



CZECHIA: 20 YEARS IN THE EUROPEAN UNION



**CZECH
STATISTICAL
OFFICE**

© Czech Statistical Office, 2024

ISBN 978-80-250-3468-2 (brochure)

978-80-250-3469-9 (pdf)

CZECHIA: 20 YEARS
IN THE EUROPEAN UNION

Data sources and time series length:

Mainly data of the CZSO and Eurostat have been used in the publication. Provided data are current as at 15 March 2024.

Where available, data are for the period from 2004 to 2023.



Marek Rojíček

President of the CZSO

Dear Reader,

In May 2024, it will be 20 years since the Czech Republic joined the European Union.

Accession to the EU brought rapid changes directly linked to the principles of the common market, i.e. the free movement of goods, people, and capital. After the accession, a phase of strong economic growth driven by export industries began. The linkage with foreign countries was also reinforced by significant inflows of foreign direct investment. By joining the EU, the Czech economy obtained its current shape – an extraordinarily strong representation of industry and a position of a supplier for business partners in the western part of the EU, especially in Germany.

Membership in the European Union is also associated with changes in various areas of society. Greater opportunities to travel, study, and work in other member countries. Transformation in the energy sector, greater emphasis on environmental protection, and the development of science, research, and other areas that are the focus of common European policy. Against the backdrop of the last twenty years, demographic changes have also been taking place, affecting the way of life of the population and presenting challenges for the future that will be addressed not only by the Czech Republic.

The publication summarises the social and economic development of Czechia over the last two decades in a concise and graphically interesting form and also provides a picture of the Czech Republic's position within the European Union.

Have a nice reading!

Czech Republic in the EU

History of enlargement of the European Union

1952 founding members*



1973 first enlargement**



1981 second enlargement



1986 third enlargement



1995 fourth enlargement



2004 fifth enlargement



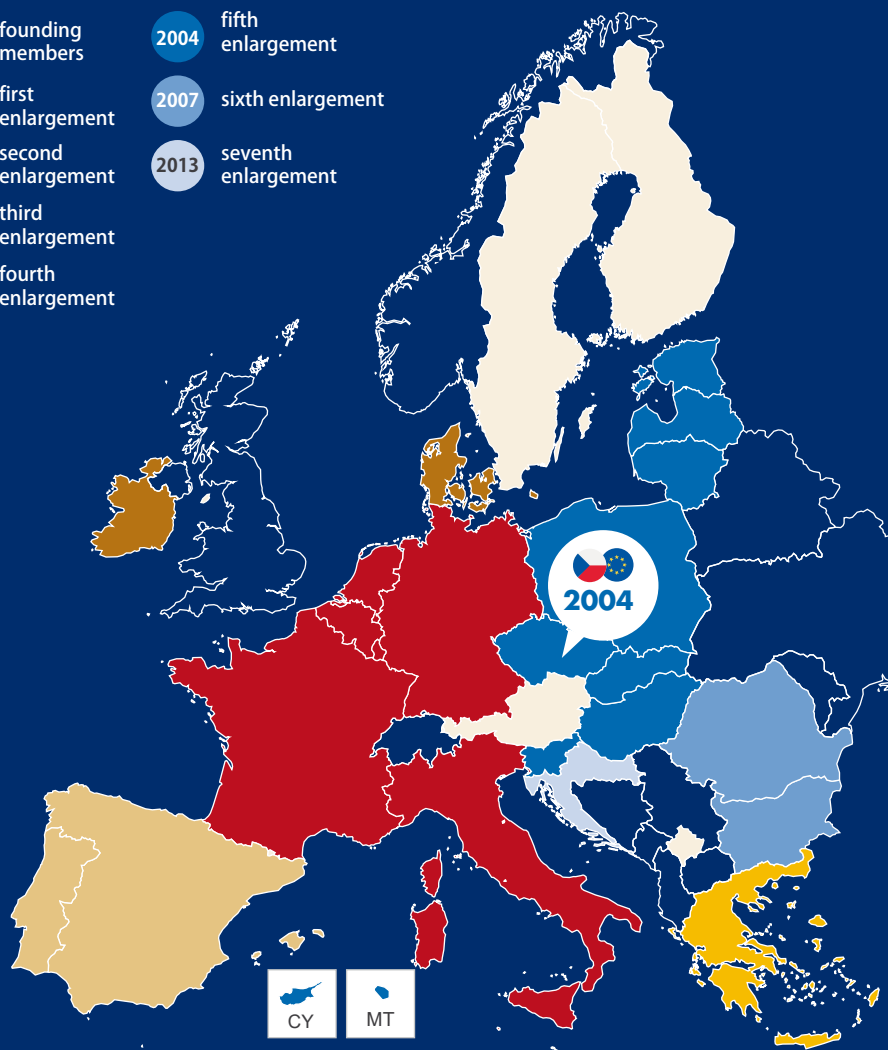
2007 sixth enlargement



2013 seventh enlargement



- 1952 founding members
- 1973 first enlargement
- 1981 second enlargement
- 1986 third enlargement
- 1995 fourth enlargement
- 2004 fifth enlargement
- 2007 sixth enlargement
- 2013 seventh enlargement



* The founding members of the European Coal and Steel Community – the forerunner of the present day EU. The former East Germany became part of the EU after the reunification in 1990.

** The United Kingdom left the EU in 2020.

Position of the Czech Republic in the European Union¹⁾ Share of the CR in the EU (%)

Area	1.9
Population	2.4
GDP (current prices)	1.8
Population under 15 years	2.6
Population aged 65+ years	2.3
Residents with foreign citizenship	2.1
Holders of temporary protection status	8.9
Students in tertiary education	1.8
Teachers and academic staff in tertiary education	1.3
Exports of goods to Member States of the EU	4.4
Export of goods outside of the EU	1.6
Investment (current prices)	2.2
General government consumption (current prices)	1.7
General government debt (EUR)	0.9
Harvest of cereals	3.0
Foreign guests from non-EU countries accommodated in collective accommodation establishments	2.0
Employment, total	2.5
Total employment in industry	4.5
Employment in high-tech industries	2.8
Researchers (full-time equivalent)	2.4
Employed persons working part-time	0.9
Long-term unemployed persons (more than 1 year)	0.8
Emissions of greenhouse gasses (CO ₂ equivalent)	3.0
Government environmental protection expenditure	1.8
Waste generation by businesses	1.7
Municipal waste generation	2.5
Natura 2000 protected areas (terrestrial)	1.5

Czechia, within the EU, has



2.6%
the lowest unemployment rate
(in 2023)



88.6%
the highest male employment
rate (in 2022)



27.9%
the highest share of population
working in industry (in 2022)



10.2%
the lowest percentage of persons
at-risk-of-poverty (in 2022)



34.4
the highest number of Ukrainian
holders of temporary protection
status per 1 000 population
(in December 2023)



81.6%
the highest share of exports
of goods to EU countries in the
total value of exports (in 2022)



120.7km
the densest railway network
(per 1 000 km²)



64.2%
the highest share of persons with
completed secondary education
(in 2022)



30.5%
the highest share of sales from
electronic sales (in 2023)

¹⁾ If available, the indicators refer mainly to the years 2022 and 2023. Part of the indicators refer to the years 2020 and 2021.



01

POPULATION

Mainly external migration was contributing to the population increase in Czechia	12
The COVID-19 pandemic disrupted stabledemographic trends just for a short time.....	14
Foreigners already make a tenth of the population of Czechia	16
Most remittances flow to Czechia from Germany.....	18
Growth in the number of households of individuals was mainly influenced by the growing population of persons aged 65+ years.....	20
The share of people with tertiary education remains also among the young below the EU average	22

02

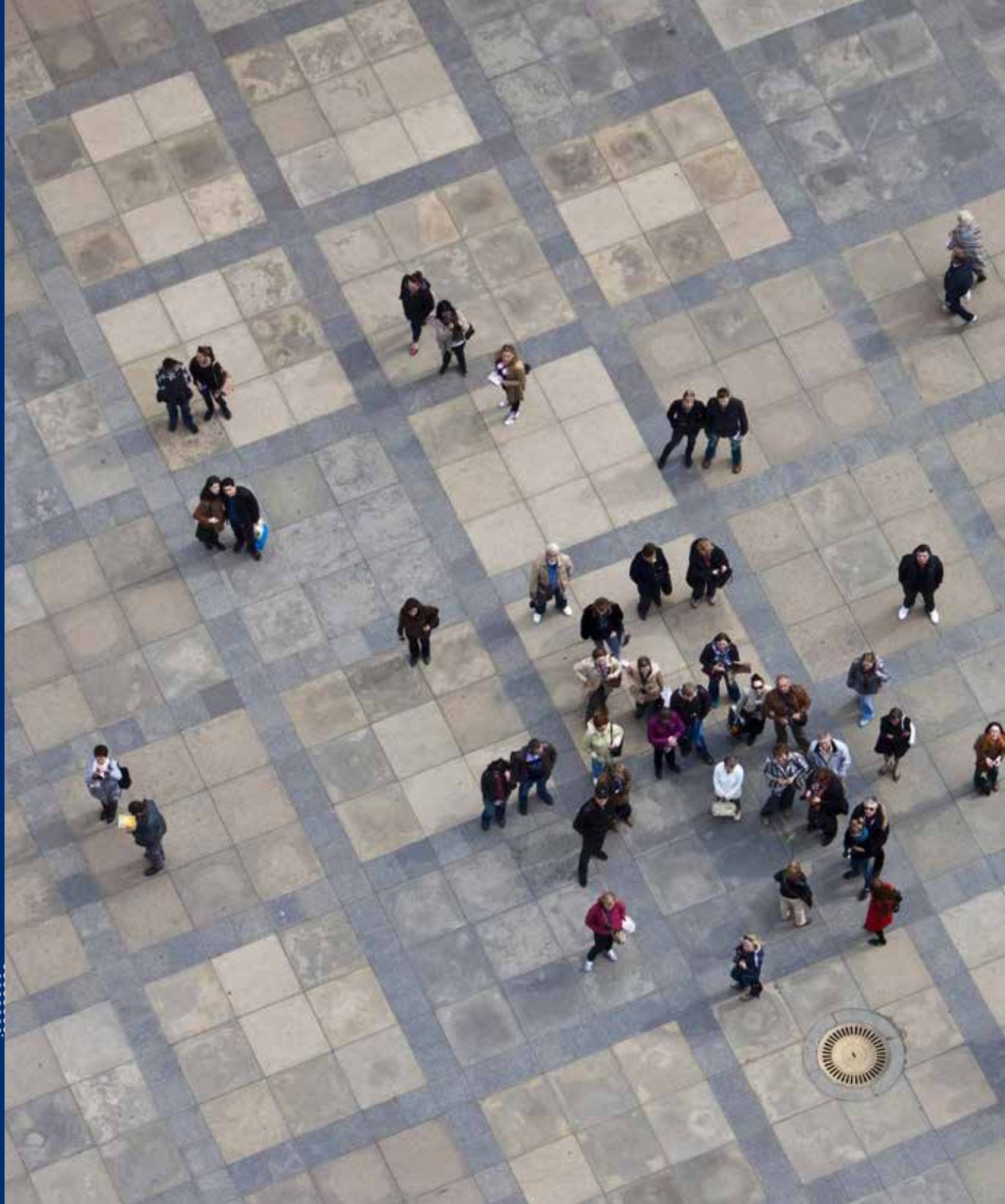
ECONOMY

Share of Czechia in GDP of the EU increased	26
Convergence of Czechia has slowed down in recent years.....	28
Regional disparities in household income have slightly decreased.....	30
A large part of corporations in Czechia is controlled by foreign owners	32
EU countries are the main destination of exports from Czechia	34
Czechia remains a net importer as for majority of agricultural products	36
Czechia still belongs to the most industrial economies in the EU	38
Information and communication were developing the most.....	40
Role of investment in intellectual property has been strengthening for a long time	42
Housing and energy account for over a quarter of household consumption in Czechia	44
General government debt as percentage of GDP in Czechia has long been among the lowest in the EU	46
Over a half of an increase in consumer prices in Czechia was in 2019–2023	48
Labour productivity and wage levels in Czechia have slowly converged towards the EU.....	50
The COVID-19 pandemic accelerated an increase in some forms of flexible working arrangements.....	52

03

ENVIRONMENT AND INNOVATION

In 2020, a decrease in generation of greenhouse gases accelerated	56
Share of renewable energy sources in electricity consumption is increasing in Czechia	58
Three quarters of environmental protection expenditure go to waste management and wastewater management	60
Czech enterprises had the highest proportion of sales from e-commerce in the EU in 2022	62
Three quarters of the high-tech sector in Czechia consist of ICT services	64
Sources of funding of R&D from abroad mostly go to universities	66





01

POPULATION



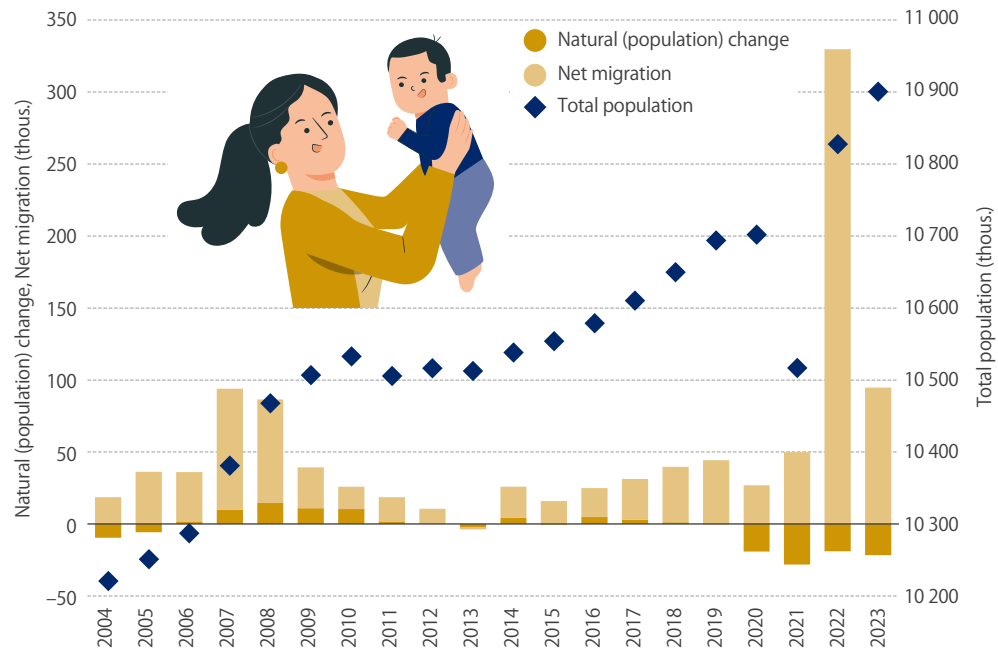
Mainly external migration was contributing to the population increase in Czechia

The rapid population growth of Czechia during the first years after its accession to the EU was related to the increasing immigration from Eastern European countries as well as an increasing number of children born. The total population growth came to a halt after 2010, when the Czech economy was gripped by the longest recession in modern history, which led to a slowdown in external migration. In the second half of the last decade, filled by the economic boom, the domestic demand for cheaper labour force from abroad was strengthening again. In 2020 and 2021, the population balance was negatively affected by the COVID-19 pandemic. Subsequently, the number of deaths returned to normal, however, the birth rate decreased. This negative development was fully compensated by the arrival of refugees from Ukraine; Czechia received the highest number of the refugees per capita of all EU Member States. At the end of 2023, Czechia already had a population of 10.9 million, which was the highest since 1944.



The population of Czechia increased by **6.7%** from 2004 to 2023.

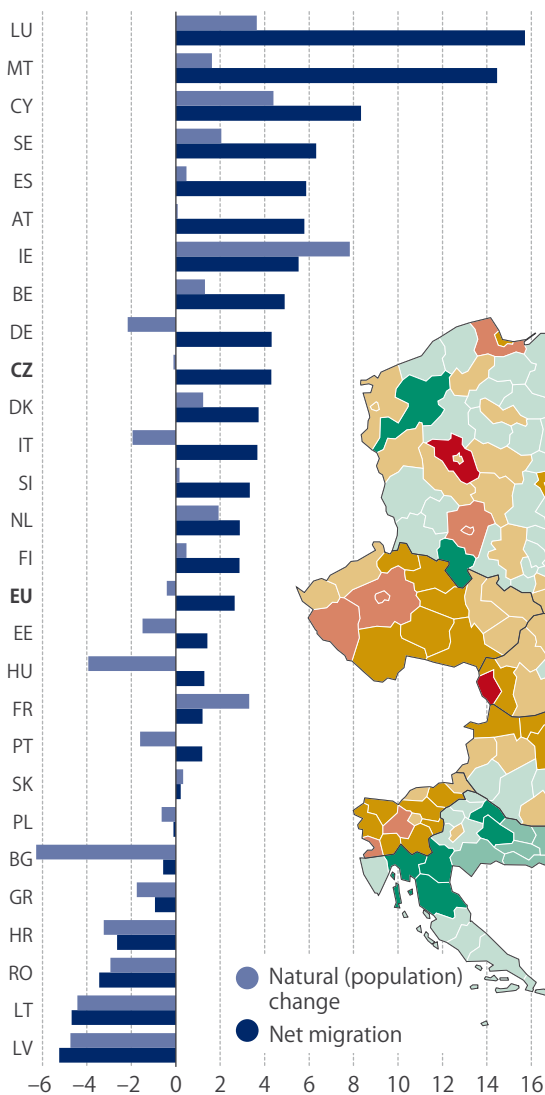
Natural change, net migration (annual total), and the total population of the Czech Republic¹⁾ (as at 31 December, thous.)



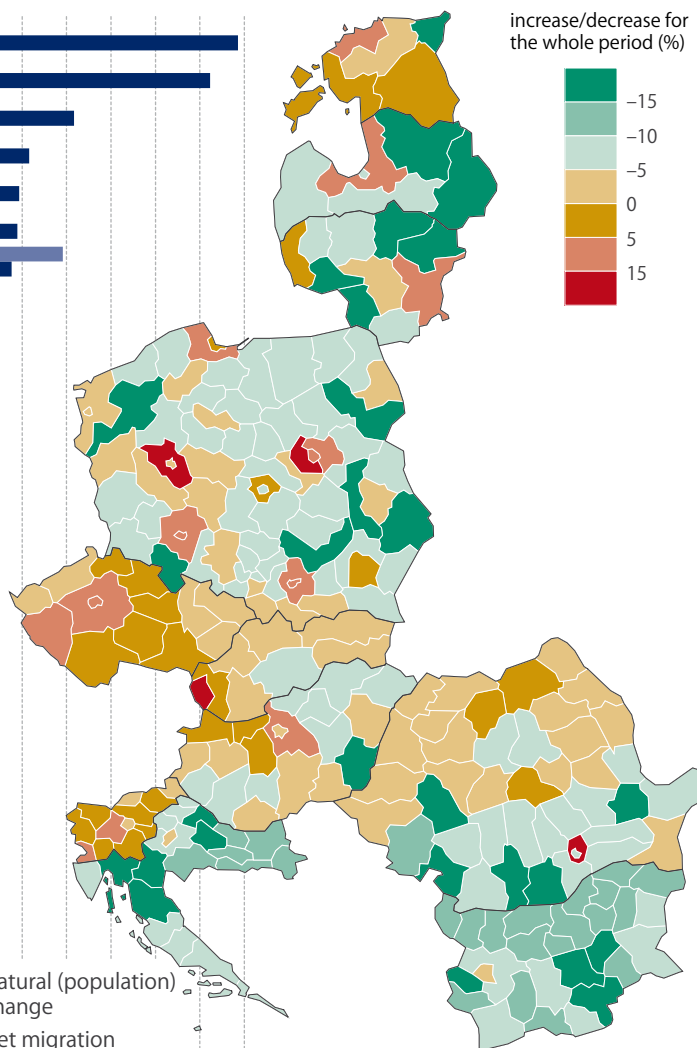
¹⁾ The year-on-year population decrease in 2011 and 2021 is related to the inclusion of the results of the Population and Housing Census.

Population trend in Countries and Regions of the EU

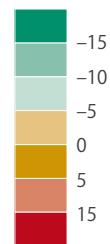
Natural population change and net migration in EU countries (annual average for the period of 2004–2022, per thousand population)



Population trend in the period from 2014 to 2022 in Regions of newer Member States of the EU¹⁾ (%)



increase/decrease for the whole period (%)



● Natural (population) change
● Net migration

Population growth in EU countries (total for the period of 2004–2022, %)

Luxembourg 
45.2

Czechia 
6.0

EU 
3.7

Latvia 
-17.3

¹⁾ Very small countries, which are not divided into regions (Malta, Cyprus), are not shown in the cartogram.

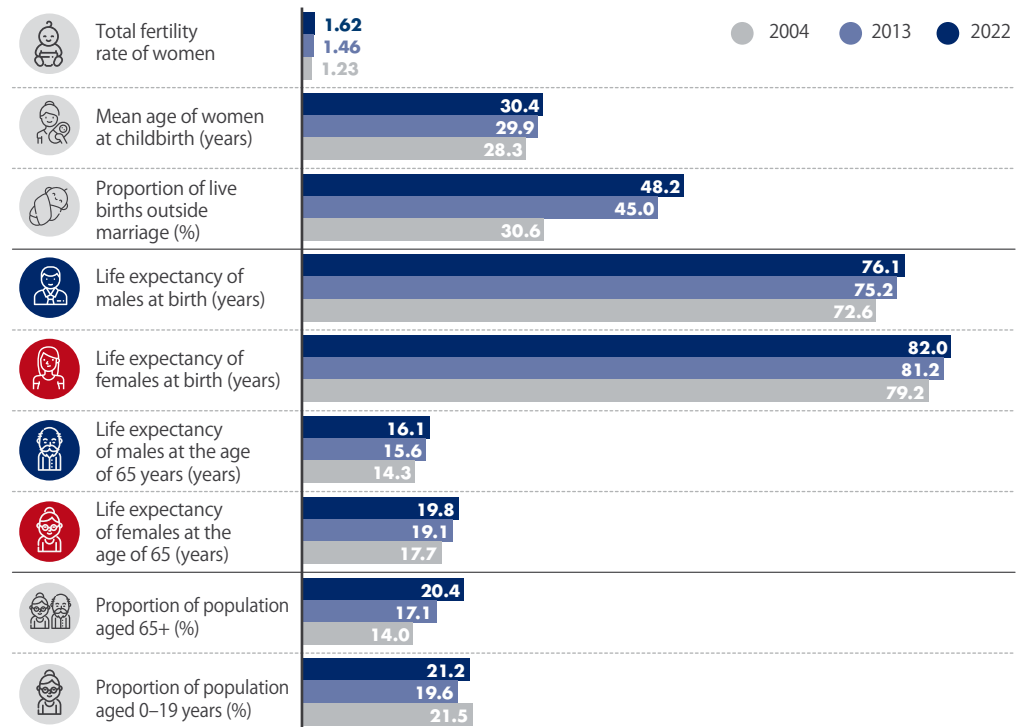
The COVID-19 pandemic disrupted stable demographic trends just for a short time

After the accession of Czechia to the EU, many trends in demographic development from the 1990s continued, e.g. the reduction of mortality and abortion rates. On the other hand, a decrease in female fertility stopped. The total fertility rate was above the EU level since 2015; in 2021, it peaked at 1.83 children per woman. The growth in the average age of mothers at childbirth slowed significantly after 2010. For a short time, the COVID-19 pandemic affected demographic trends mainly through an increase in the mortality and a deeper decline in the nuptiality (marriage rate). Between 2019 and 2021, life expectancy in Czechia decreased by 1.6 year for females and 2.2 years for males – i.e. down to the level from the year 2009. It did not reach its highest pre-pandemic level until 2023, when it approached 77 years for males and 83 years for females. However, it was still slightly lagging behind the EU average.

