoting green skills development in curricula. Czechia has also supported 4 000 schools in organising tutoring programmes for pupils at risk of school failure, to tackle inequalities between pupils and schools driven by social or other disadvantages. The law on pre-school childcare entered into force to ensure access to affordable childcare for children below three years old, and Czechia published a call for projects for providing housing and care facilities for children at risk. Moreover, Czechia continue to expand eHealth services to citizens, awarded the public contracts for the construction of new university areas in the field of health sciences.

Table A16.1:**Selected EU funds with adopted allocations - summary data (million EUR)**

Instrument/policy	Allocation 2021-2026		Disbursed since 2021 (1)
RRF grants (including the RepowerEU allocation)	8 409.2		4 174.5
RRF loans	818.1		190.9
Instrument/policy	**Allocation 2014-2020 (2)**	**Allocation 2021-2027**	**Disbursed since 2021 (3)** (covering total payments to the Member State on commitments originating from both 2014-2020 and 2021-2027 programming periods)
Cohesion policy (total)	22 676.2	21 054.1	14 248.3
European Regional Development Fund (ERDF)	12 848.2	10 346.3	7 383.0
Cohesion Fund (CF)	6 143.9	6 635.4	4 175.2
European Social Fund (ESF, ESF+) and the Youth Employment Initiative (YEI)	3 684.0	2 430.9	2 108.3
Just Transition Fund (JTF)		1 641.5	581.8
Fisheries			
European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the European Maritime and Fisheries Fund (EMFF)	31.1	30.0	20.2
Migration and home affairs			
Migration, border management and internal security - AMIF, BMVI and ISF (4)	85.3	153.1	70.8
The common agricultural policy under the CAP strategic plan (5)	**Allocation 2023-2027**		**Disbursements under the CAP Strategic Plan (6)**
Total under the CAP strategic plan	5 646.8		1 811.8
European Agricultural Guarantee Fund (EAGF)	4 236.1		1 582.5
European Fund for Agricultural Development (EAFRD)	1 410.6		229.3

(1) The cut-off date for data on disbursements under the RRF is 31 May 2025.
(2) Cohesion policy 2014-2020 allocations include REACT-EU appropriations committed in 2021-2022.
(3) These amounts relate only to disbursements made from 2021 onwards and do not include payments made to the Member State before 2021. Hence the figures do not comprise the totality of payments corresponding to the 2014-2020 allocation. The cut-off date for data on disbursements under EMFAF and EMFF is 29 April 2025. The cut-off date for data on disbursements under cohesion policy funds, AMIF, BMVI and ISF is 5 May 2025.
(4) AMIF - Asylum, Migration and Integration Fund; BMVI- Border Management and Visa Instrument; ISF - Internal Security Fund.
(5) Expenditure outside the CAP strategic plan is not included.
(6) The cut-off date for data on EARDF disbursements is 5 May 2025. The information on EAGF disbursements is based on the Member State declarations until March 2025. Disbursements for the Direct Payments (EAGF) started in 2024.
Source: European Commission

Table A16.2:**Summary table on 2019-2024 CSRs**

Table 16.2: Summary table on 2019-2024 CSRs		
Czechia	**Assessment in May 2025**	**Relevant SDGs**
2019 CSR 1	Some progress	
Improve long-term fiscal sustainability of the pension and health-care systems.	Some progress	SDG 3, 8, 16
Adopt pending anti-corruption measures.	Some progress	SDG 16
2019 CSR 2	**Some progress**	
Foster the employment of women with young children, including by improving access to affordable childcare, and of disadvantaged groups.	Limited progress	SDG 4, 5, 8, 10
Increase the quality and inclusiveness of the education and training systems, including by fostering technical and digital skills and promoting the teaching profession.	Some progress	SDG 4, 8, 10
2019 CSR 3	Some progress	
Focus investment-related economic policy on transport, notably on its sustainability	Some progress	SDG 10, 11
, digital infrastructure	Some progress	SDG 9, 10, 11
, and low carbon and energy transition, including energy efficiency , taking into account regional disparities.	Limited progress	SDG 7, 9, 10, 11, 13
Reduce the administrative burden on investment	Limited progress	SDG 8, 9
and support more quality-based competition in public procurement.	Limited progress	SDG 9
Remove the barriers hampering the development of a fully functioning innovation ecosystem.	Some progress	SDG 9
2020 CSR 1	**Some progress**	
In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	No longer relevant	SDG 8, 16
Ensure the resilience of the health system, strengthen the availability of health workers, primary care and the integration of care, and deployment of e-health services.	Some progress	SDG 3
2020 CSR 2	Some progress	
Support employment through active labour market policies,	Some progress	SDG 8
the provision of skills, including digital skills, and access to digital learning.	Some progress	SDG 4
2020 CSR 3	Some progress	
Support small and medium-sized enterprises by making greater use of financial instruments to ensure liquidity support,	Some progress	SDG 8, 9
reducing the administrative burden and improving e-government.	Some progress	SDG 8, 9, 16
Front-load mature public investment projects and	Substantial progress	SDG 8, 16
promote private investment to foster the economic recovery.	Substantial progress	SDG 8, 9
Focus investment on the green and digital transition, in particular on high-capacity digital infrastructure and technologies,	Limited progress	SDG 9
clean and efficient production and use of energy,	Limited progress	SDG 7, 9, 13
and sustainable transport infrastructure, including in the coal regions.	Limited progress	SDG 10, 11
Ensure access to finance for innovative firms and improve public-private cooperation in research and development.	Limited progress	SDG 8, 9

(Continued on the next page)

Table (continued)

2021 CSR 1	**No longer relevant**	
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.	No longer relevant	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	No longer relevant	SDG 8, 16
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	No longer relevant	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all.	No longer relevant	SDG 8, 16
2022 CSR 1	**Substantial progress**	
In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	No longer relevant	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.	No longer relevant	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	No longer relevant	SDG 8, 16
Take measures to ensure the long-term fiscal sustainability of public finances, including the sustainability of the pension system.	Substantial progress	SDG 8
2022 CSR 2		
Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 8 September 2021.	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.	
Swiftly finalise the negotiations with the Commission of the 2021-2027 cohesion policy programming documents with a view to starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.	
2022 CSR 3	**Limited progress**	
Strengthen the provision of social and affordable housing, including by adopting a specific legislative framework for social housing and improved coordination between different public bodies.	Limited progress	SDG 1, 2, 10, 16
2022 CSR 4	**Some progress**	
Reduce overall reliance on fossil fuels and diversify imports of fossil fuel.	Some progress	SDG 7, 9, 13
Accelerate the deployment of renewables, streamline permit procedures and make grid access easier.	Some progress	SDG 7, 8, 9, 13
Increase the energy efficiency of district heating systems and of the building stock by incentivising deep renovations and renewable heat sources.	Some progress	SDG 7
2023 CSR 1	**Substantial progress**	
Wind down the emergency energy support measures in force, using the related savings to reduce the government deficit, as soon as possible in 2023 and 2024. Should renewed energy price increases necessitate new or continued support measures, ensure that these are targeted at protecting vulnerable households and firms, fiscally affordable and preserve incentives for energy savings.	Full implementation	SDG 8, 16
Ensure prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 6.0%.	Full implementation	SDG 8, 16
Preserve nationally financed public investment and ensure the effective absorption of RRF grants and other EU funds, in particular to foster the green and digital transitions.	Some progress	SDG 8, 16
For the period beyond 2024, continue to pursue a medium-term fiscal strategy of gradual and sustainable consolidation, combined with investments and reforms conducive to higher sustainable growth, to achieve a prudent medium-term fiscal position.	Full implementation	SDG 8
Take measures to ensure the long-term fiscal sustainability of public finances, including the sustainability of the pension system.	Substantial progress	SDG 8, 16

(Continued on the next page)

Table (continued)