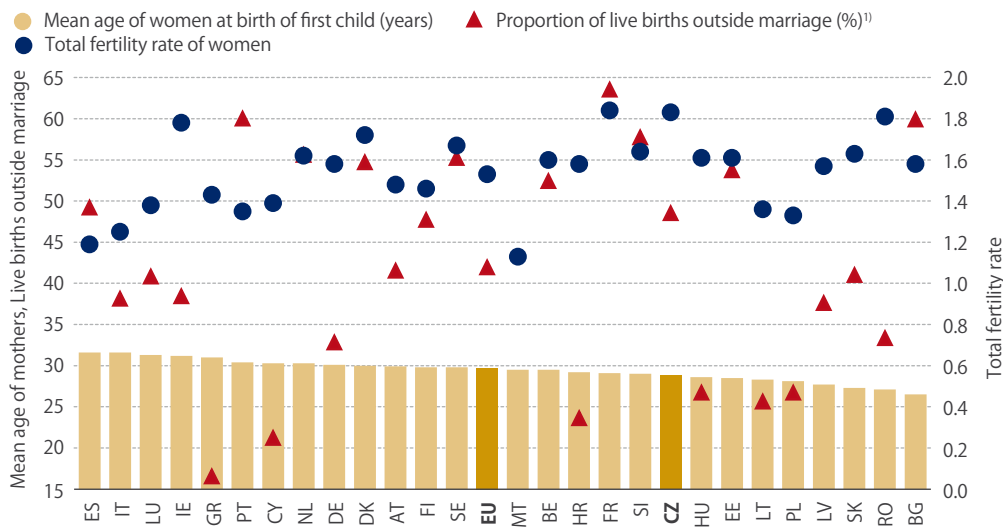


Life expectancy in Czechia increased by **3.2 years** from 2004 to 2022.

Fertility, mortality and age composition indicators, Czech Republic, years 2004, 2013, 2022

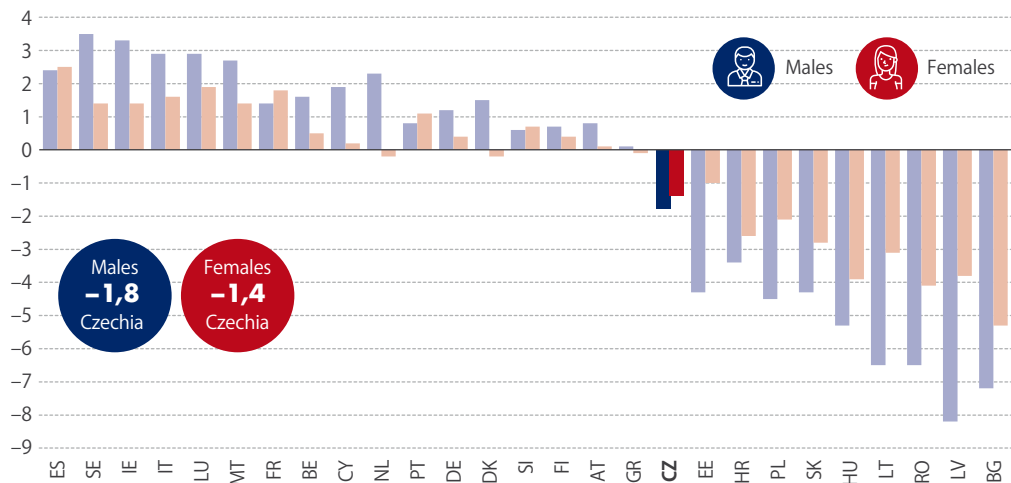


Total fertility rate, Mean age of women at birth of first child, Proportion of live births outside marriage in EU countries in 2021¹⁾



¹⁾ EU and Sweden: data for 2020, Ireland, Estonia and Cyprus: data for 2019, Belgium: data for 2018. Data for Malta were not available.

Life expectancy of males and females: difference from EU average for males and females in 2022 (years)¹⁾



¹⁾ Data for Germany and Ireland are from the year 2021.

Life expectancy at birth, both sexes, in 2022 (years)



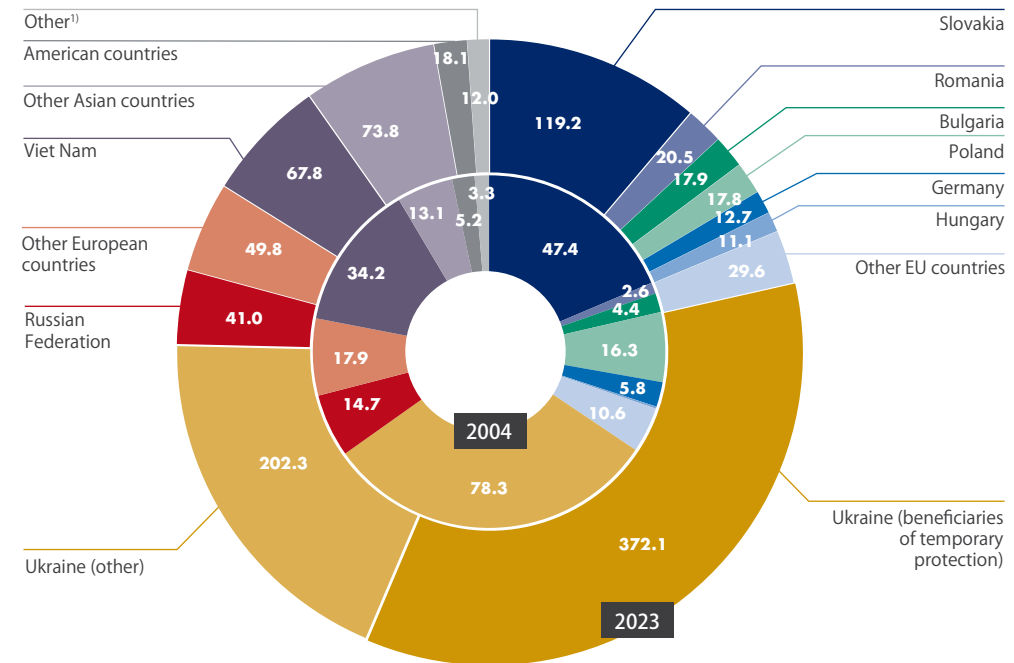
Foreigners already make a tenth of the population of Czechia

The free movement of persons in the EU has intensified migration flows for work-related reasons and for study. Czechia was also becoming more attractive for labour migrants from the so-called third countries. The number of foreigners grew rapidly already in 2004–2008 and afterwards it remained slightly below 0.5 million. Its growth began to accelerate again during the boom after 2015 and the inflow of migrants was not interrupted even by the COVID-19 pandemic. Despite that, Czechia still belonged to EU countries with a lower share of foreigners in total population. The outbreak of war in Ukraine triggered a massive refugee wave that changed the prevailing pattern of labour-motivated immigration into the Czech Republic with a predominance of men. During years 2022 and 2023, the number of foreigners in Czechia increased by two thirds. Thanks to low unemployment, a high share of immigrants is integrating into the labour market and is also contributing to a reduction in the rate of demographic ageing in Czechia.



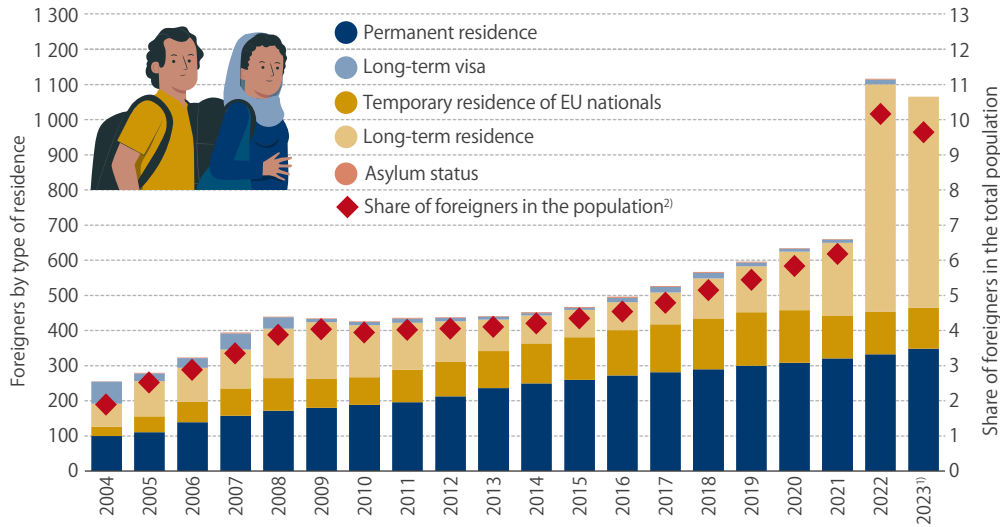
32.8%
of all foreigners in Czechia had permanent residence there at the end of 2023.

Foreigners in Czechia by citizenship (thous., as at 31 December)



¹⁾ Africa, Australia and Oceania, stateless persons, not identified
Source: Directorate of the Foreign Police Service in the Czech Republic

Foreigners in Czechia by type of residence (thous.) and share of foreigners in the population (% , as at 31 December)

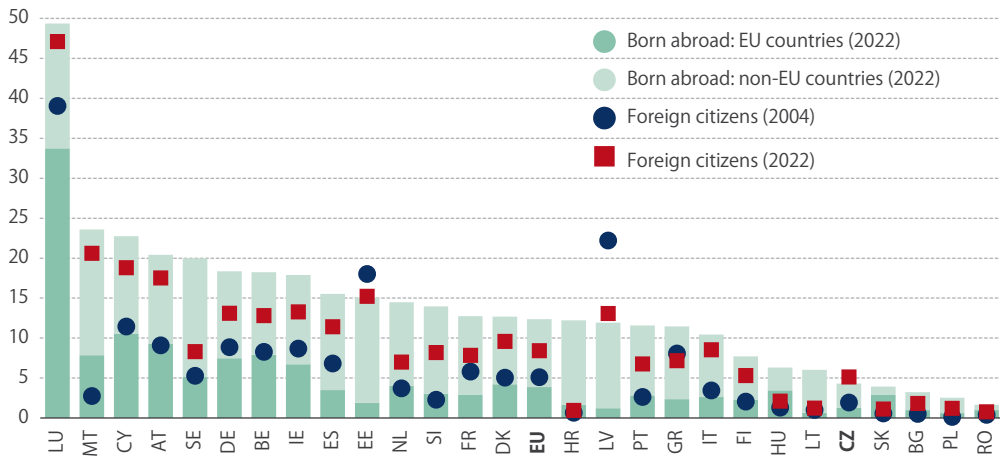


¹⁾ for 2023: preliminary data; the long-term residence category also includes long-term visa and asylum status

²⁾ only foreigners with residence for 12+ months

Source: CZSO and Directorate of the Foreign Police Service in the Czech Republic

Foreigners by citizenship and by country of birth in EU countries¹⁾ (% of the total population, as at 1 January)



¹⁾ instead the piece of data on citizenship for the year 2004: for Estonia and Romania data for 2006, France – 2007, Bulgaria – 2008, Romania – 2012, Croatia – 2013, instead of citizenship for the year 2022: for Romania data for 2021

Share of the born abroad among residents aged 15–64 years in EU countries (% , as at 1 January 2022)

Luxembourg 
57.7

EU 
14.9

Czechia 
6.2

Romania 
0.9

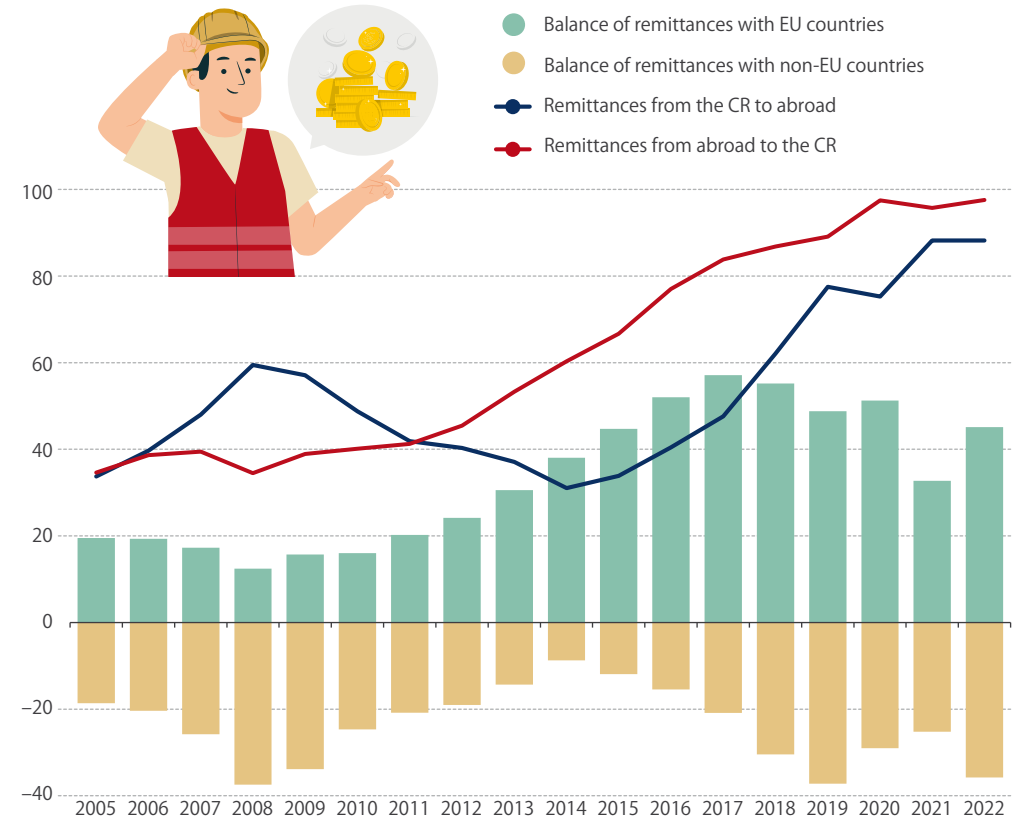
Most remittances flow to Czechia from Germany

Remittances represent estimates of transfers of money that workers send to their domestic economies from abroad. Czechia has been their net recipient since 2011. In Europe, money usually flows from the West to the East and remittances are thus in general a more significant part of the economy for countries of eastern part of the EU. However, as for the share of the balance of remittances as % of GDP Czechia belongs among newer Member States to those below the average. A half of remittances to Czechia consists of payments of people working in Germany and flows from Austria and the United Kingdom of Great Britain and Northern Ireland are also considerable. Conversely, remittances are sent from Czechia back to their homes by Ukrainians and Slovaks.

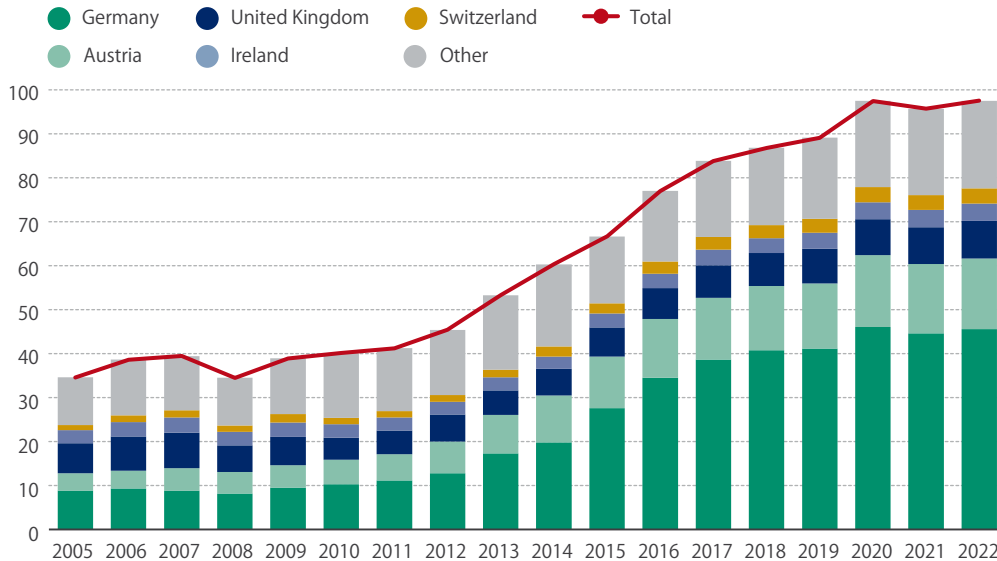


CZK +45.1 billion
the balance of remittances of the CR with other countries of the EU in 2022.

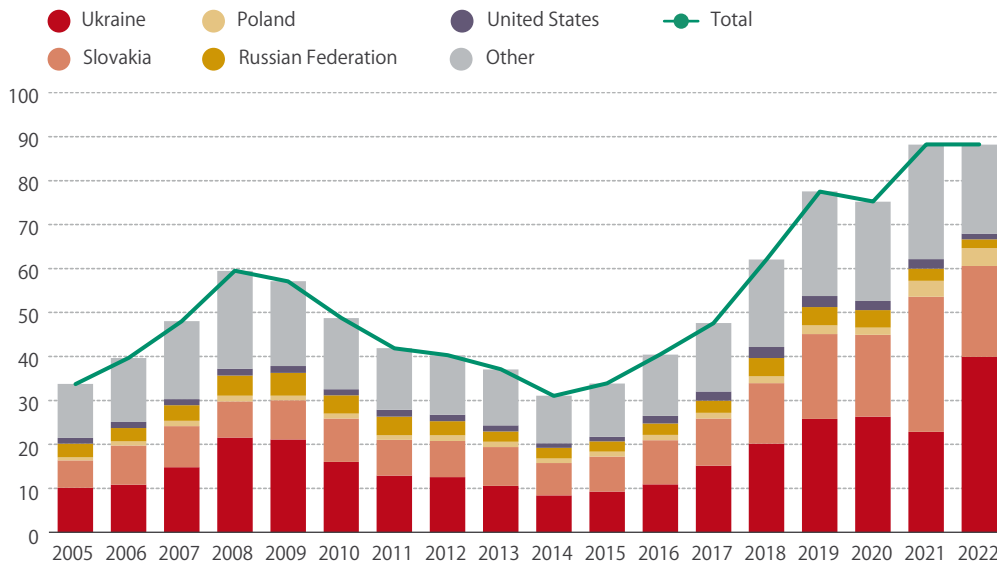
Remittances from and to the CR and balance of remittances of the CR with selected countries (CZK bn)



Remittances from abroad into the CR (CZK bn)



Remittances from the CR to abroad (CZK bn)



Balance of remittances¹⁾
(cumulation for 2019 to 2022, % of GDP)

Croatia 
5.0

Czechia 
0.2

EU 
-0.1

Malta 
-2.6

¹⁾ value of remittances as for Denmark, Luxembourg, and Germany is not available

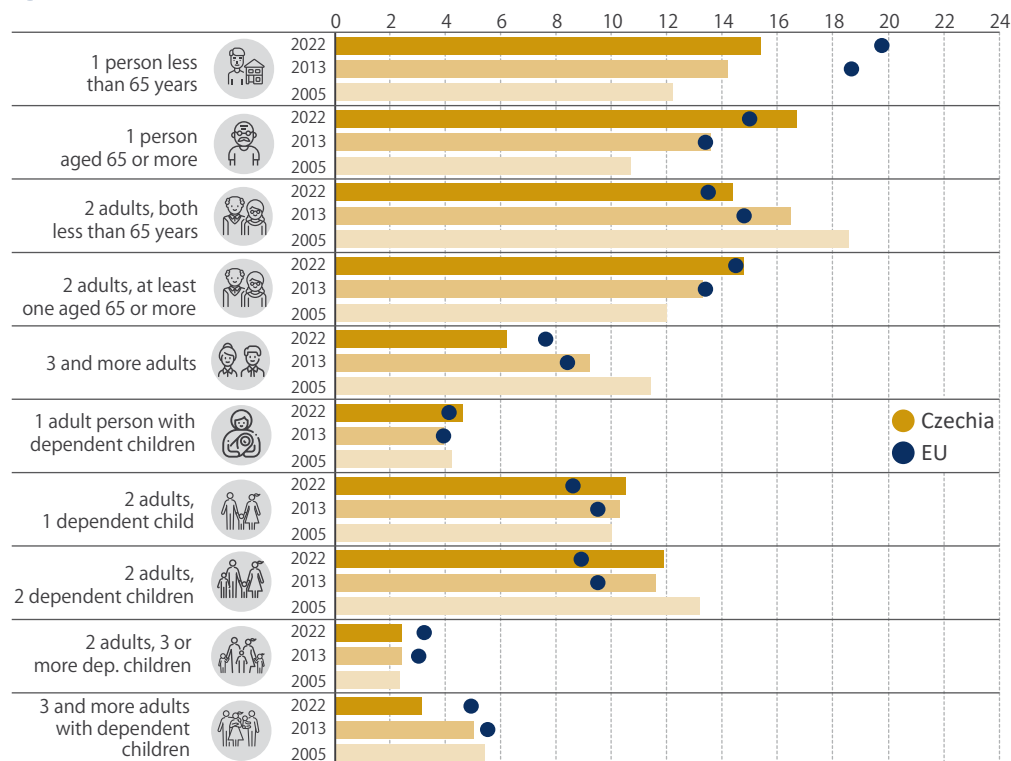
Growth in the number of households of individuals was mainly influenced by the growing population of persons aged 65+ years

From 2004 to 2022, in Czechia, similarly as in the EU, the median age of the population increased by over 5 years to almost 44 years. In Czechia, the proportion of the population aged 65+ years was still slightly below the EU level; a relative increase of the weight of the population of the elderly, however, was one of the highest also thanks to a decrease in mortality. The share of households of persons aged 65+ is thus increasing; a majority of them already consists of individuals only, both in Czechia and the EU. However, also among the younger population, the number of households of individuals is increasing. On the contrary, the weight of families with children remains almost unchanged in Czechia; households of four members are usually slightly prevailing. In the EU, the share of two-parent families with 1 or 2 children is slightly decreasing. An average number of household members has been moderately decreasing for a long time in most of Member States of the EU.



An average household both in the Czech Republic and the EU had **2.3** members in 2022.