2023 CSR 2		
Accelerate the implementation of its recovery and resilience plan, also by ensuring an adequate administrative capacity, and swiftly finalise the addendum, including the REPowerEU chapter, with a view to rapidly starting its implementation. Proceed with the speedy implementation of cohesion policy programmes, in close complementarity and synergy with the recovery and resilience plan.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress with the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.	
2023 CSR 3	**Limited progress**	
Strengthen the provision of social and affordable housing, including by adopting a specific legislative framework, improving coordination between different public bodies, and incentivising the construction of new housing units as well as the refurbishment of existing ones.	Limited progress	SDG 1, 2, 10, 16
2023 CSR 4	**Some progress**	
Reduce reliance on fossil fuels.	Some progress	SDG 7, 9, 13
Increase the deployment of renewables with additional investments in electricity grids and direct deployment of renewable capacity.	Some progress	SDG 7, 9, 13
Streamline permitting procedures for renewables and make the grid fit to accommodate access to renewables through additional reforms, removing restrictions for small-scale renewables and setting up a one-stop shop, boosting grid flexibility and creating conducive conditions for energy communities.	Some progress	SDG 7, 8, 9, 13
Increase the energy efficiency of district heating systems and of the building stock by incentivising deep renovations and renewable heat sources, easing administrative access to subsidies for both households and industry, and capacity building and skills in public authorities.	Some progress	SDG 7, 8, 9, 16
Promote the uptake of zero-emission vehicles and boost the availability of high-capacity charging and refuelling infrastructure through new reforms to create enabling conditions for and remove existing barriers to the deployment of vehicles and infrastructure.	Limited progress	SDG 11
Step up policy efforts aimed at the provision and acquisition of skills and competences needed for the green transition.	Limited progress	SDG 4
2024 CSR 1	**Some progress**	
Submit the medium-term fiscal-structural plan in a timely manner.	Full implementation	SDG 8, 16
In line with the requirements of the reformed Stability and Growth Pact, limit the growth in net expenditure in 2025 to a rate consistent with, inter alia, maintaining the general government deficit below the 3% of GDP Treaty reference value and keeping the general government debt at a prudent level over the medium term.	Full implementation	SDG 8, 16
Take measures to ensure the long-term fiscal sustainability of the pension system.	Substantial progress	SDG 8
Lower tax and benefit disincentives for parents to return to work to promote higher female labour market participation.	Limited progress	SDG 8
Improve incentives for people close to retirement to continue working.	Some progress	SDG 8
Take steps to increase revenue from recurrent property taxes.	Limited progress	SDG 8, 10, 12
2024 CSR 2		
Strengthen administrative capacity to manage the recovery and resilience plan, accelerate investments and maintain momentum in the implementation of reforms. Address relevant challenges to allow for continued, swift and effective implementation of the recovery and resilience plan, including the REPowerEU chapter, ensuring completion of reforms and investments by August 2026. Accelerate the implementation of cohesion policy programmes. In the context of their mid-term review, continue focusing on the agreed priorities, taking action to better mobilise private sector resources, including through the use of innovative financial instruments, while considering the opportunities provided by the Strategic Technologies for Europe Platform initiative to improve competitiveness.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets. Progress with the cohesion policy programming is monitored in the context of the Cohesion Policy of the European Union.	
2024 CSR 3	**Limited progress**	
Strengthen the capacity of Czechia's public administration to attract, retain and develop talent, particularly those with analytical, managerial and IT skills	Some progress	SDG 4, 16
Reduce departmentalism and strengthen strategic steering capacities to improve consistency across policies.	Limited progress	SDG 16
Support cooperation among municipal administrations, including by providing support for administrative capacity building targeted to structurally affected regions	Limited progress	SDG 16
2024 CSR 4	**Limited progress**	
Boost innovation by improving technology transfer from academia to businesses,	Limited progress	SDG 9
supporting the creation of spin-offs and start-ups,	Limited progress	SDG 8, 9
and increasing participation in tertiary education.	Limited progress	SDG 4
Strengthen the competitiveness of the economy by addressing skills mismatches, simplifying the recognition of foreign qualifications,	Some progress	SDG 4
and by increasing the labour market participation of underrepresented groups.	Some progress	SDG 8, 10

Source: European Commission

The regional disparities between the capital region Praha and the rest of Czechia continue. This is shown by various indicators that are essential for competitiveness. The introduction of targeted regional incentives together with the stronger role regions play in defining their specific needs could enable convergence towards the EU average in terms of GDP per head and regional development. This is particularly relevant for those Czech regions experiencing a talent development trap ([236]).

The Czech economy rebounded in the aftermath of the COVID-19 pandemic. However, this recovery remained lower than the EU average and has been slowed down by high inflation rates. While experiencing a slight expansion of the economy of 0.1% in real terms in 2023, real GDP growth was 1.1% in 2024.

Czech regions have many competencies in transport, education, healthcare, social care, spatial planning, cultural development, and assistance to municipalities. The national allocation of tax revenues represents a major part of regional budget revenues (typically around 90%) and therefore determines their scope for spending ([237]). In the current setting, the regional governments distribute further nationally allocated financial resources. It would be beneficial to consider adding to the system incentives targeted at regions that would motivate them to encourage greater economic activity on their territory, make strategic investments, or improve the quality and efficiency of public services. Latest experience from the territorial just transition plan for the Czech Just Transition Fund regions shows a positive role of regional strategies serving as an instrument that coordinates the territorial dimension under cohesion policy and other EU and selected national resources at regional level.

Increasing regional growth requires a wide range of policies. Effective and efficient spending of available EU funding, including the use of financial instruments as a repayable form of support, is an important part of it. The success of the 'Transformation loan' in three JTF regions shows the benefits of financial instruments also in the less developed regions.

Regional disparities in Czechia have remained broadly unchanged but are still significant. The country's capital region is highly developed with GDP per head standing at 193% of the EU average in 2023. In the rest of the country, there is a group of three moderately developed regions, where GDP per head ranges from 77% to 85% of the EU average, four regions below 75%, and a poorer region (Severozápad) where GDP per head corresponds to 63% of the EU average.

Most regions have grown faster than the EU average, albeit at different speeds. As a result, Czechia continued to catch up rapidly with the EU average (i.e. convergence), from 84% of the EU GDP (purchasing power standard (PPS)) per head average in 2011 to 95% in 2020. Since then, convergence halted and in 2023 Czechia's GDP per head decreased to 90% of the EU average.

Competitiveness

The pattern of disparities between regions is similar for labour productivity, displaying the same divide between the capital region and the rest. In 2022, labour productivity (GDP (PPS) per hour worked) in Czechia was at 77% of the EU average declining from 79% in 2021. It was by far the highest in the capital region (121% of the EU average) in 2022, compared to 76% in the second most productive Czech region (Střední Čechy), and 58% in the least productive region (Severozápad).

The trend in labour productivity shows that almost all regions are catching up with the EU average but at different speeds (Graph A17.1). Real productivity per hour growth was highest in Praha, with an average annual growth rate of 2.6% between 2013 and 2022, well above the EU rate of 0.9%. The other regions experienced lower productivity per hour growth, Severovýchod, Střední Čechy and Střední Morava were still above the EU average. The country's poorest region Severozápad experienced a negligible productivity decline of 0.09% over the same period.

([236])Regions experiencing a talent development trap are affected by a decline in the working-age population and a low and stagnating share of people with a tertiary education. See the European Commission Communication: COM(2023) 32 final 'Harnessing talent in Europe's regions' points out to Severozápad and Moravskoslezko as regions in the talent development trap in Czechia.

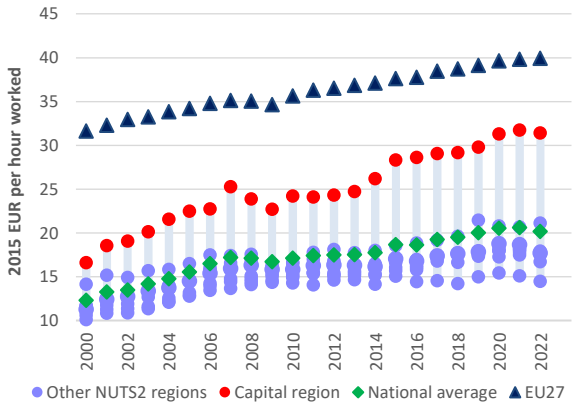
([237])Krajské rozpočty pod drobnohledem: odkud mají příjmy, na co jdou výdaje a co přinese změna RUD.