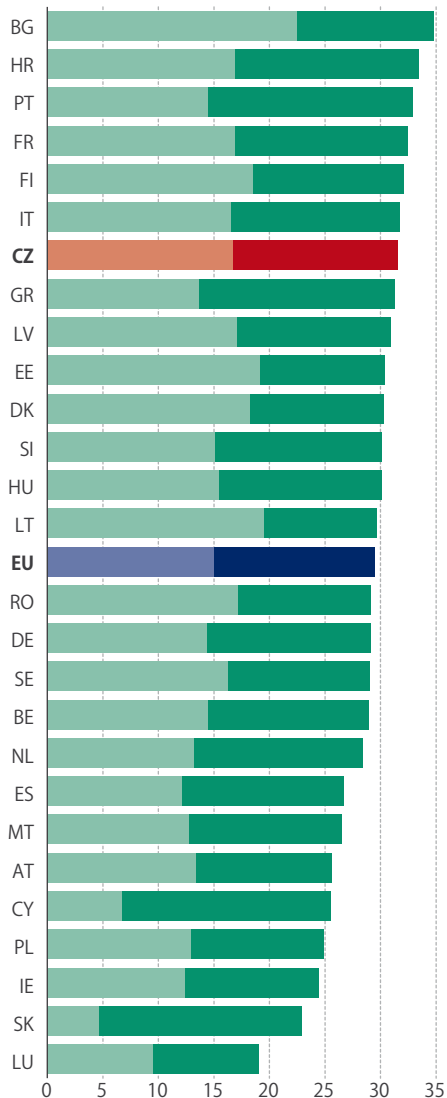
Household types in Czechia and EU¹⁾ (% in total, 2005, 2013, 2022)



¹⁾ Data for the Czech Republic are available only from 2005 onwards. The time series for the EU starts only in 2007.

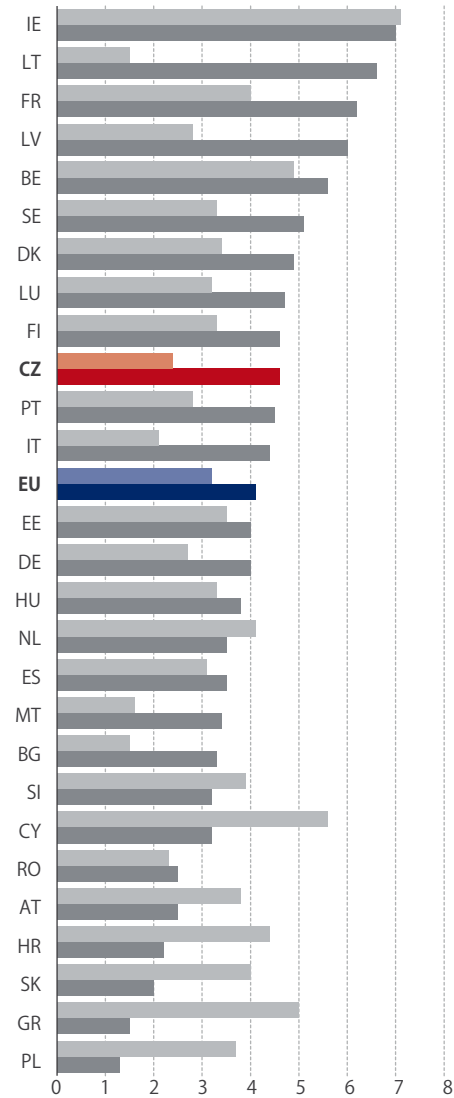
Proportion of households with persons aged 65+ in total number of households (% , EU countries, 2022)

One adult 65 years or over
Two adults, at least one aged 65 years or over



Proportion of selected types of households with children in total number of households (% , EU countries, 2022)

Two adults with three or more dependent children
Single person with dependent children



Average household size (persons) in 2022





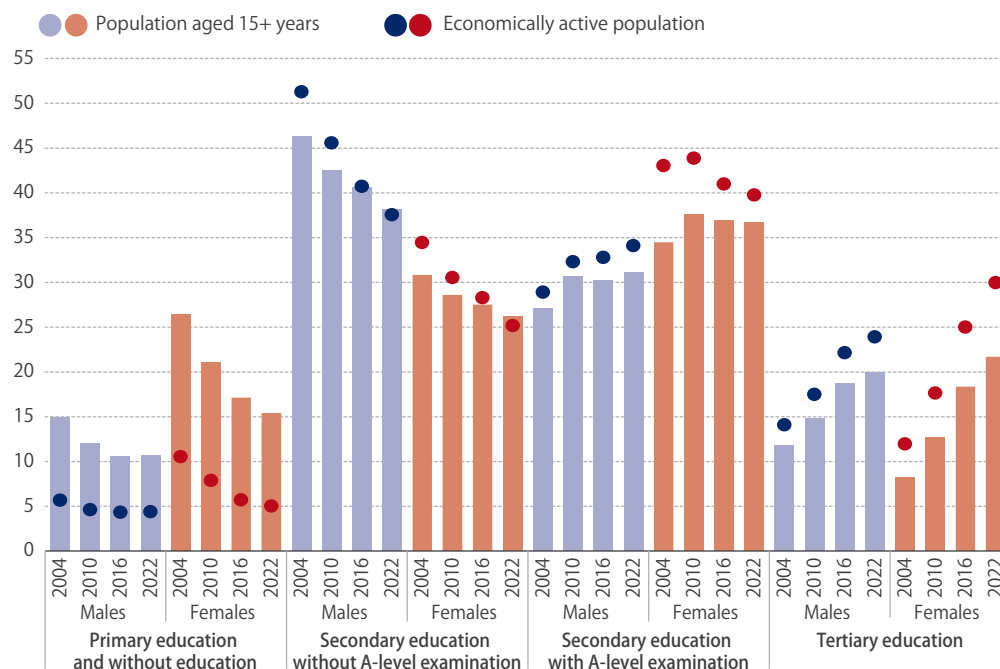
34.6%

of the population of Czechia aged 25–34 years had tertiary education, almost three times higher compared to 2004.

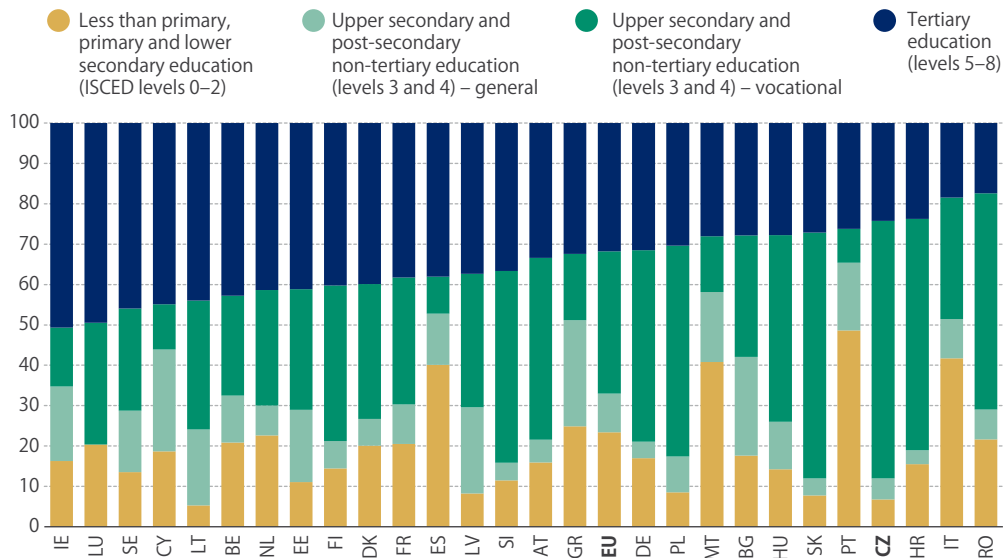
The share of people with tertiary education remains also among the young below the EU average

An increasing importance of education for a good position on the labour market and for the competitiveness of the whole economy stimulates the participation of the population in formal and non-formal education. This, together with natural generational change, is reflected in shifts in the educational composition of the population. It occurs more rapidly in women. As for the population of the Czech Republic aged 15+ years, the proportion of persons with tertiary education increased in 2004–2022 from 10% to 21%. Also the share of those with secondary education with an A-level examination has slightly increased. Czechia together with Slovakia usually belongs within the EU to the countries with the highest share of people with secondary school education among whom graduates from vocational education are dominating. On the other hand, the share of people with tertiary education was still relatively low in the Czech Republic. Only the category of females aged 25–34 years was close to the EU average; in 2022, 43% of females had tertiary education in Czechia, while in the EU it was 48%.

Population of Czechia by educational attainment in the period of 2004–2022 (%)



Population aged 25–74 years by educational attainment in EU countries in 2022 (%)



Population aged 25–34 years with tertiary education in EU countries in 2022 (%)

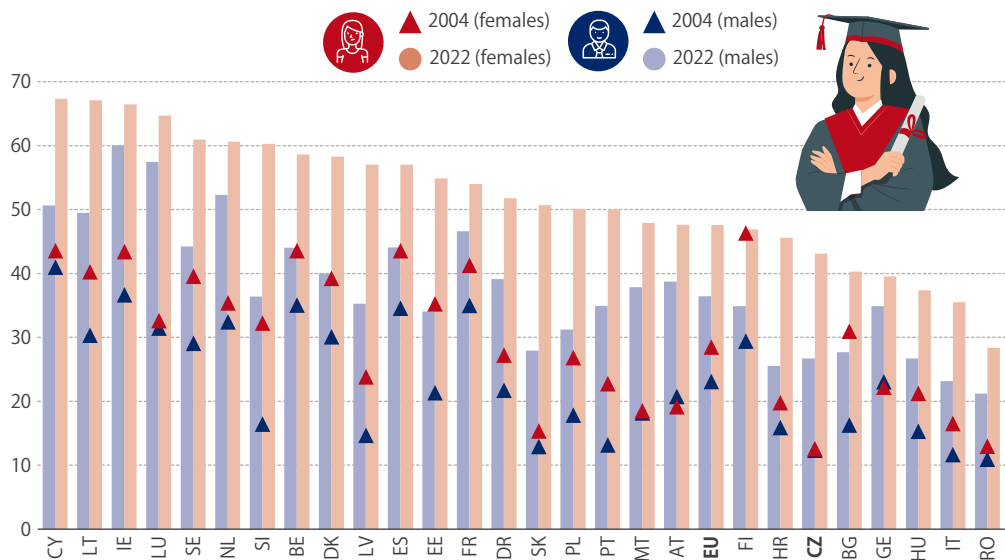
Ireland **63.3**

EU **41.9**

Czechia **34.6**

Romania **24.7**

Population aged 25–34 years with tertiary education in EU countries in 2004 and 2022 (%)







02

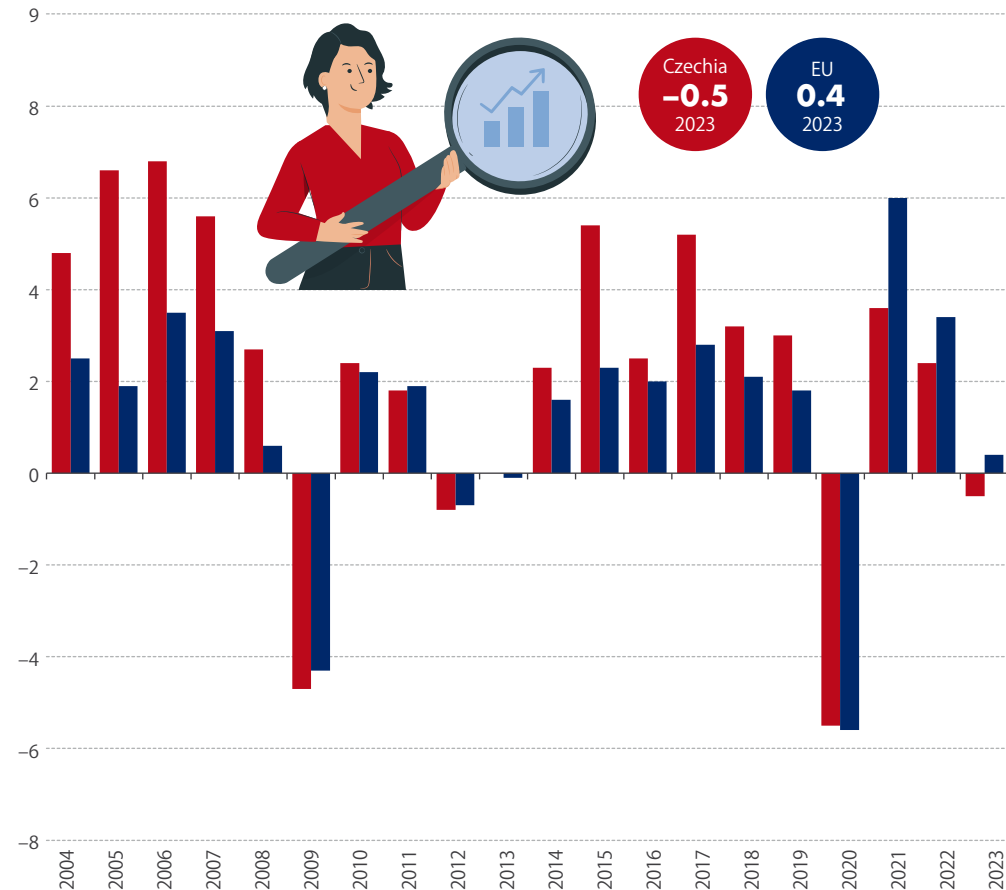
ECONOMY



Share of Czechia in GDP of the EU increased

The economic growth of Czechia and other countries that joined the EU together with it after the year 2000 has been stronger on average over the last twenty years than that of the original Member States. The dynamics of Czech GDP most significantly outpaced the EU average in the first five years of membership. On the contrary, in the last five years, the Czech economy grew more moderately than the European average. Despite that, Czechia's share of EU GDP continued to grow. While in 2004 Czechia accounted for 1.1% of the EU economy, last year its share increased to 1.8%.

 Gross domestic product in Czechia and the EU (% , real growth)



2.3%

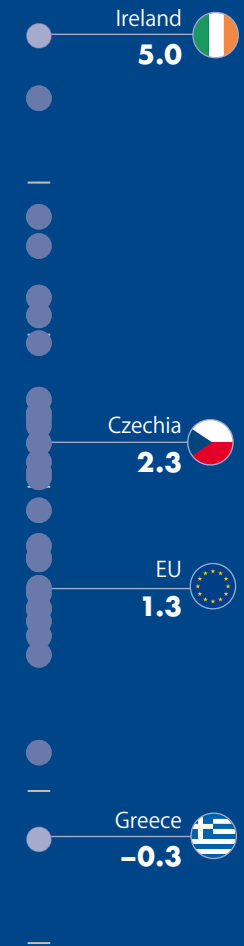
average real GDP growth in Czechia from 2004 to 2023.



Average year-on-year growth rate of the gross domestic product in EU countries (%)

	2004–2008	2009–2013	2014–2018	2019–2023
EU	2.3	-0.2	2.2	1.1
Belgium	2.5	0.7	1.7	1.5
Bulgaria	6.6	0.1	2.5	2.6
CZECHIA	5.3	-0.3	3.7	0.5
Denmark	1.8	-0.2	2.4	2.0
Germany	1.9	0.6	1.9	0.4
Estonia	5.6	-0.3	3.5	1.3
Ireland	3.6	-0.2	10.3	6.5
Greece	2.9	-5.9	0.5	1.5
Spain	3.1	-1.8	2.7	0.9
France	1.9	0.4	1.5	0.7
Croatia	4.1	-2.3	2.4	3.3
Italy	0.9	-1.6	0.9	0.8
Cyprus	4.7	-1.9	3.9	3.8
Latvia	7.4	-1.7	3.1	1.2
Lithuania	7.0	-0.2	3.3	2.6
Luxembourg	4.1	1.2	2.5	1.9
Hungary	2.9	-0.7	4.0	2.1
Malta	2.9	2.9	7.7	4.8
Netherlands	2.7	-0.4	2.2	1.7
Austria	2.7	0.3	1.7	0.5
Poland	5.2	2.6	4.4	2.9
Portugal	1.4	-1.6	2.2	1.7
Romania	7.9	-0.6	4.9	2.4
Slovenia	4.9	-1.8	3.5	2.2
Slovakia	7.3	1.1	3.3	1.3
Finland	3.4	-1.0	1.4	0.4
Sweden	2.9	1.0	2.8	1.6

Average year-on-year growth rate of the gross domestic product from 2004 to 2023 (%)



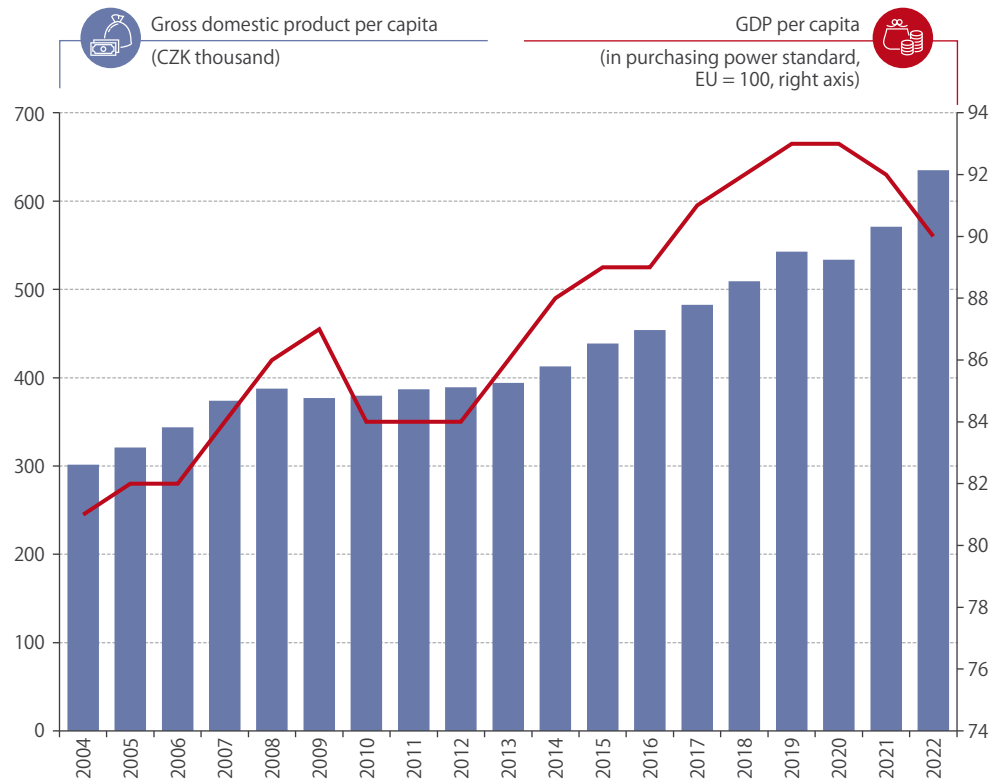
Convergence of Czechia has slowed down in recent years

Up until the year 2020, an above-average economic growth also meant a fast convergence of Czech economy to the average of the whole EU. When the Czech Republic joined the EU in 2004, the gross domestic product per capita in Czechia was 78% of the EU average (after having taken into account the different price level). However, the convergence stopped at 93%, which the Czech economy reached in 2019. Even with the COVID-19 slump, this level was maintained; however, the real recovery of the Czech economy in 2021 and 2022 lagged relatively behind the rest of the EU. In 2022, the gross domestic product per capita in Czechia reached 90% of the EU average.



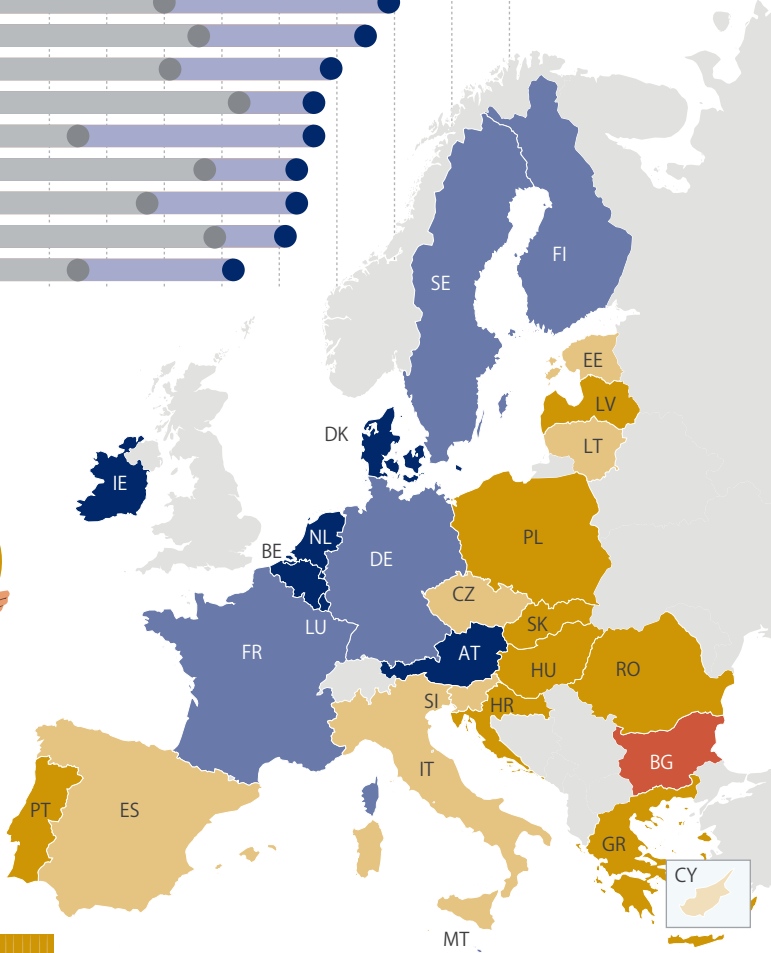
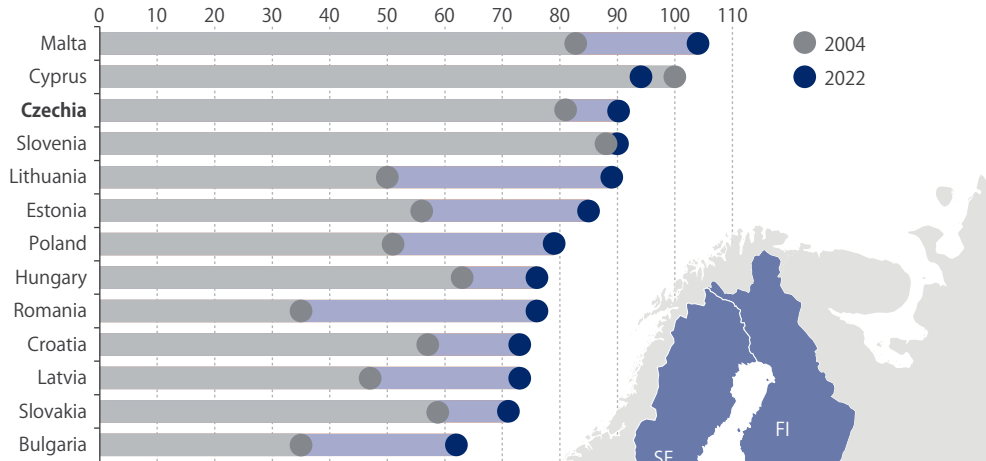
The gross domestic product per capita in Czechia in 2022 reached **90%** of the EU average in real terms.

Gross domestic product per capita in the CR in 2004–2022





GDP per capita in member states that joined the EU after 2000 (PPS, EU = 100)



GDP per capita (PPS, EU = 100)
in 2022



GDP per capita (PPS, EU = 100) in 2022



Regional disparities in household income have slightly decreased

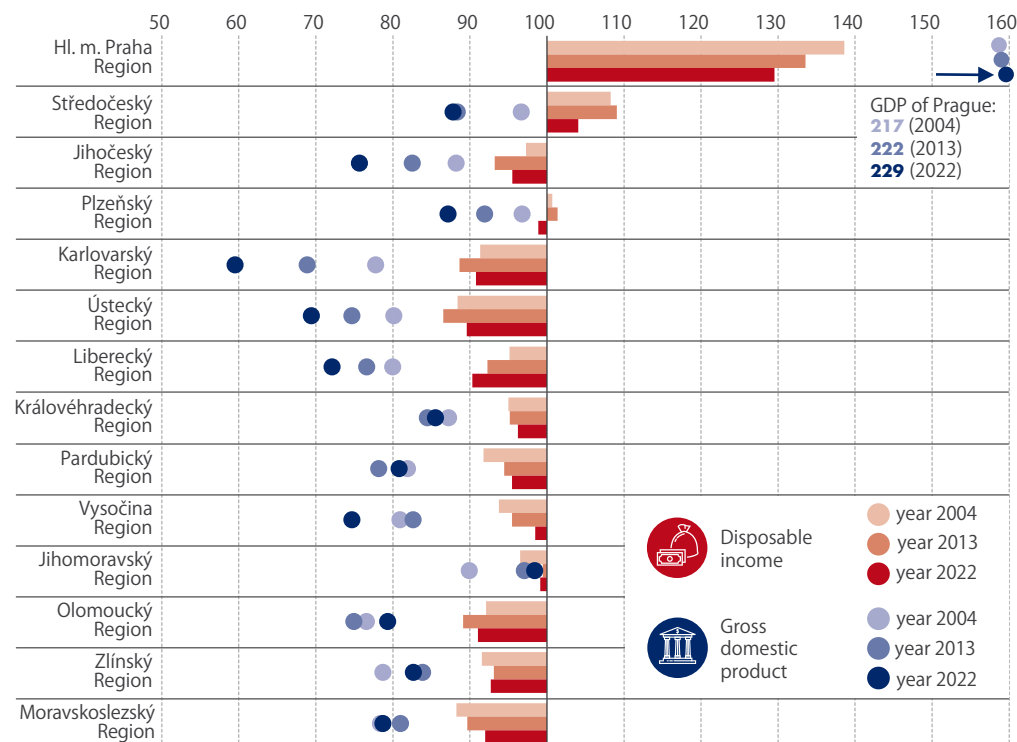
After the growth of regional economic disparities in Czechia in the 1990s, disparities have stabilised. EU accession has brought a significant increase in subsidy support for structurally affected and economically weak regions. There was also an influence of internal development prerequisites, which derived primarily from the quality of human capital of the Regions. Prague's role as a natural centre continued to strengthen slightly; in 2004, the GDP per capita in Prague was 217% of the national level and in 2022 it was already 229% also thanks to increasing of commuting for work from other Regions. The position of Moravian regions, especially of the Jihomoravský Region, was improving. The opposite was true for the Karlovarský Region. Disparities among Regions in terms of household net disposable income, which comprehensively captures the income situation of households, were much lower compared to GDP and, moreover, they have been declining slightly in recent years.



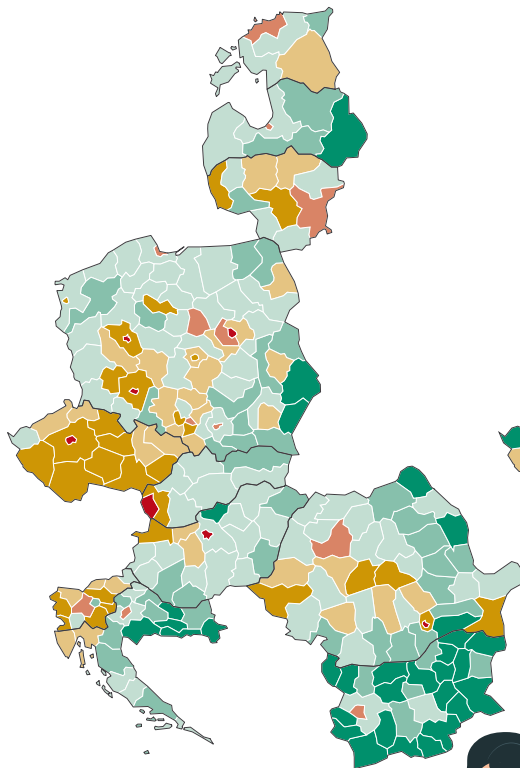
54%

was in 2022 the GDP per capita in PPS in the Karlovarský Region in relation to the whole EU.

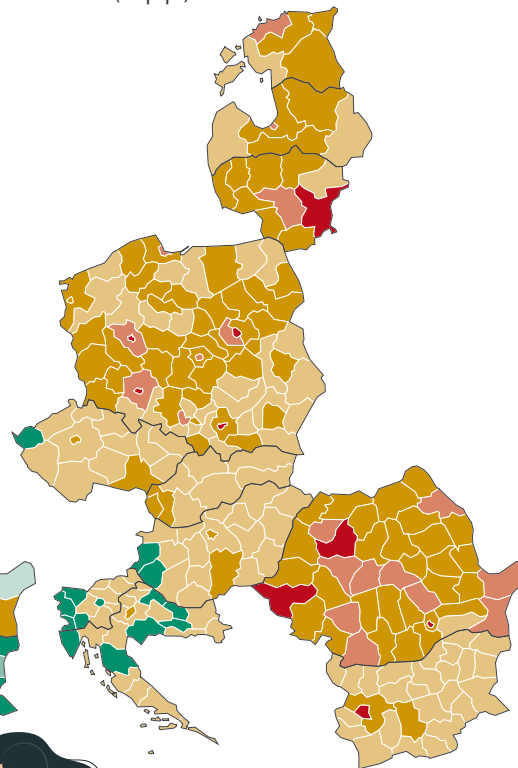
GDP and net disposable income of households per capita in Regions of Czechia
(national level = 100)



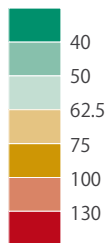
Gross domestic product in PPS per inhabitant in the regions of newer EU Member States¹⁾ in 2020
(EU level = 100)



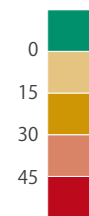
Gross domestic product in PPS per inhabitant in the regions of newer EU Member States¹⁾ (EU level = 100), difference between 2020 and 2004
(in p.p.)



GDP per capita
(EU = 100)



Development of GDP per capita (in relation to the EU, 2020–2004 in p.p.)



Dispersion of regional employment rates (for persons aged 20–64 years) at NUTS 3 level in 2022
(coefficient¹⁾ of variation²⁾, %)

Italy 
17.4

EU 
11.2

Czechia 
2.4

Ireland 
1.8

¹⁾ weighted by the absolute population of each region

²⁾ no data for Cyprus, Malta, and Luxembourg

¹⁾ These are countries that have joined the EU after 2000. Very small states are not displayed (Malta, Cyprus).

A large part of corporations in Czechia is controlled by foreign owners

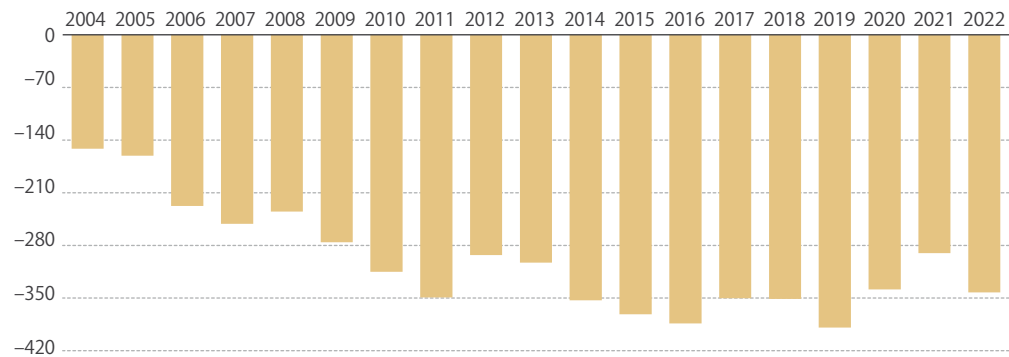
Free movement of capital, which is one of principles of functioning of the EU, deepened an inflow of foreign capital to the Czech economy after the Czech Republic joined the EU. Foreign-controlled non-financial corporations represent for a long-term almost a half of the gross value added formation of non-financial corporations in Czechia. Their share in compensation of employees and in investment activities is slightly smaller. The strong presence of foreign owners is naturally also reflected in an outflow of profits from corporations to abroad. During the last three years, the proportion of property income of the rest of the world slightly decreased below 10%. In 2022, the volume of income from direct investments of the rest of the world reached over CZK 456 billion. CZK 128 billion were reinvested back.



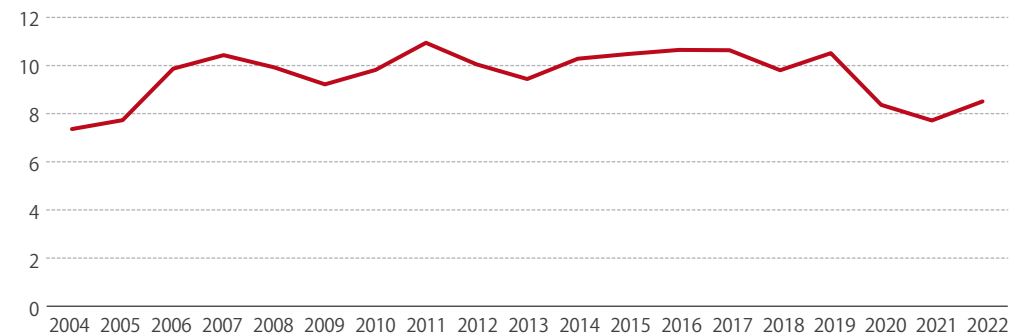
8.5%

the proportion of property income of the rest of the world in the Czech gross domestic product in 2022.

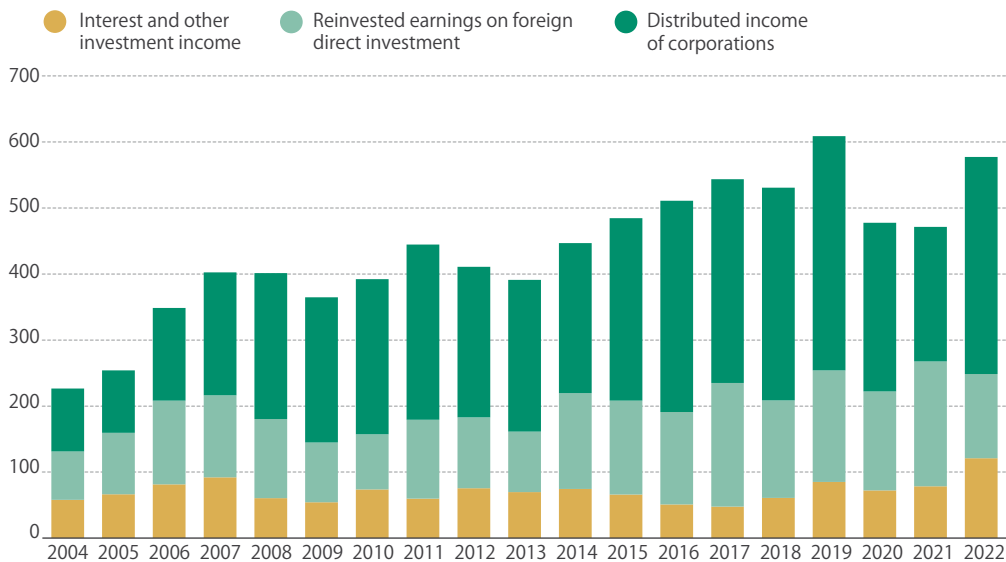
Balance of property income (CZK bn)



Proportion of property income of the rest of the world in the CR (% of GDP)



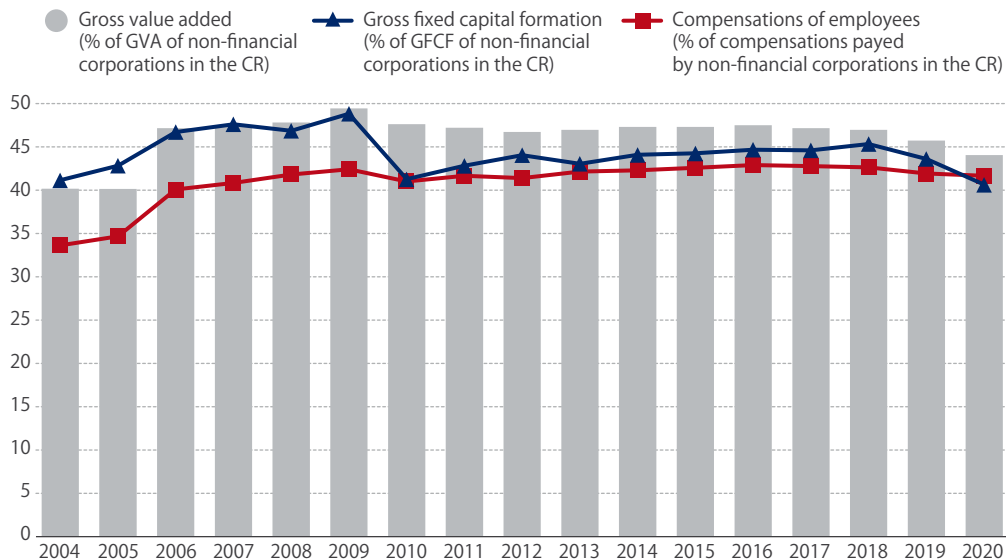
Property income of the rest of the world in the CR (CZK bn)





Proportion of property income of the rest of the world in 2022 (% of GDP)


Luxembourg 
365.6

Foreign controlled non-financial corporations



Czechia 
8.5

EU 
5.8

Germany 
3.1

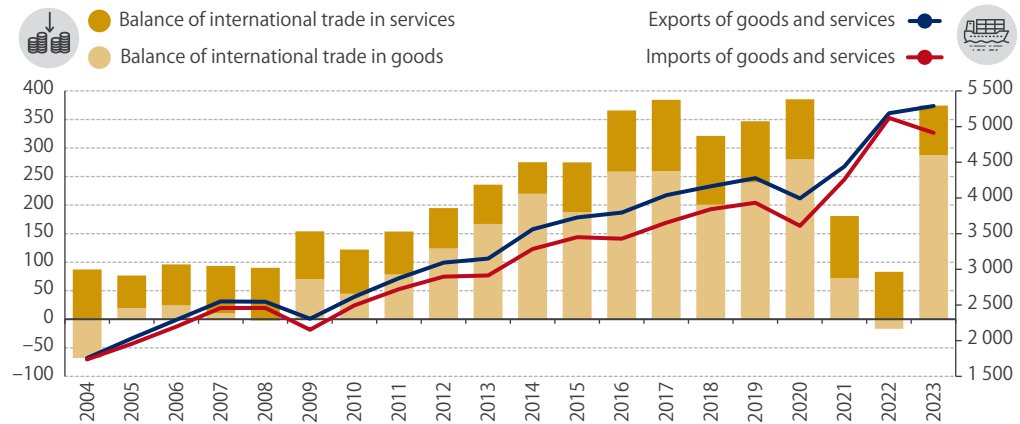
EU countries are the main destination of exports from Czechia

After joining the free European market, the growth of the international trade surplus became the main factor of the economic growth of Czechia. Especially the international trade in goods surplus was increasing. The motor vehicle sector, which accounts for over a quarter of exports of goods from Czechia, has quickly established a major position in exports. Machinery and equipment, electrical equipment, and fabricated metal products also play a significant role. About 80% of Czech exports of goods have been going to EU countries for a long time, which is one of the highest shares in the EU. Germany remains a key trading partner for Czechia.

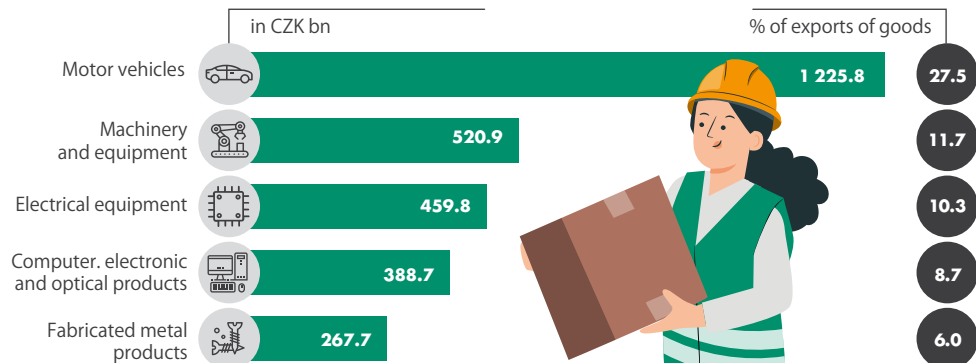


79.9%
share of exports of goods to the EU in total exports of goods from the Czech Republic in 2023.

Development of international trade in goods and services in Czechia (CZK bn)



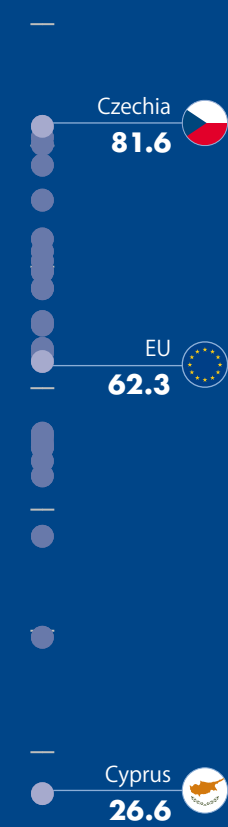
The most significant export commodities in 2023



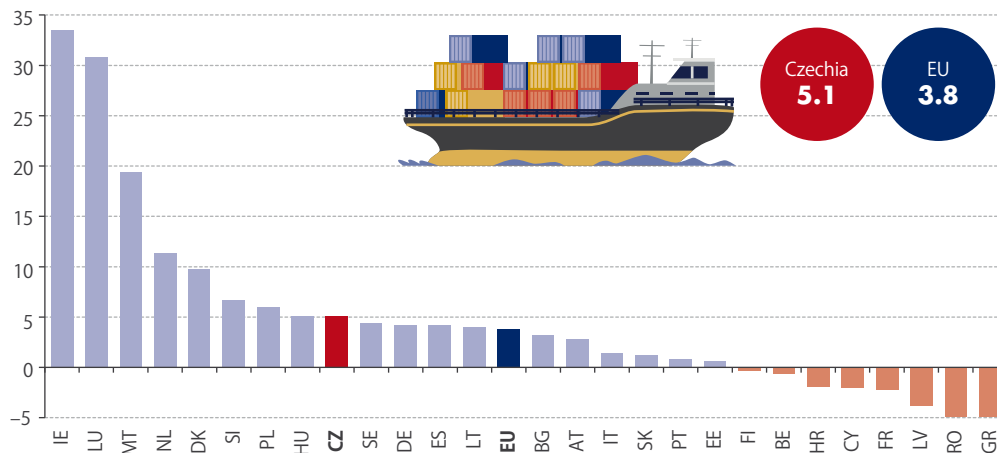
International trade in goods: main partners from the EU in 2023 (CZK bn)



Share of exports to the EU in total exports in 2022 (%)



External balance of goods and services in 2023 (% of GDP)



Czechia remains a net importer as for majority of agricultural products

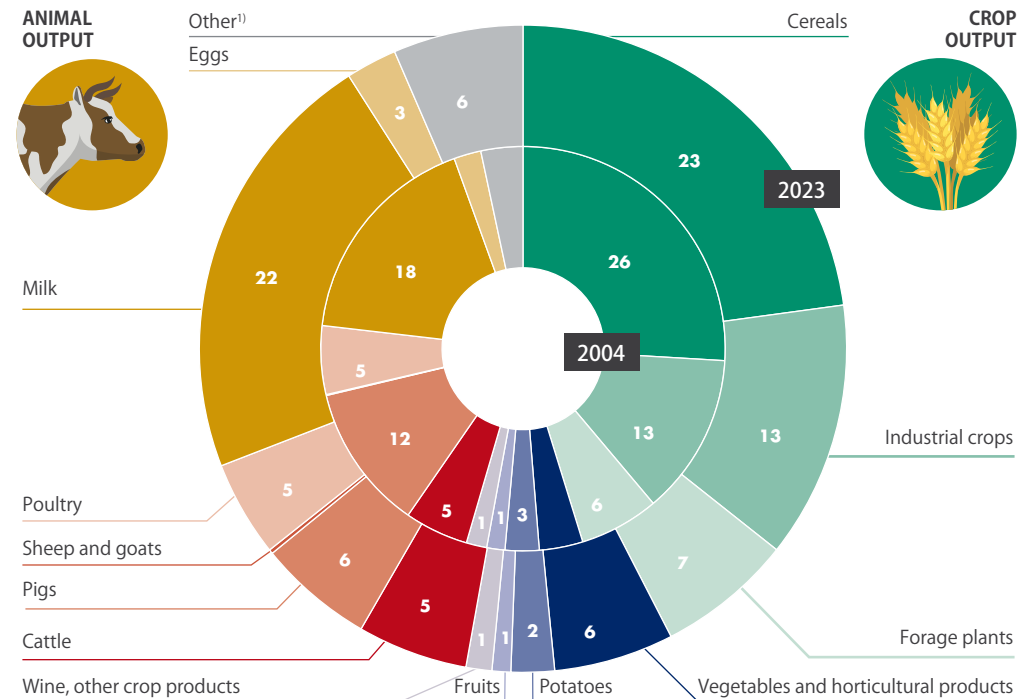
Accession of Czechia to the EU has brought increased subsidy support to agriculture, but concurrently also increasing competitive pressure from the open European market. This has led to a change in the structure of agricultural production. Especially pigs have declined due to low profitability and fruit and potato growing have become less important. However, a number of areas of crop production have developed. Milk production has maintained good competitiveness thanks to its rising productivity. Overall, however, Czechia remained a net importer of agricultural products. Primary agricultural production and the related food industry were considerably affected by the energy crisis in 2022, which entailed an increase in production costs and consequently also lower profits of companies. Agriculture, forestry and fishing in Czechia employed 3% of all workers and accounted for 2% of the economy's value added.