Table A17.1:**Selection of indicators at regional level in Czechia**

	GDP per head (PPS)	Productivity - GDP per hour worked (PPS)	Real productivity growth (per hour worked)	Working age population (20-64) growth	Unemploy-ment rate	Early leavers from education and training	Housing cost overburden	Access to healthcare	Access to alternative fuel infrastructure	Quality&accountability pillar of European Quality of Government Index (1)	Greenhouse gas emissions
	Index EU-27 = 100	Index EU-27 = 100	Average annual % change	Average annual % change	% of labour force	% of population aged 18-24	% of total population	Population within 10 minutes by car from nearest hospital (%)	Number of electric vehicles charging points within 10 km	Change 2010 - 2024, percentage points	tCO2eq. per person
	2023	2022	2013-2022	2014-2023	2024	2024	2024	2023	2022	2024	2023
European Union (27 MS)	100	100	0.9	-0.2	5.9	9.3	8.8	52	287		7.1
Czechia	90	77	1.4	-0.5	2.6	5.4	9.2	62	77		10.5
Praha	193	121	2.6	0.3	1.8	1.3	18.0	94	415	1.10	3.6
Střední Čechy	81	76	1.5	0.2	1.3	6.1	8.9	57	22	0.58	10.2
Jihozápad	77	64	0.8	-0.5	2.3	7.9	5.7	48	23	0.18	9.2
Severozápad	63	58	-0.1	-1.1	4.1	11.6	10.0	70	13	0.29	28.6
Severovýchod	73	66	1.6	-0.7	2.9	5.5	8.5	61	15	0.50	10.9
Jihovýchod	85	69	0.8	-0.5	2.4	2.7	5.4	54	64	0.48	7.9
Střední Morava	73	67	1.4	-1.0	2.6	4.3	7.9	46	16	0.32	6.7
Moravskoslezsko	71	69	0.7	-1.2	4.1	5.1	10.7	74	38	0.26	10.8

(1) University of Gothenburg
Source: Eurostat and JRC

Graph A17.1: **Labour productivity per hour**



Unit: Real GDP per hour worked (EUR, 2015 prices)
Source: ARDECO (JRC)

Several factors can help explain these disparities. **Human capital ([238]) levels are considerably lower outside the capital region.** In all Czech regions, except the capital region, the proportion of the population aged 30-34 with a tertiary degree is below the EU average (44.8%), with the four poorest regions (Severovýchod, Střední Morava, Moravskoslezsko and Severozápad) scoring below 30%. The Praha region has by far the highest proportion (62.8%). Educational attainment is an important factor that also affects competitiveness. Higher levels of education usually lead to higher rates of employment, higher productivity and higher lifetime earnings for individuals.

The concentration of skilled and educated workforce in the capital region is also reflected in innovation and technology. In 2022, R&D expenditure was highest in the capital region where it corresponded to 2.69% of GDP (in Jihovýchod it was also higher than in the EU – 2.48%). 12.7% of workers were employed in high-tech sectors in Praha, more than double the rate in the EU. At the other end of the spectrum, employment in high-tech sectors represented less than 6% in the other regions, and R&D expenditure was only 0.38% of GDP in the least developed region of Severozápad.

There is a clear tendency for population to cluster in the most prosperous regions. Between 2014 and 2023, average annual population growth was positive in all regions except in Střední Morava and Moravskoslezsko. Moravskoslezko and Severozápad are also considered as experiencing a talent development trap ([239]). The net out-migration particularly of the young population deepens territorial disparities and could be addressed with concrete measures. Activities of the Moravskoslezko region, like the talent management strategy may serve as an example ([240]).

([238])Human capital encompasses knowledge, skills and competences, highlighting the importance of education, training and experience in building a workforce that drives economic growth, innovation and productivity.

([239])EC Communication 'Harnessing talent in Europe's regions' /COM(2023) 32 final/ *p. 5.*

([240])The region prepares 'Talent management' strategy that includes also 'Compatriots welcome back' initiative.