CZK 9.6 billion

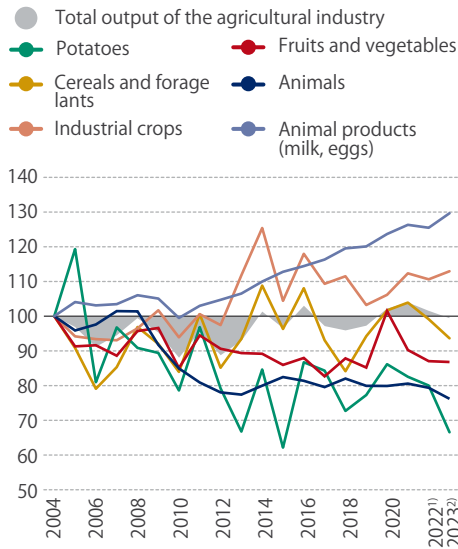
Czechia's international trade surplus with forestry and logging products in 2023.

Structure of output of the agricultural industry in Czechia (% , current prices)



¹⁾ agricultural services output, non-agricultural secondary activities

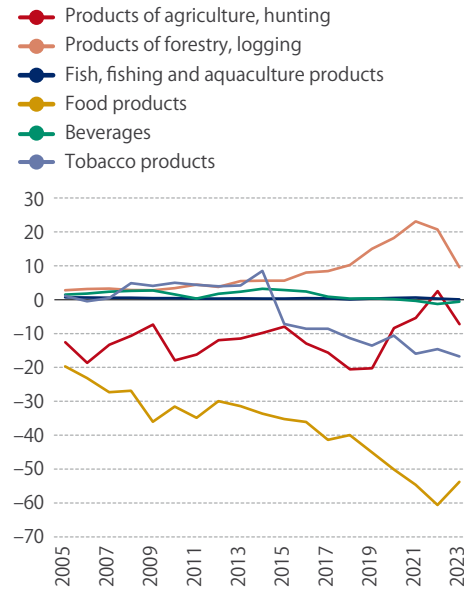
Total output of the agricultural industry and its selected items in Czechia (CZK, constant prices, production level of 2004 = 100)



¹⁾ half-finalised data

²⁾ first estimate

Balance of international trade of Czechia in agricultural and related products¹⁾ (CZK billion, current prices)

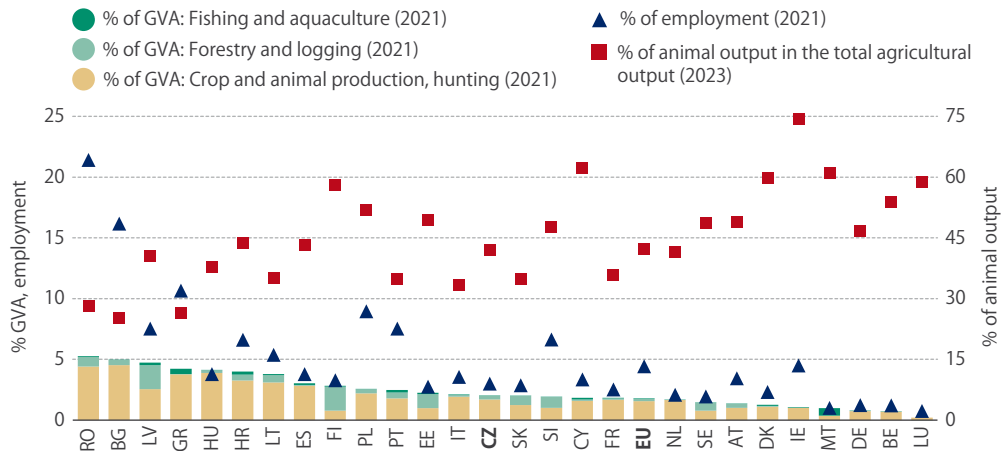


¹⁾ Agricultural and related products – they include 6 categories of goods shown in the chart (CPA classes 1–3 and 10–12).

Share of crop production in the total agricultural output in EU countries in 2023 (%)

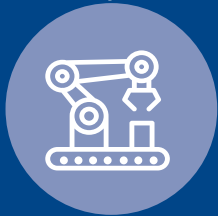


Share of agriculture, forestry and fishing in the gross value added (GVA) and employment in the entire economy in EU countries (%)



Czechia still belongs to the most industrial economies in the EU

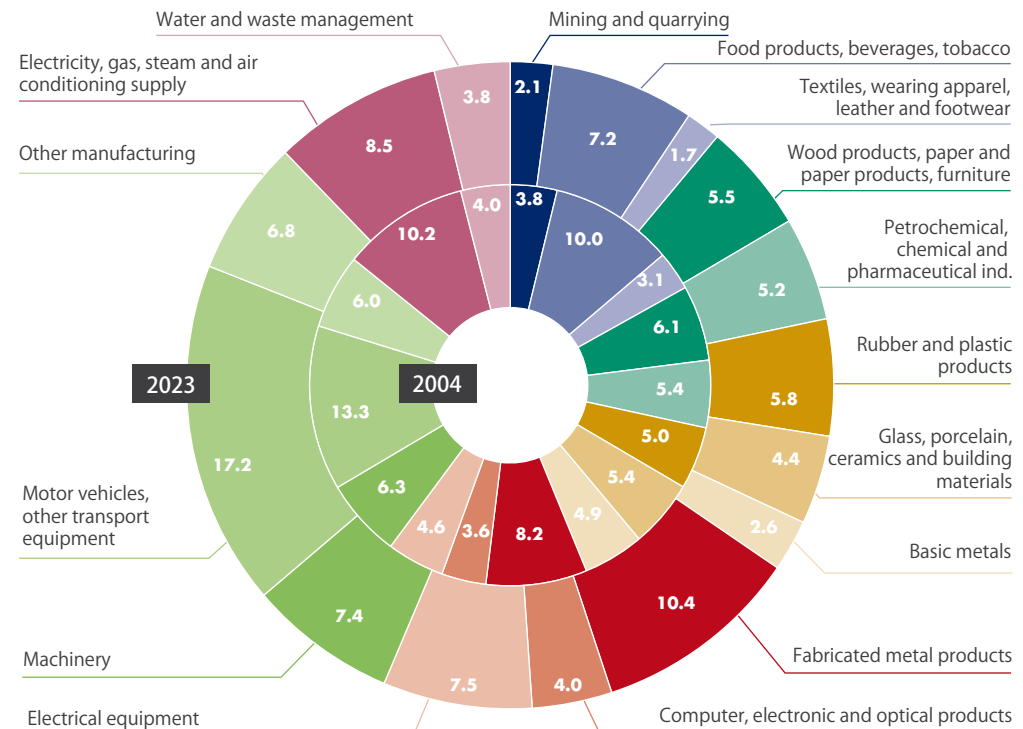
Industry in the Czech Republic usually plays the role of a key driver of the economy in boom periods. Traditionally, it forms a backbone of the international trade and also significantly contributes to the investment activity of the whole economy. Also thanks to a strong role of foreign-controlled enterprises, the value added in industry increased by two thirds in real terms between 2004 and 2022, moreover, with the employment virtually stagnating. Structural changes were also taking place – the relative importance of mining and quarrying, energy branch (electricity, gas, steam and air conditioning supply), basic metals and smaller, low-technology industries (e.g. manufacture of food products) was declining. On the other hand, manufacture of transport equipment with related industries or machinery were developing. However, the strong export orientation towards euro area countries, together with high import intensity, make the domestic industry more vulnerable in periods of recession and during supply shocks manifested by disruptions in global supply chains.



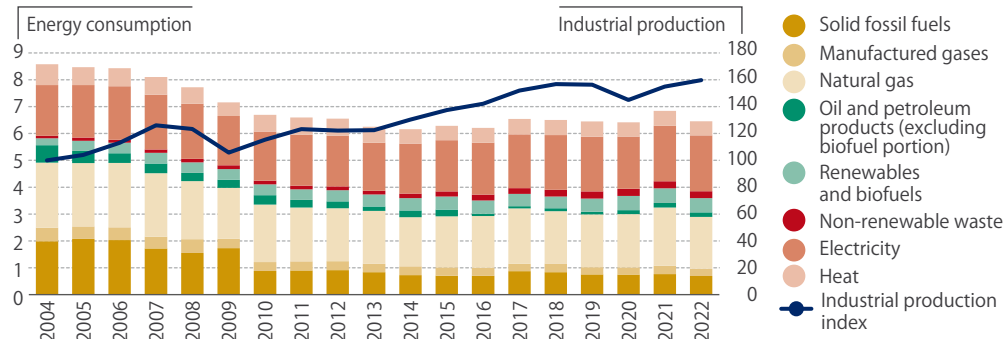
24.7%

a decrease in the final energy consumption in industry (in natural units) in Czechia for the period 2004–2022.

Gross value added by main industrial branch in Czechia (%)

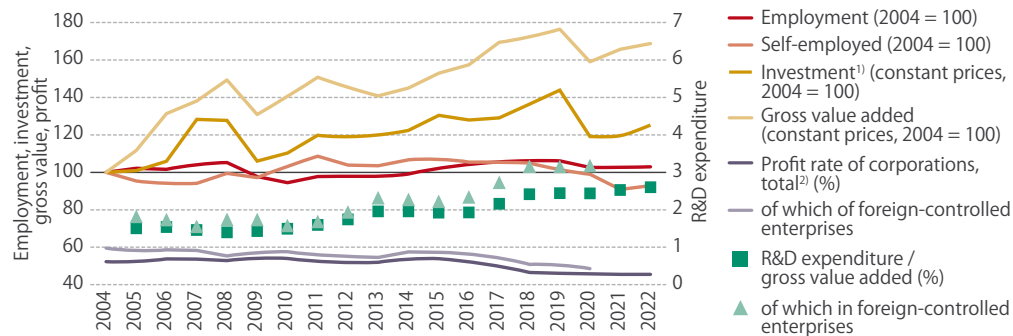


Final energy consumption in industry¹⁾ (million tonnes of oil equivalent) and industrial production index²⁾ in the Czech Republic (2004 = 100)



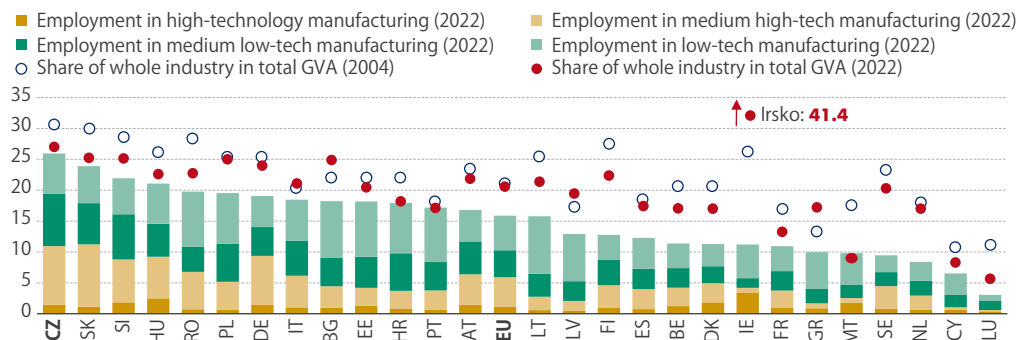
¹⁾ consumption of the energy branch is not included ²⁾ electricity, gas, steam and air conditioning supply is not included

Industry in Czechia – selected indicators



¹⁾ gross fixed capital formation ²⁾ gross operating surplus / gross value added

Share of employment and GVA in industry in the economy in EU countries (%)



Gross value added in manufacture of transport equipment (% of GVA in the entire industry, 2021)

Slovakia 
20.1

Czechia 
16.9

EU 
10.4

Ireland 
0.2

Information and communication were developing the most

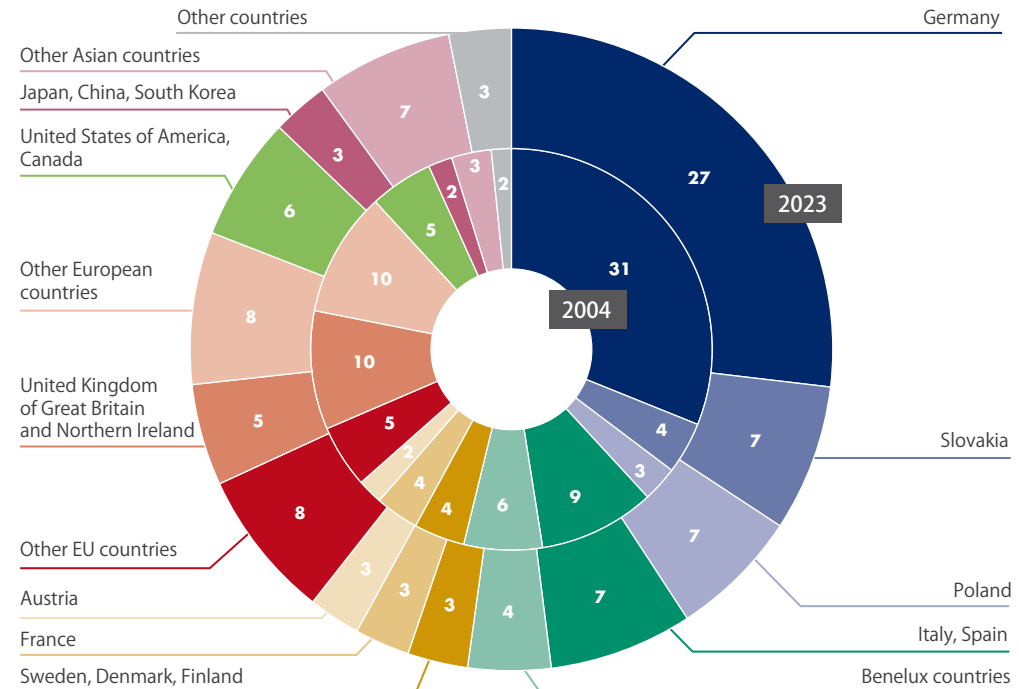
The role of the sector of services in the Czech economy has been increasing. Employment and the value added grew rapidly until 2010, whereas after 2015, a dynamic increase in the economic performance of services overshadowed more modest employment growth. In 2022, services accounted for 65% of the value added in the economy and concentrated 62% of the labour force, about 5 p. p. more than in 2004. The growth in services performance was contributed to by the development of trade and financial and insurance activities and, especially, information and communication, which form the core of high-tech services. On the other hand, accommodation and food service activities, which have not yet fully erased losses of the COVID-19 pandemic era, have relatively lagged behind. However, in 2022, after a one-year pause, tourism already slightly contributed to a surplus of the Czech Republic's balance of payments in services. The role of the service sector in the economy of Czechia is lower than in the EU on average, partly due to the weaker weight of public services.



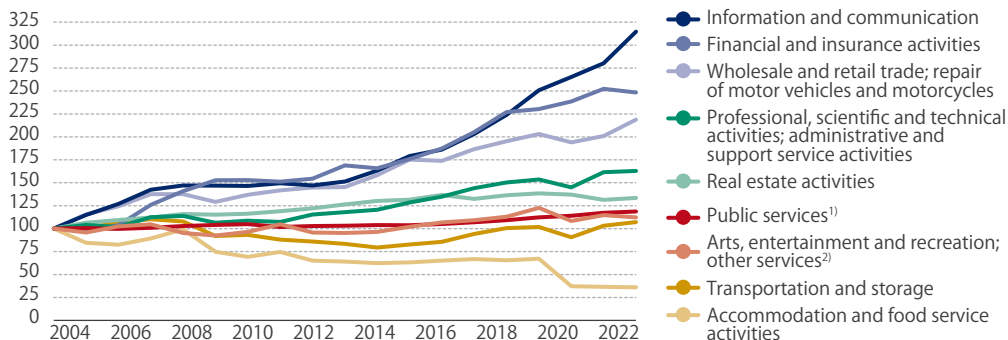
61.2%

the share of non-residents who accommodated in Prague in 2023 in the total number of foreign guests in Czechia.

Structure of overnight stays of non-residents (by citizenship) in collective tourist accommodation establishments in Czechia (%)



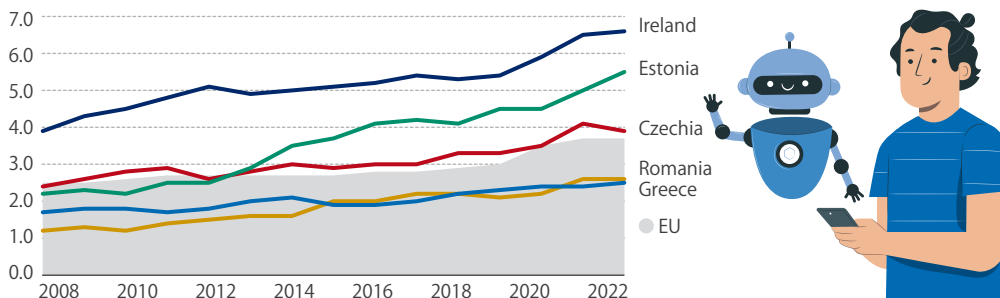
Gross value added in main economic activities of services in Czechia (CZK, constant prices, GVA level of 2004 = 100)



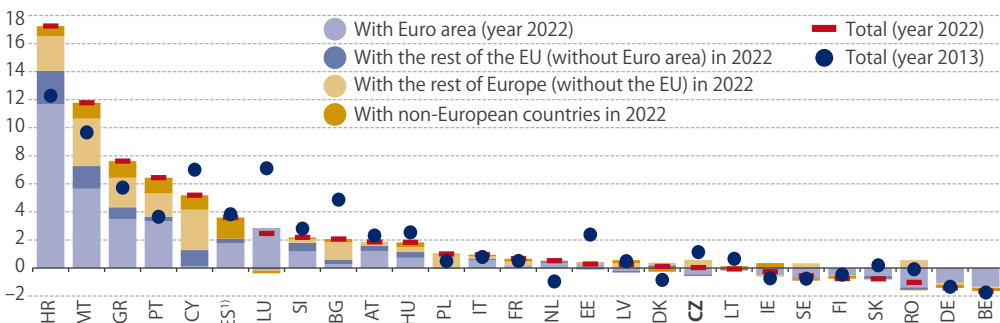
¹⁾ include economic activities: Public administration and defence, education, human health and social work activities

²⁾ other services mainly include: repairs of household goods or personal services (hairdressing, cleaning, funeral, etc.)

Share of employment in knowledge-intensive high-technology services in selected EU countries (% of total employment)



Balance of income and expenditure from tourism to GDP in EU countries (%)



¹⁾ For Spain the category of non-European countries also includes European countries outside the EU.

Share of public services in total employment in EU countries in 2022 (%)

Sweden  **33.8**

EU  **24.0**

Czechia  **19.5**

Romania  **14.0**

Role of investment in intellectual property has been strengthening for a long time

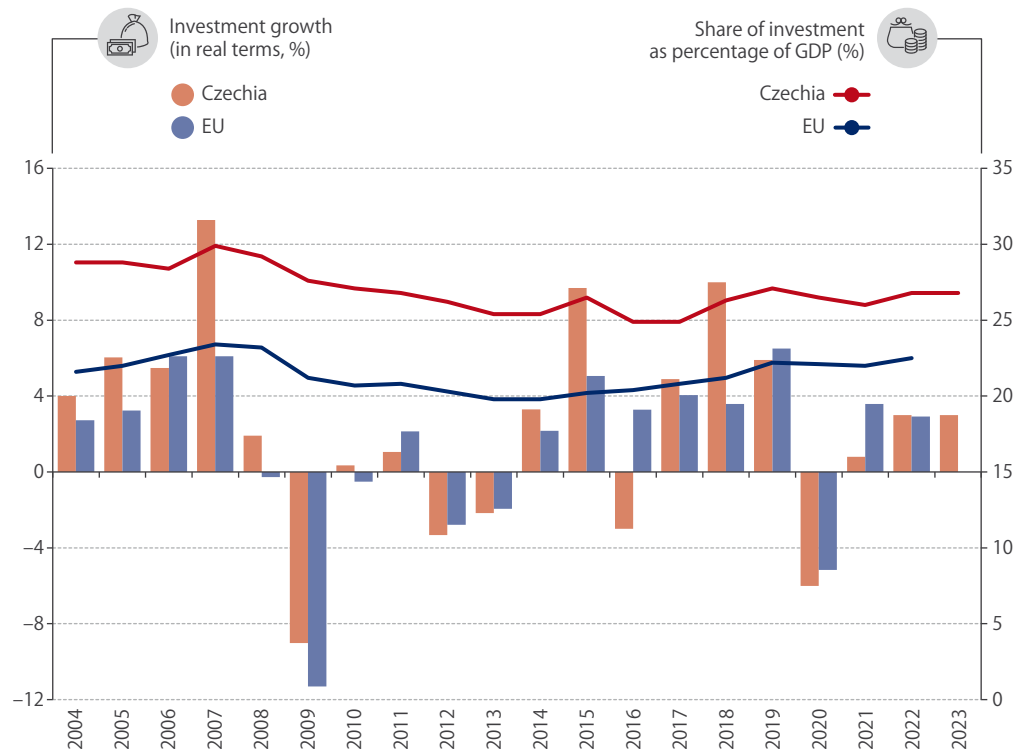
The share of investment as percentage of Czech GDP has long been among the highest in the EU. The form of investment activities is also influenced by drawing of subsidies from EU funds. It is obvious in the considerable development of the area of other buildings and structures, which includes infrastructure projects, especially in the first 10 years of the Czech Republic's EU membership. In industrially oriented Czechia, expenditure on machinery and equipment is also steadily a large part of investment. The share of investment in dwellings, which is a domain of households, is also virtually constant. The share of investment in intellectual property products – which includes research and development but also licences for software products – has been growing over the long term and has become even more important in recent years.



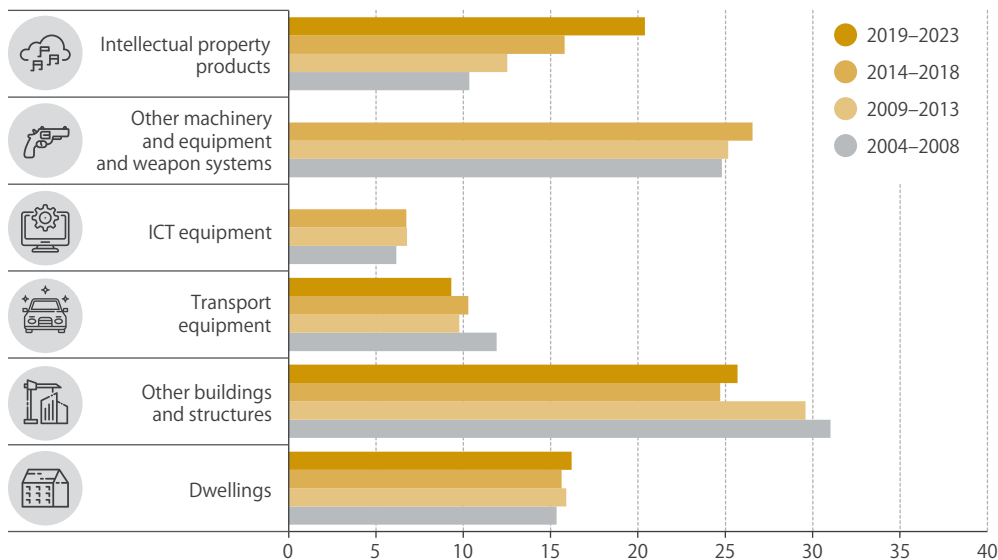
20.4%

the average share of investment in intellectual property products in the total investment in the Czech Republic in 2019–2023.

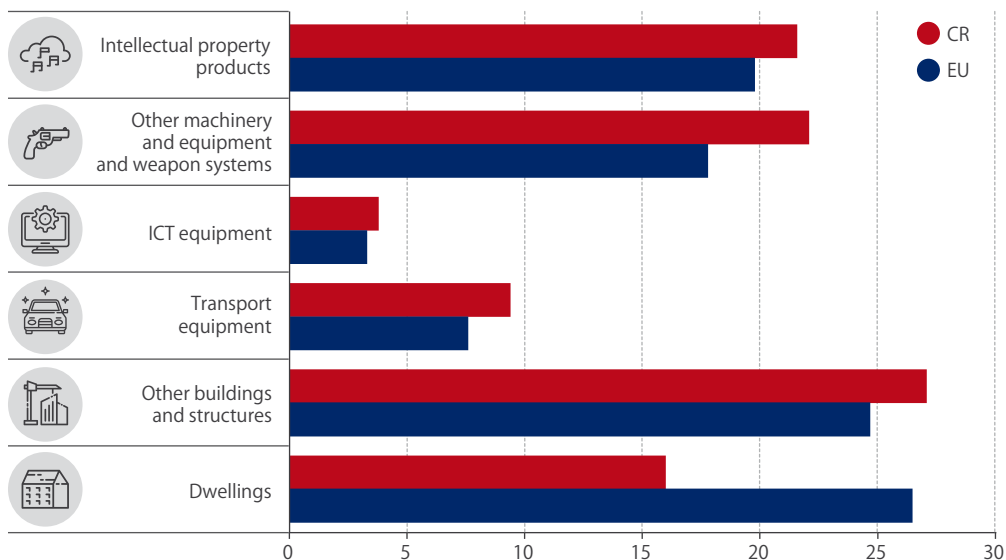
Investment in Czechia and the EU



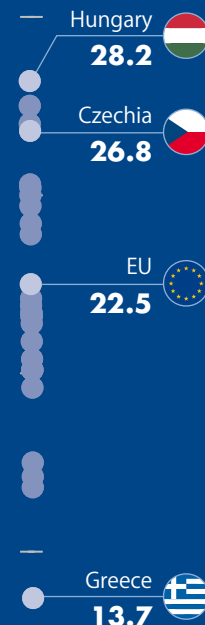
Structure of investment activities in the CR (% of total investment, average value)



Structure of investment activities in the CR and in the EU in 2022 (% of total investment)



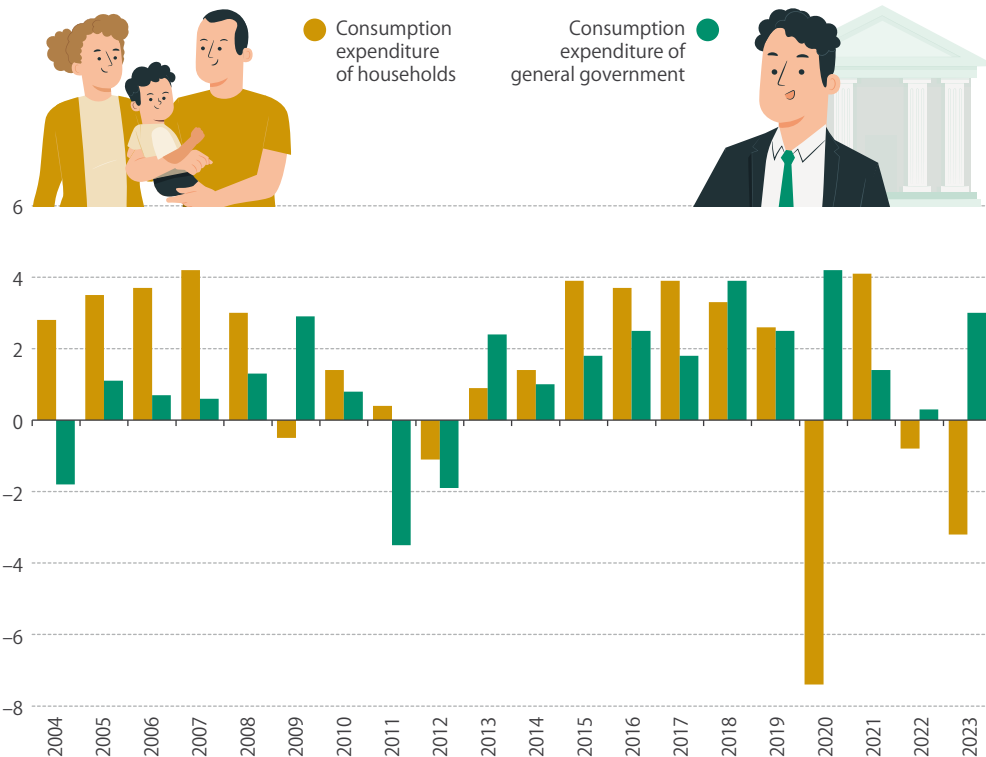
Share of investment in the gross domestic product in 2022 (%)



Housing and energy account for over a quarter of household consumption in Czechia

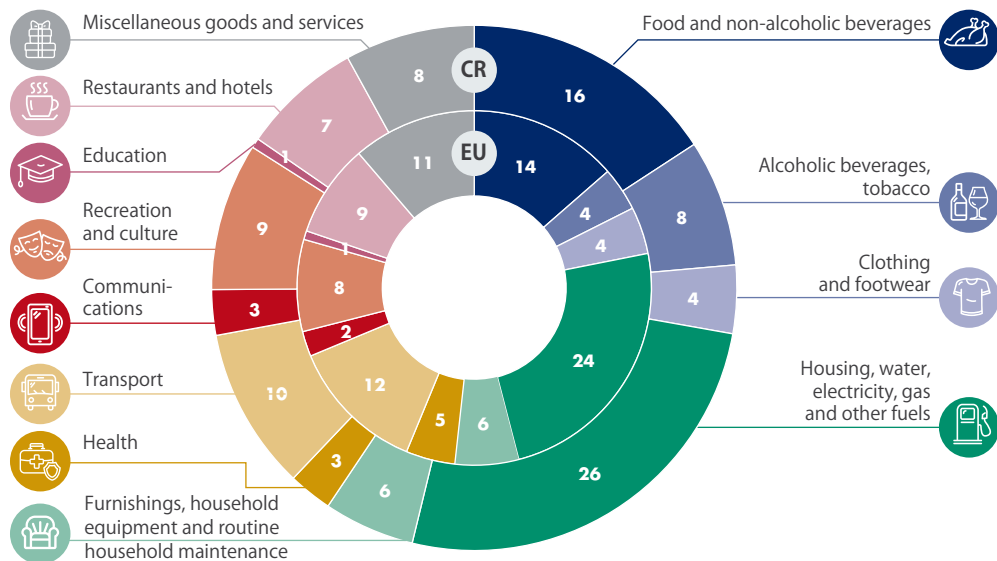
Household consumption, along with the whole economy, grew strongly, especially in the first years after the accession to the EU and also after 2014. However, over the past five years, households have faced first the shock of the pandemic and a partial closure of the economy, followed by sharp price increases. Therefore, their consumption last year corresponded in real terms to the level of 2016. The main part of household expenditure has long been consisting of expenditure on housing and energy the role of which has slightly strengthened since 2004. In contrast, the share of expenditure on recreation and culture has weakened over the last 20 years. Government expenditure as a share of GDP in Czechia remains below the EU average. Across the Union, the role of government expenditure in connection with pandemic impacts has been growing in recent years. Expenditure on health and on economic affairs was increasing.

 Real growth of consumption of households and general government in Czechia (%)

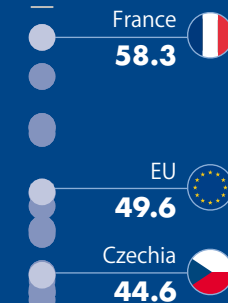


20.4%
share of general government expenditure on healthcare in Czechia in 2022.

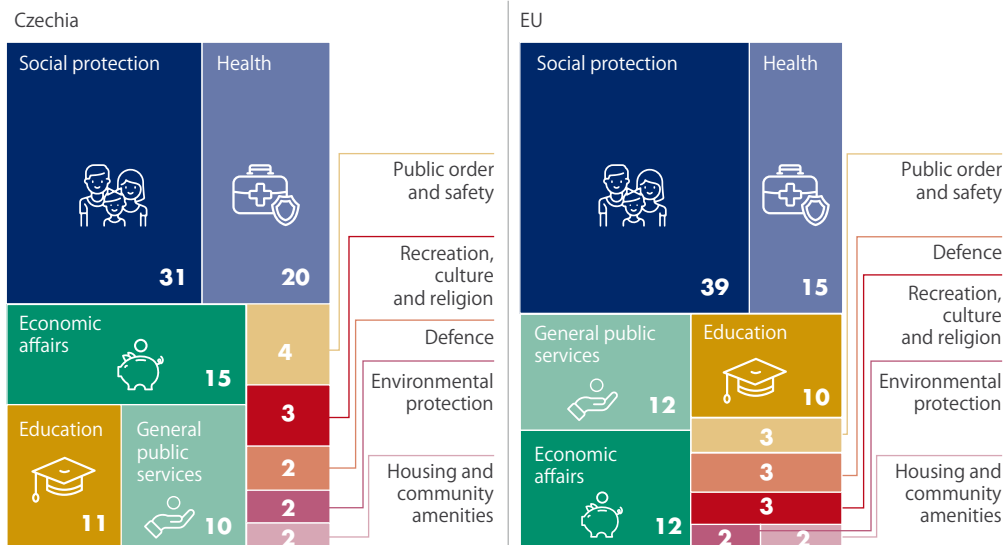
Structure of household consumption in 2022 (% of total expenditure)



Government expenditure (% of GDP)



Government expenditure by function in 2022 (% of total expenditure)



General government debt as percentage of GDP in Czechia has long been among the lowest in the EU

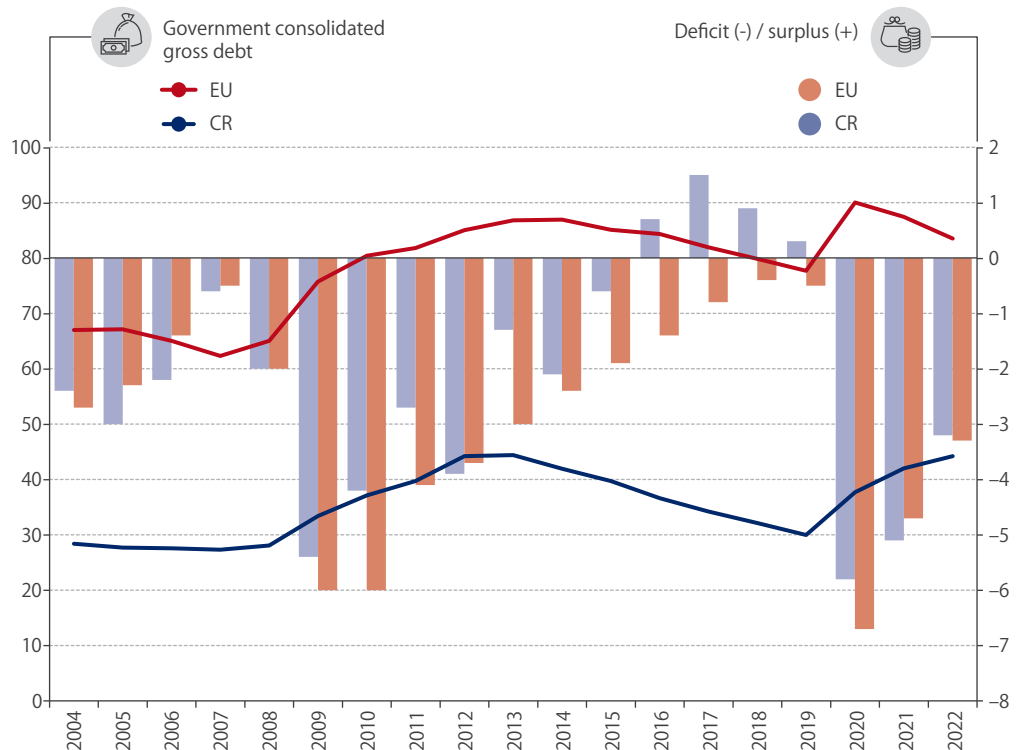
An increased debt level of some EU countries resulting from the aftermath of the 2008–2009 financial and economic crisis have persisted, despite partial declines, until now. Dealing with consequences of the COVID-19 pandemic was also a big stimulus for a new increase in indebtedness and deficit performance. Before 2020, Czechia belonged to states with the lowest relative debt and the government sector performance was in a surplus in the Czech Republic. The pandemic and a sharp increase in the price level requiring interventions of the government, however, led to considerable deficits and an increase in the nominal debt. A rather weak GDP growth also contributed to an increase in the relative debt from 30% of GDP in 2019 to 44.2% of GDP in 2022. Therefore, Czechia moved to rank eighth lowest in the EU as for indebtedness in 2022.



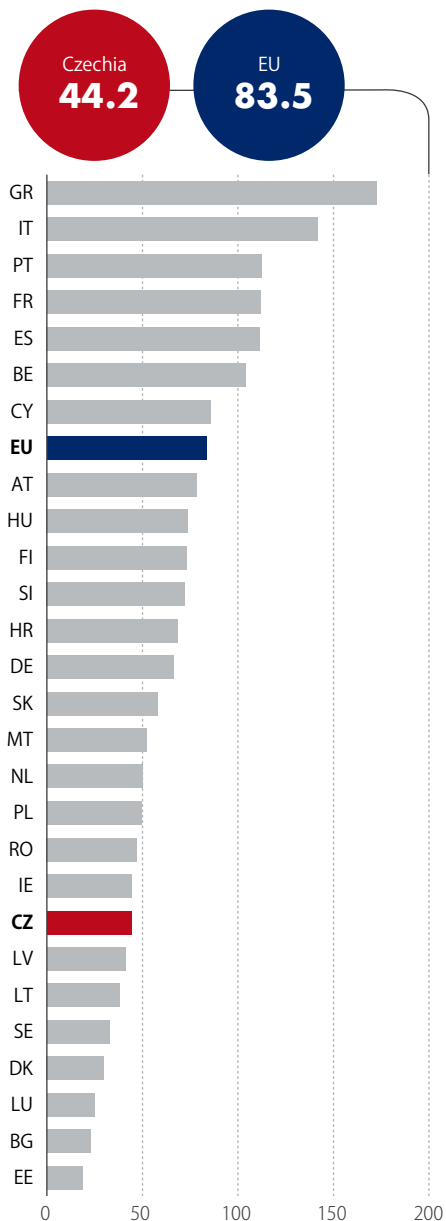
44.2%

general government debt as percentage of GDP of the Czech Republic in 2022.

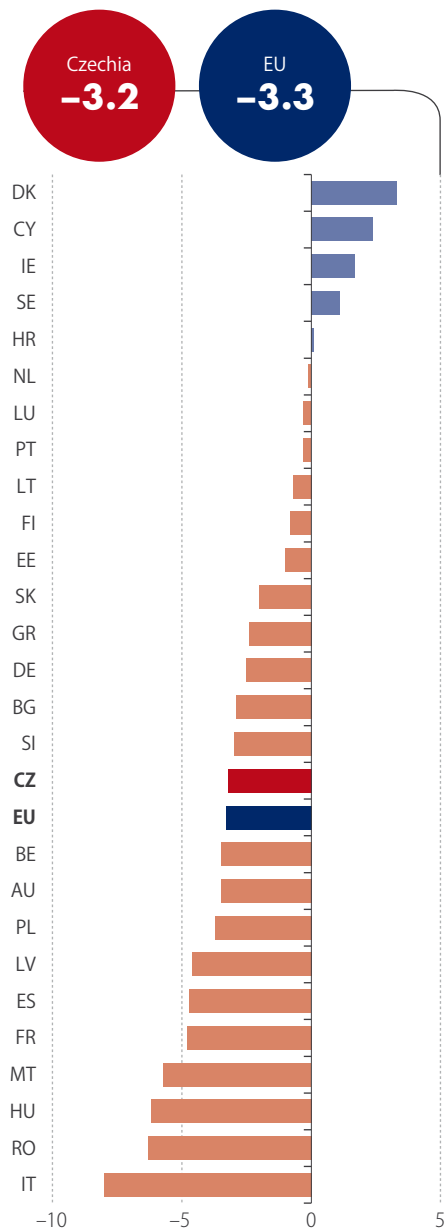
Debt and deficit (% of gross domestic product)



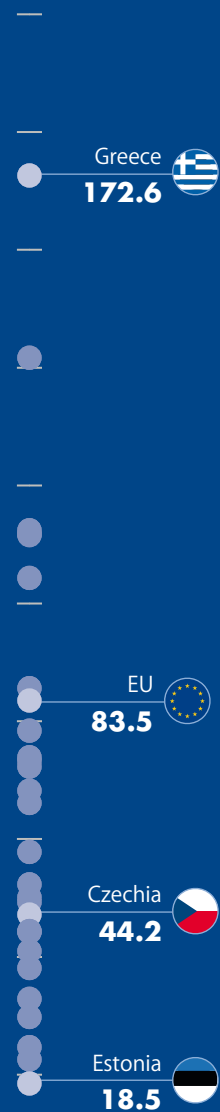
Gross debt in 2022
(% of GDP)



Deficit (-) / surplus (+) in 2022
(% of GDP)



Gross debt in 2022
(% of GDP)



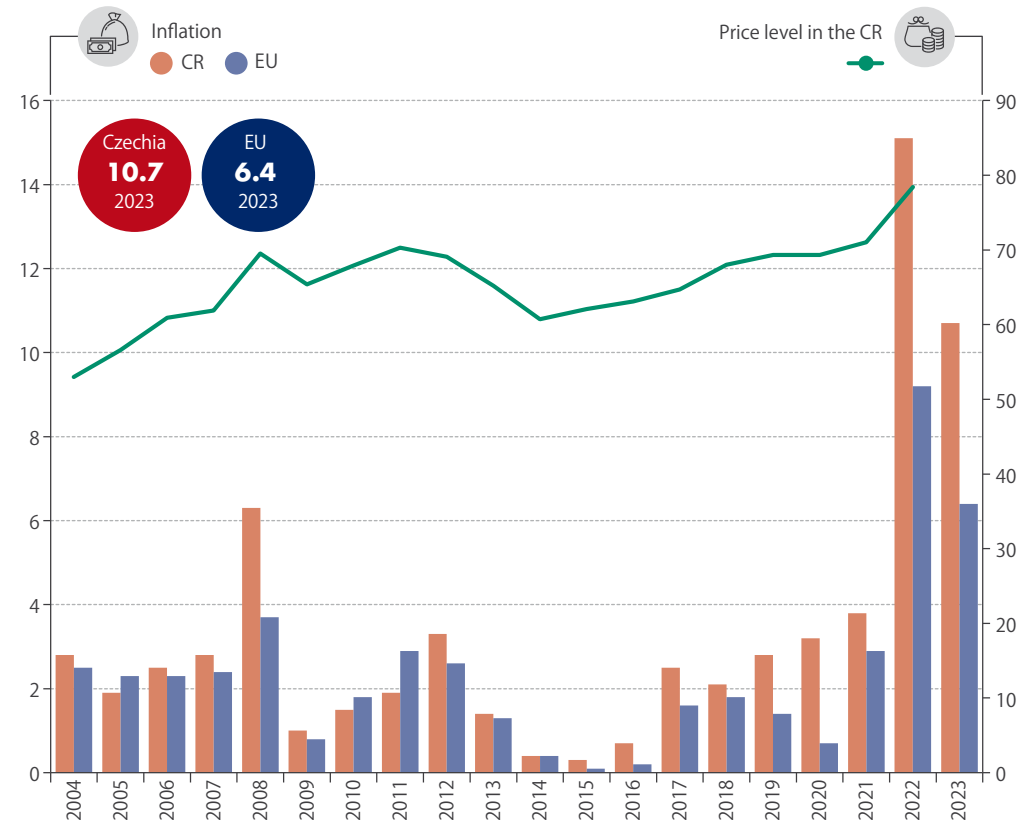
Over a half of an increase in consumer prices in Czechia was in 2019–2023

Economic convergence is also associated with an increase in the price level, which has been in Czechia over the past 20 years above average. That is also why the price level measured by purchasing power parity increased in Czechia from 53% in 2004 almost up to 80% of the EU average in 2022. During the twenty years of the Czech Republic's membership in the EU, consumer prices in Czechia increased by 89.1% in total. Development over the past few years had a big impact on that. Whereas in 2004–2018 the total increment of consumer prices reached 34.4%, in 2019–2023 the increment exceeded 40%.