Social fairness

Labour market conditions are strong in Czechia compared to other EU Member States, but disparities within the country continue to exist beyond the metric of unemployment, i.e. poverty and healthcare. The unemployment rate in 2024 was remarkably low (2.6%) and did not vary widely between regions. All regions had an unemployment rate below the EU average (5.9%). The participation of women in the labour market has also been high compared to the EU average. The employment rate of women is higher at national level (75.8%) than the EU average (70.8%). Differences between regions are small, between 79.1% in Praha and 72.8% in Severozápad.

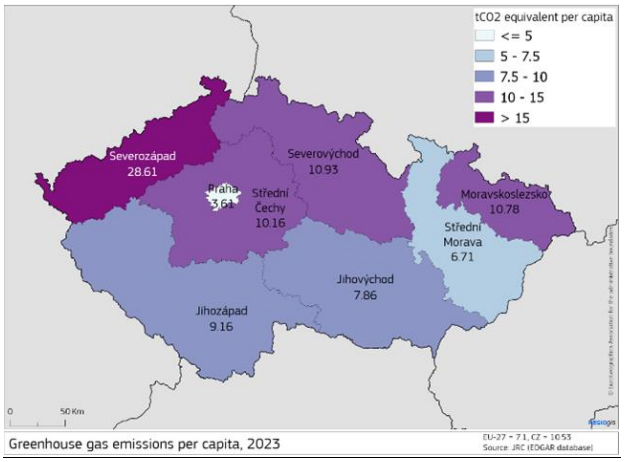
Many Czech households are struggling to access affordable housing, especially in cities. In terms of housing affordability, defined as the ratio of wages to the price of new apartments, Czechia ranked among the bottom countries in Europe in 2023 ([241]). There are differences between regions, but the housing affordability is lowest in Praha.

The share of the population at risk of poverty and social exclusion at national level is among the lowest in the EU (see also Annex 11) but varies significantly between the regions. This share was much higher than the national average of 11.3% (although still below the EU average of estimated 21%) in the less developed regions, standing at 16.3% in Moravskoslezsko and 12.5% in Severozápad. The population in Severozápad has also been significantly affected by foreclosures and personal bankruptcies. In Q3-2024, more than 12% of people were in foreclosure in Severozápad compared to the country's average of 7% ([242]).

Access to healthcare varies widely between the less developed and transition regions on the one hand and Praha on the other. In 2023, the share of the population living within a 10-minute radius by car from the nearest hospital in Praha was 94%, compared to 46% in Střední Morava and 48% in Jihozápad.

Sustainability

Map A17.1: **Greenhouse gas emissions per capita, 2023**



Source: Eurostat and JRC

Czechia's annual greenhouse gas emissions per person in 2023, with an average of 10.5 tonnes of CO_2 equivalent, exceeded the EU average of 7.1 tonnes of CO_2 equivalent, with significant disparities between regions. The coal mining region of Severozápad was the highest emitter with 28.6 tonnes per person. At the other end, the capital region of Praha was the lowest emitter with 3.6 tonnes per person in 2023. The other regions were closer to the national average, with between 6.7 and 10.9 tonnes per person. The low level of emissions in the capital region can be explained by the high percentage of employment in the services sector (25% in financial services and 21% in other services). Particulate matter (PM2.5) concentration was slightly above the EU average in Czechia (12 compared to 10.1), with a peak of 16 in Moravskoslezsko.

On green transport infrastructure, Czechia lags behind the EU with an average of about 77 electric vehicle charging points within 10 km, against 287 on average in the EU ([243]). Unsurprisingly, the Praha region performs best in

([241])Deloitte Property Index, 13th edition, August 2024.

([242])Podíl osob v exekuci po krajích (Q3 2024) / Mapa zadlužení.

([243])Indicators of access to alternative fuel infrastructure are based on calculations by DG REGIO and the JRC, using data from the European Alternative Fuels Observatory (EAFO), Eurostat, TomTom and Eco-Movement.

this category with 415 charging points, which is still below the EU average for more developed regions (539).