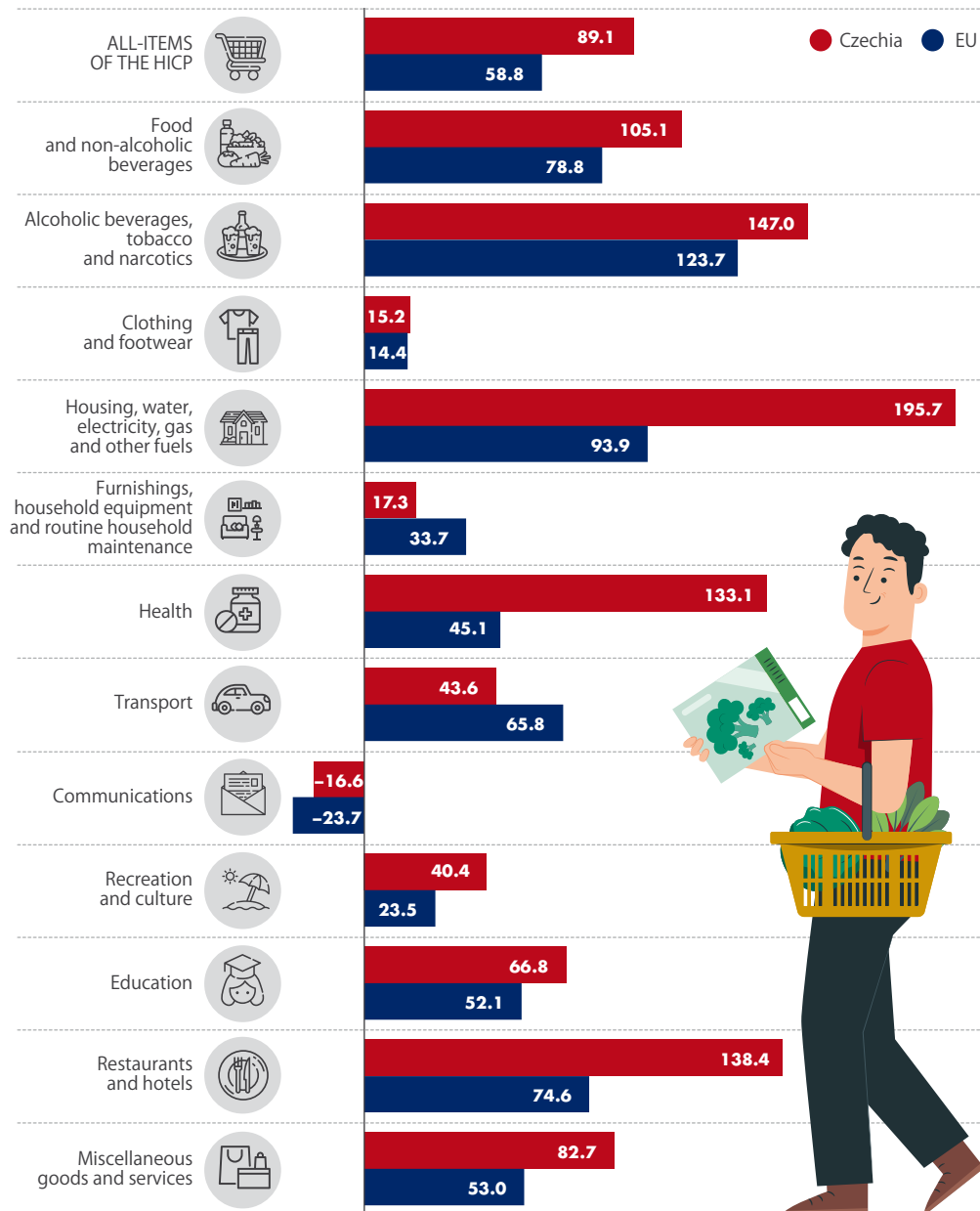


89.1%
the total increase
in consumer
prices from 2004
to 2023.

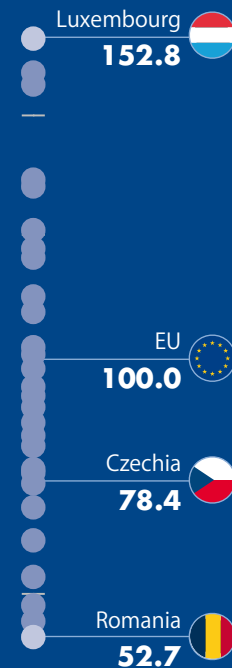
Annual consumer prices inflation in the CR and the EU (%) and price level for actual individual consumption in the CR (PPS, EU = 100)



Total change of consumer prices in the CR and the EU between 2004 and 2023 (%)



Price level indices for actual individual consumption in EU countries in 2022 (EU = 100)



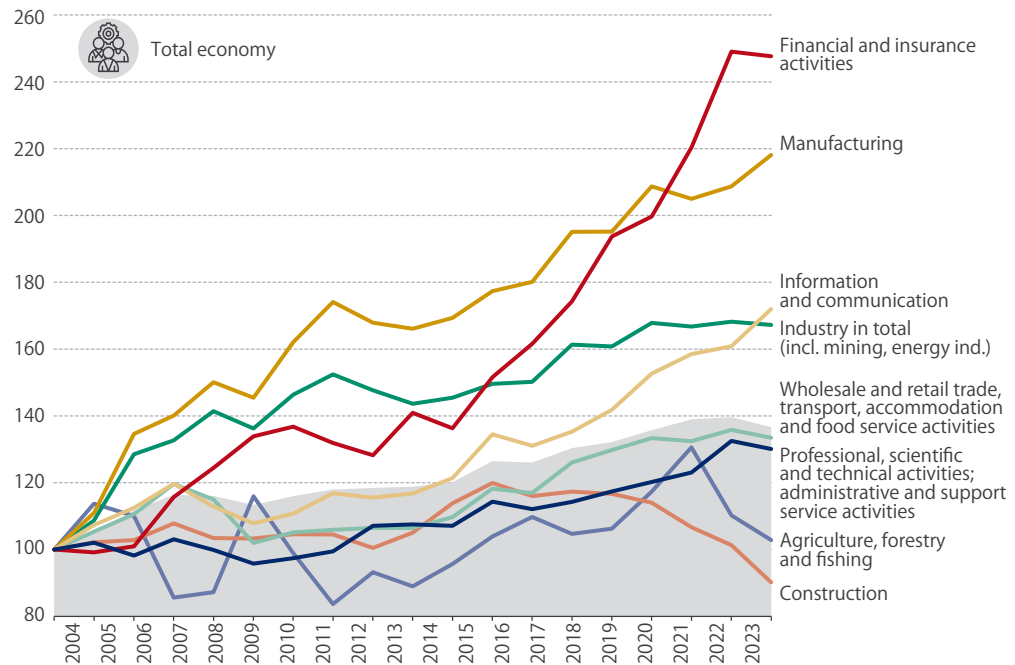
Labour productivity and wage levels in Czechia have slowly converged towards the EU

In Czechia and most of the newer Member States of the EU, real labour productivity has been gradually converging to the EU average. It grew rapidly especially in longer boom periods. While up to 2007 manufacturing was considerably contributing to its growth, in the second half of the last decade it was, for example, information and communication and financial and insurance activities. In 2022, hourly labour productivity has risen to 77% of the EU level (by 7 percentage points more compared to 2004) and productivity per employee to 85%. In most of the newer Member States of the EU, wages and salaries (earnings) of employees were lower than what would correspond to the labour productivity. That disproportion, however, slightly decreased also in Czechia in 2004–2022. Twelve countries in the EU had lower total labour costs (expressed in euros per hour) than Czechia in 2022, compared to only seven in 2004.



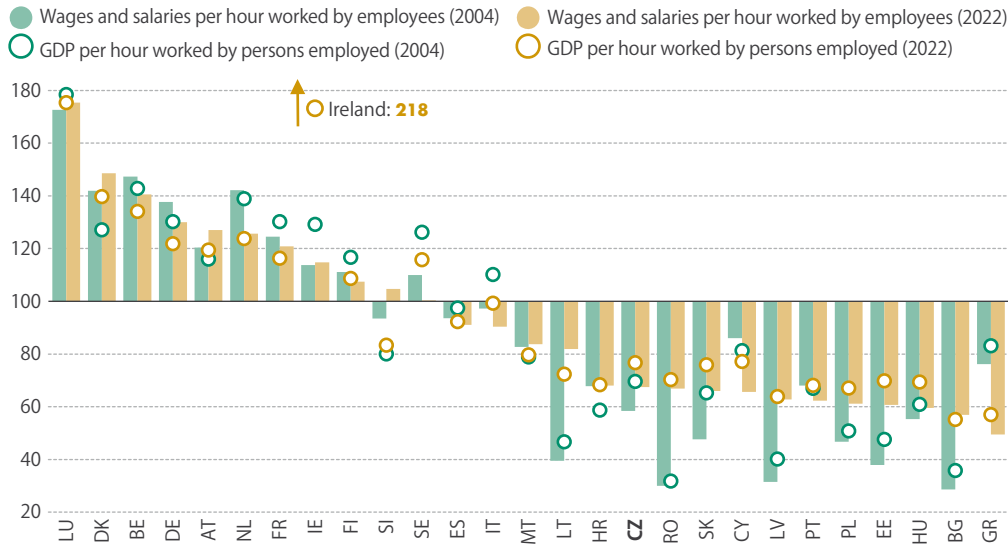
Average hourly labour costs per employee in the Czech Republic were **EUR 16.4** in 2022.

Real hourly labour productivity in the economy of Czechia and its selected branches¹⁾
(2004 level = 100)



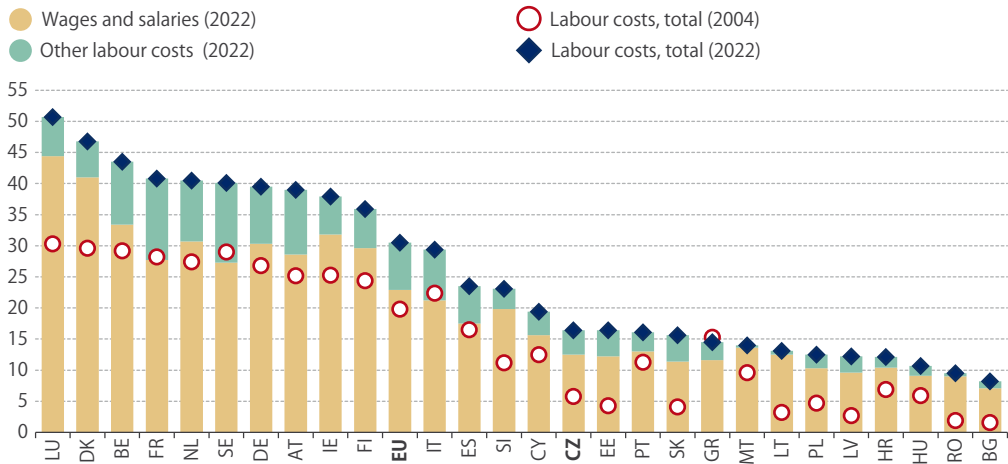
¹⁾ ratio of GDP (or value added) in constant prices per hour worked in the entire economy (or in a given branch)

Average hourly wages and salaries of employees and nominal hourly labour productivity¹⁾ in EU countries (PPS, EU level = 100)



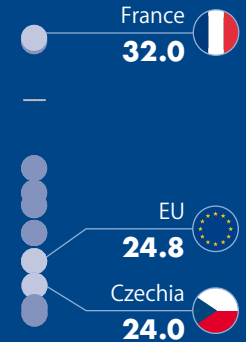
¹⁾ Productivity is expressed as the ratio of GDP to the number of hours worked by employed persons in the economy.

Total labour costs in EU countries¹⁾ (euro per hour)



¹⁾ Average hourly labour costs are total labour costs divided by the number of hours worked by employees. Labour costs include wages and salaries and non-wage costs (employers' social contributions, the balance of taxes and subsidies related to employment, as well as other expenses – e.g. vocational training costs). They do not include some branches: agriculture, forestry and fishing as well as public administration and defence; compulsory social security.

Share of non-wage costs in total labour costs in EU countries in 2022¹⁾ (%)



¹⁾ data for Malta were not available

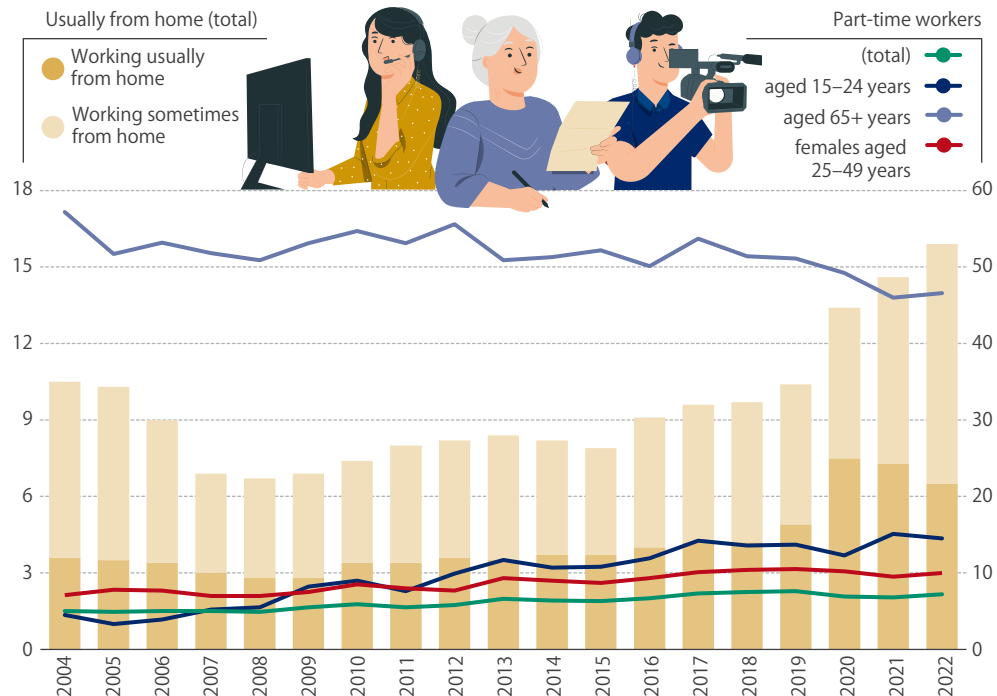
The COVID-19 pandemic accelerated an increase in some forms of flexible working arrangements

Flexible forms of working arrangements are important for balancing work and family life and can contribute to more efficient functioning of the labour market. Their role in the Czech economy has been slightly increasing for a long-term, especially among workers below 25 years of age. Among employed females aged 25–49 years, however, still only a tenth was working in that form in 2022, whereas in the EU it was a quarter. The relatively low share of (jobs with) flexible working arrangements is also related to the smaller role of the service sector in the economy, which is common in most of the newer EU Member States. Moreover, many companies offering these flexible working arrangements were affected by restrictive measures during the pandemic. However, the importance of working from home increased sharply during this period. Even after fading away of the pandemic, working at least sometimes from home has become a common practice in many areas of services.

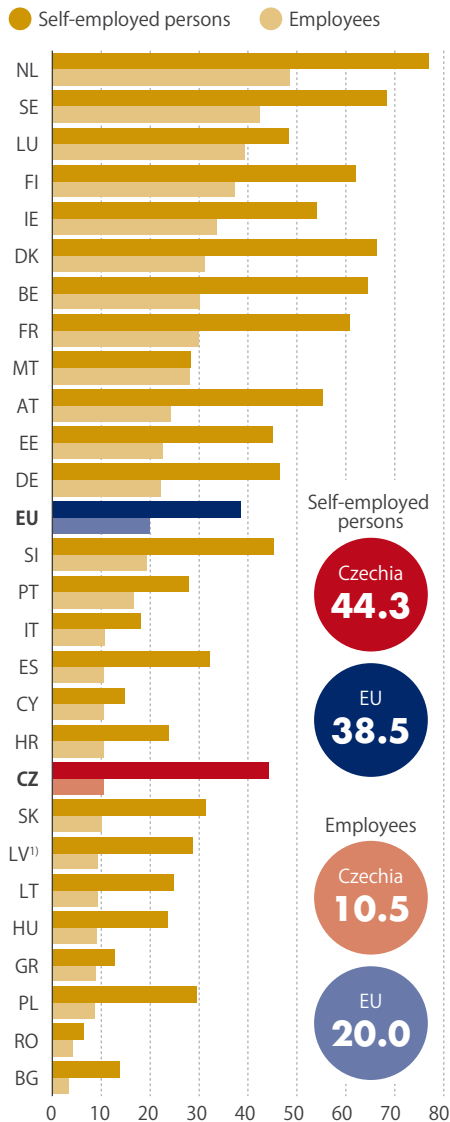


10.5%
of employees in Czechia were working at least sometimes from home in 2022 – more than twice the amount from 2019.

Employed persons in Czechia working part-time and from home (% of the total employment)

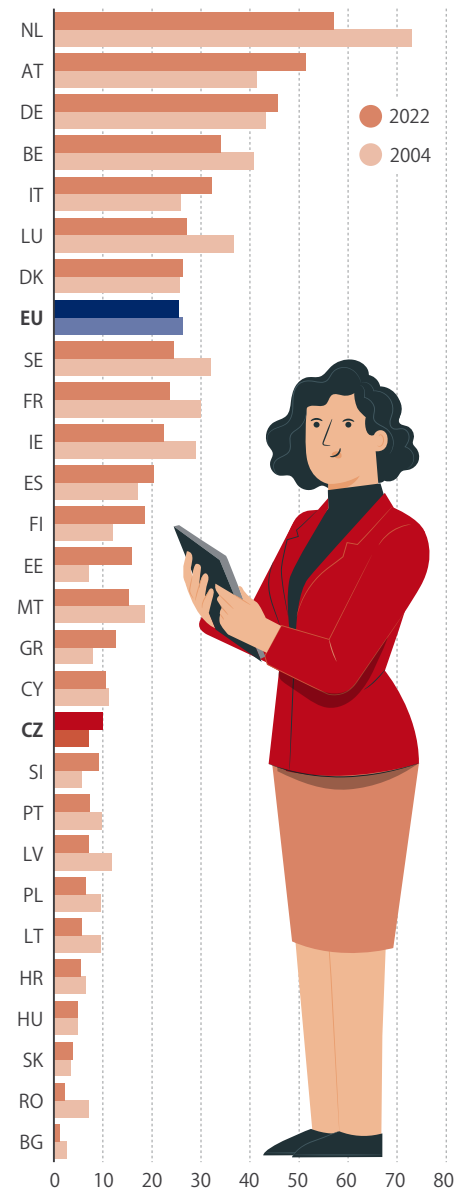


Proportion of persons working usually or sometimes from home in EU countries (% of all employees or the self-employed, 2022)

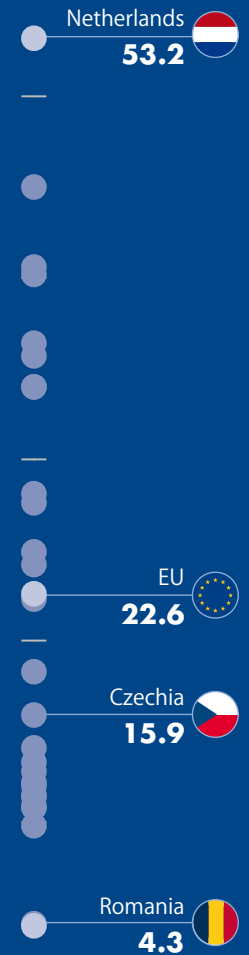


¹⁾ for the self-employed in Latvia: data as at 2020

Proportion of employed females aged 25–49 years working part-time in EU countries (% , 2004, 2022)



Proportion of employed persons working usually or sometimes from home in EU countries (% of the total employment, 2022)







03

ENVIRONMENT AND INNOVATION



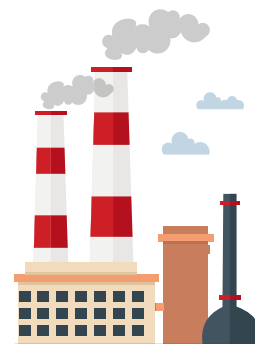
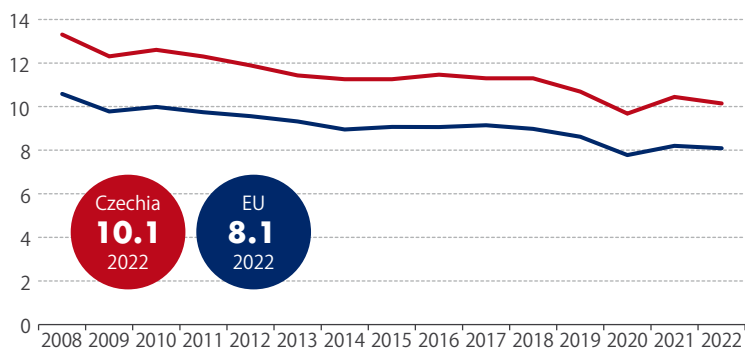
In 2020, a decrease in generation of greenhouse gases accelerated

Before 2019, it seemed that a decrease in generation of greenhouse gases which both Czechia and the EU undertook to, is stagnating. "Freezing" of the economies in 2020 in the pandemic brought a sharp decrease. In 2021, the emissions increased again. However, they did not return to their previous level and a downward trend was confirmed in 2022. Czechia, despite a considerable decrease, which occurred over the last twenty years, remains to be among the countries with a rather high amount of greenhouse gases per capita in the EU. Nevertheless, emissions of other pollutants are below the EU average in Czechia.

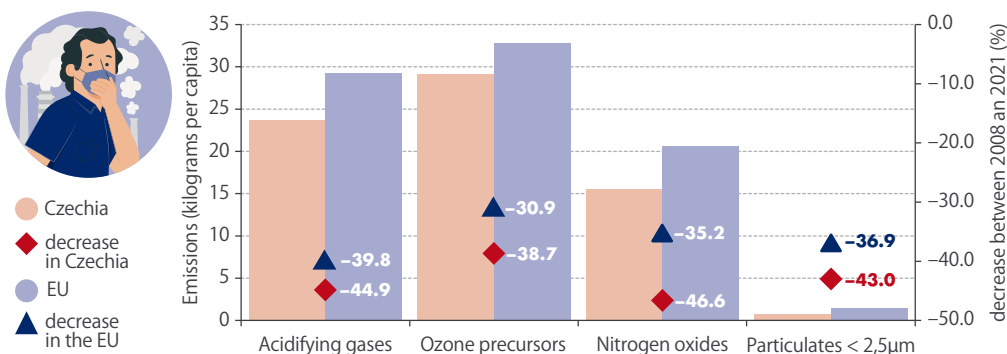


3.2 tonnes
a decrease
in generation
of greenhouse
gases per capita
in Czechia
in 2008–2022.

Greenhouse gases emissions (tonnes per capita)

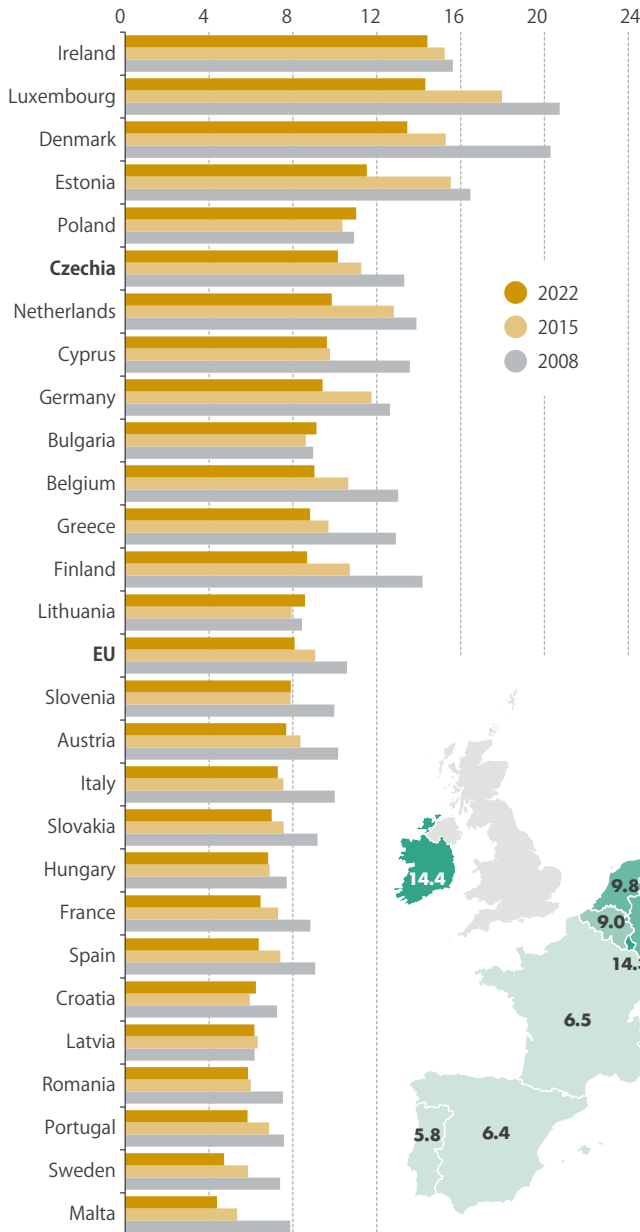


Other emissions in 2021 and a decrease between 2008 and 2021

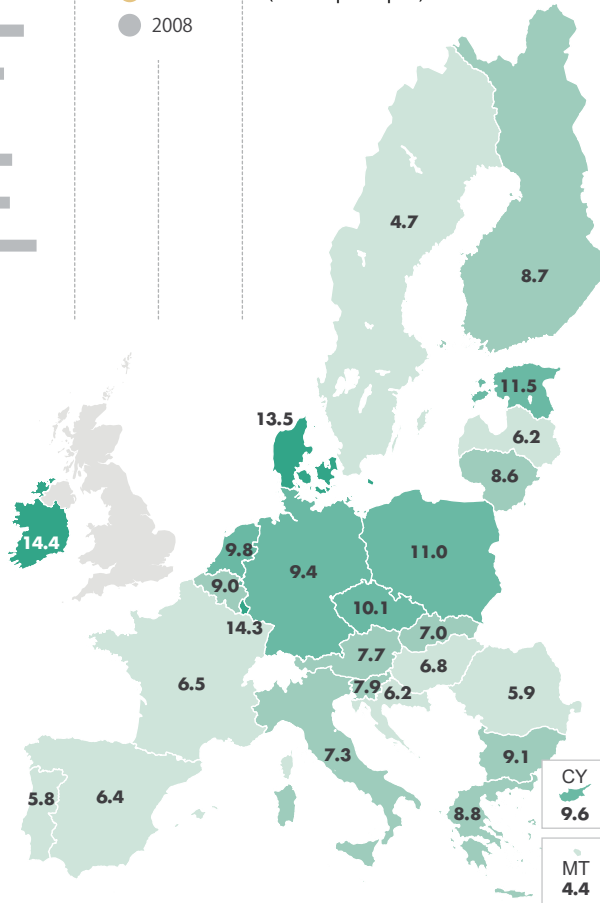




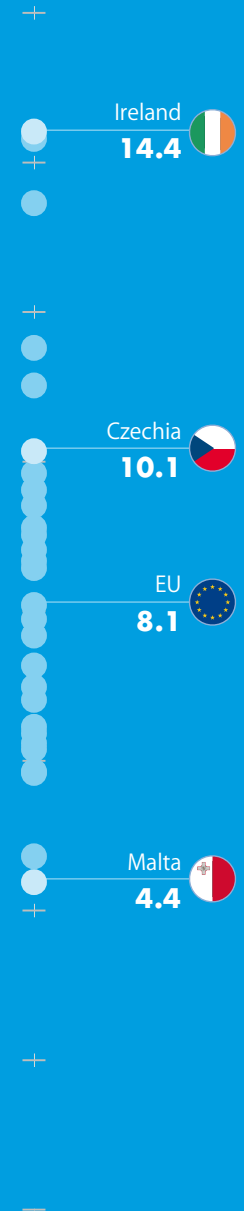
Greenhouse gases emissions in 2008, 2015, and 2022 (tonnes per capita)

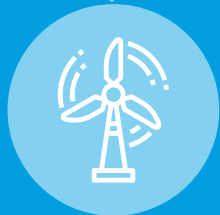


Greenhouse gases emissions in 2022 (tonnes per capita)



Greenhouse gases emissions in 2022 (tonnes per capita)



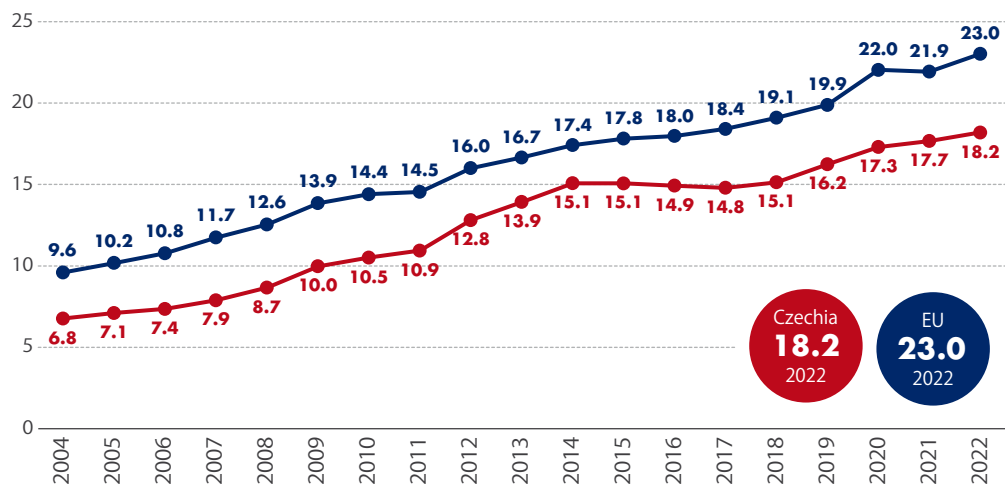


18.2%
the share
of renewable
energy sources
in the total energy
consumption
in the Czech
Republic in 2022.

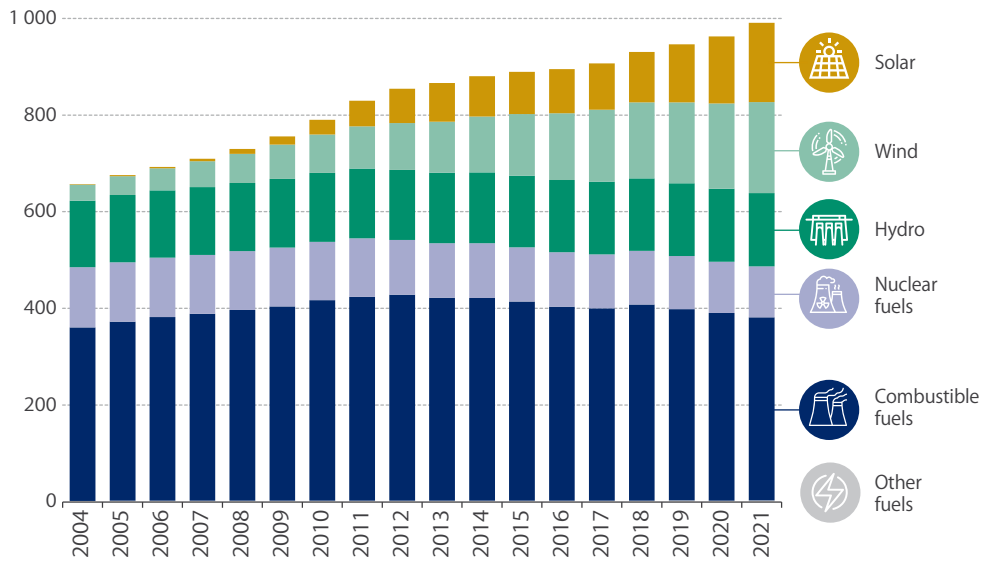
Share of renewable energy sources in electricity consumption is increasing in Czechia

The energy sector is the main producer of greenhouse gases and therefore a process of transition from fossil fuels to renewable energy sources is under way in the entire EU. Those are mainly solar power plants and hydroelectric power plants in Czechia. After the period from 2014 to 2018, in which the share of renewable energy sources in consumption of electricity in Czechia stagnated at 15%, it started to gradually increase. However, rather than an increase in new renewable energy capacities it is a result of a lower amount of electricity produced by thermal power plants (from combustible fuels), which decreased by 1.5 GW from 2018 to 2021, i.e. by over a tenth.

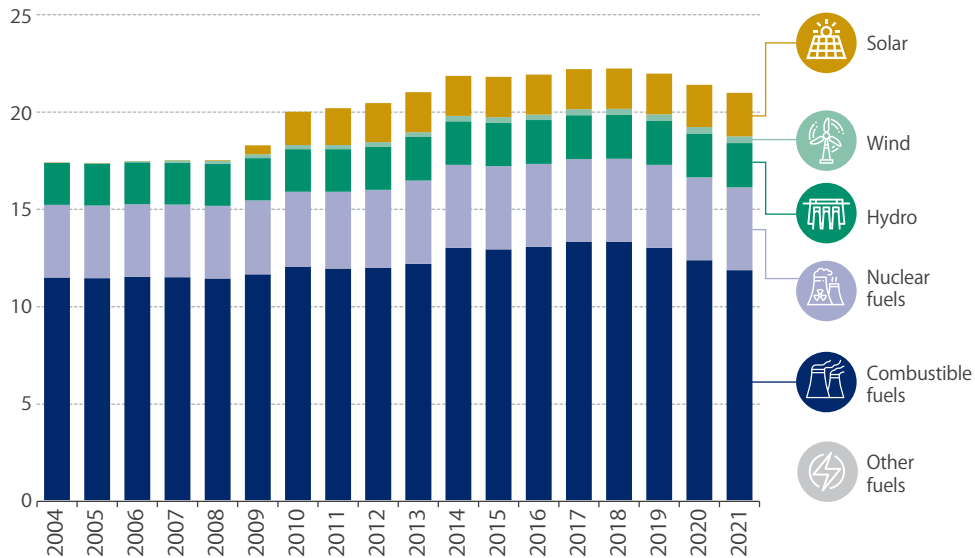
 Share of renewable energy in gross final energy consumption (%)



Electricity production capacities by main fuel groups in the EU (gigawatt)



Electricity production capacities by main fuel group in the CR (gigawatt)



Share of renewable energy in gross final energy consumption in 2022 (%)

Sweden  **66.0**

EU  **23.0**

Czechia  **18.2**

Ireland  **13.1**

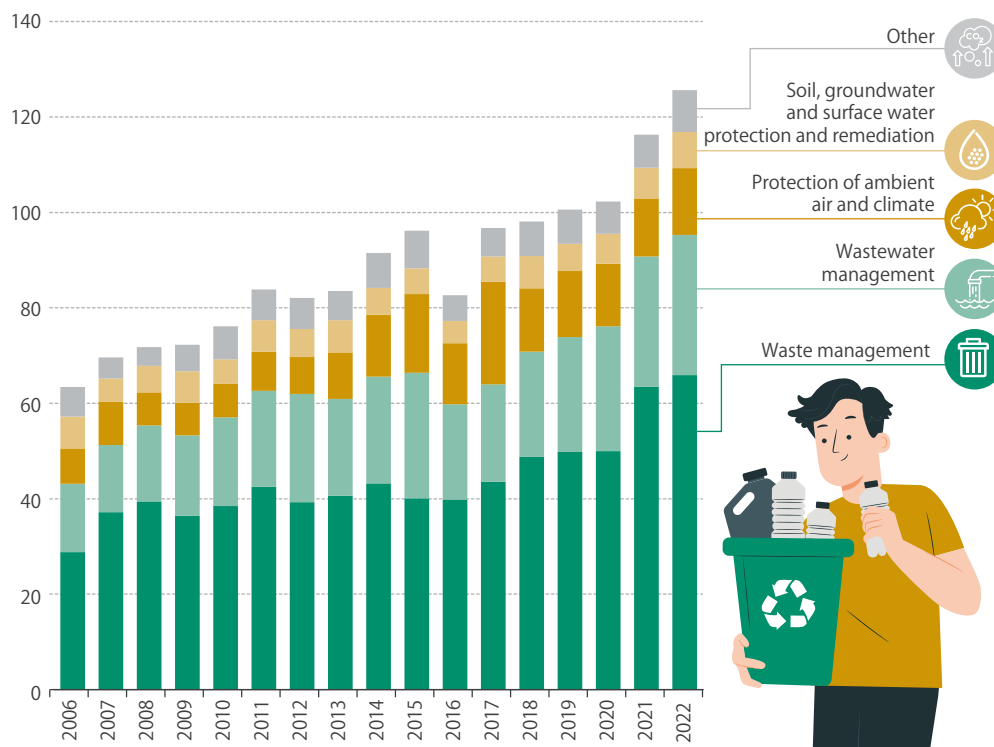


1.9%
the share
of the total
investment and
non-investment
environmental
protection
expenditure
in the Czech
Republic as %
of GDP in 2022.

Three quarters of environmental protection expenditure go to waste management and wastewater management

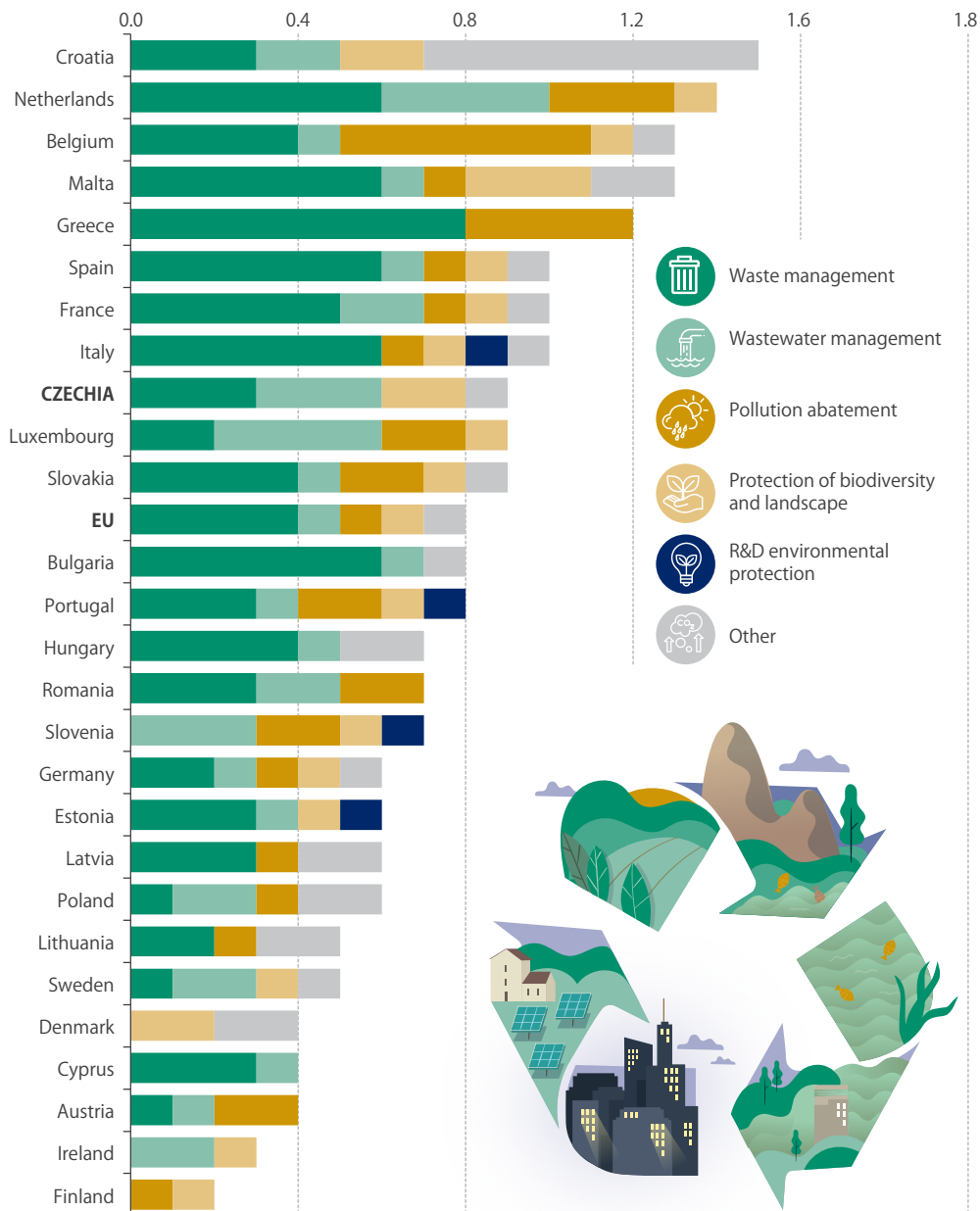
The total environmental protection expenditure in Czechia has been corresponding approximately to 2.0% of GDP for a long time. A large part of it consists of waste management and wastewater management, similarly as in the rest of European countries. In Czechia, the expenditure on waste and on wastewater has been increasing in recent years and its share in the total environmental protection expenditure, too. The volume of means spent on other areas of the environmental protection remained rather stable. The government sector plays a significant role in the expenditure. A comparison of the share of the general government sector environmental protection expenditure as % of GDP moves Czechia slightly above the EU average.

Investment and non-investment environmental protection expenditure in the CR in 2006–2022 (CZK bn)





General government environmental protection expenditure by function in 2021 (% of GDP)



General government environmental protection expenditure in 2021 (% of GDP)

Croatia 
1.5

Czechia 
0.9

EU 
0.8

Finland 
0.2

Czech enterprises had the highest proportion of sales from e-commerce in the EU in 2022

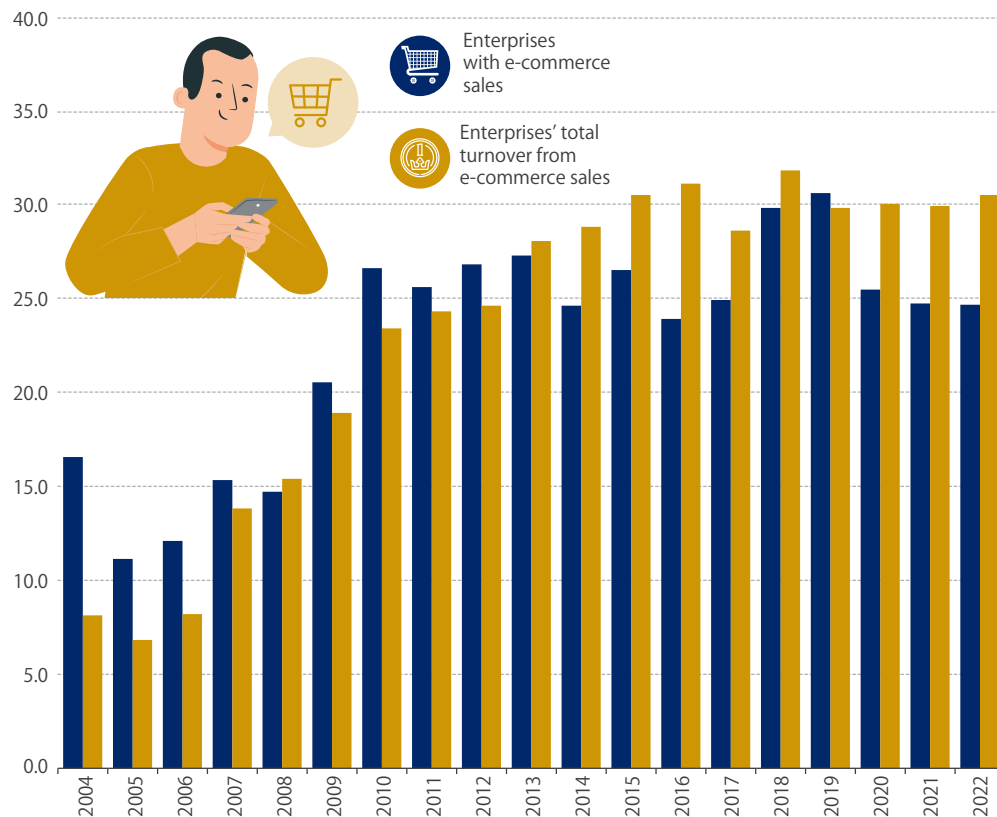
Information technologies have strongly influenced the way we do business over the past twenty years. Own websites have become standard for most enterprises and a large number of them also uses electronic means to sell their goods and services. The share of sales from e-commerce has been belonging to the highest in Czechia over the long-term. It is used the most by enterprises (businesses) in the field of accommodation, trade, and information and communication (activities). The pandemic was a significant impetus for the use of information technologies within enterprises as was shown in the development of tools for remote meetings as well as remote access of employees to internal systems.



10.4%

the proportion of enterprises in the CR, which in 2022 had guidelines for favouring remote meetings instead of business travelling.

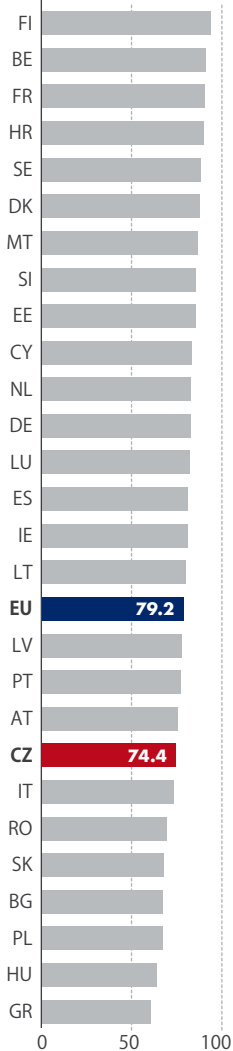
E-commerce in Czech enterprises (%)



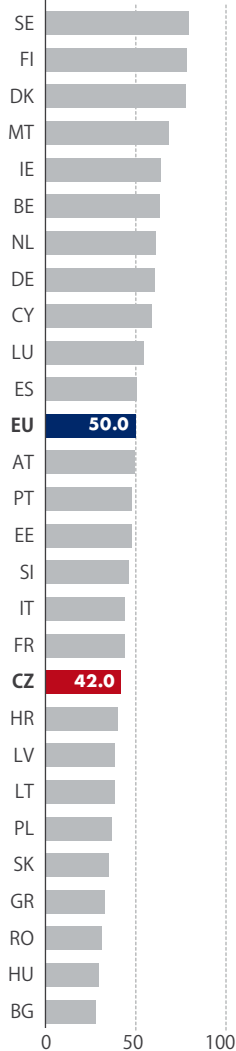
ICT usage in enterprises in 2022 (% of enterprises)



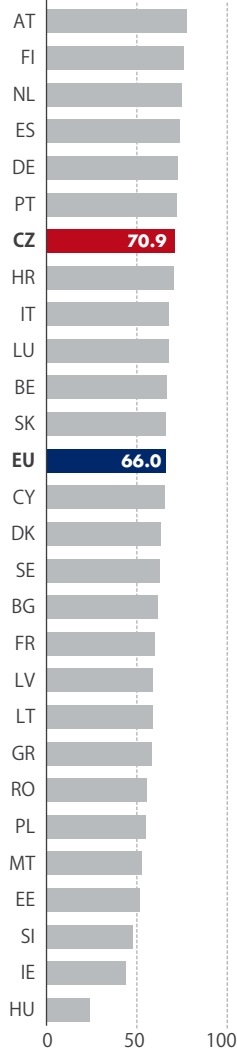
Enterprises, which provide to the persons employed remote access to the enterprise's e-mail system, documents or applications



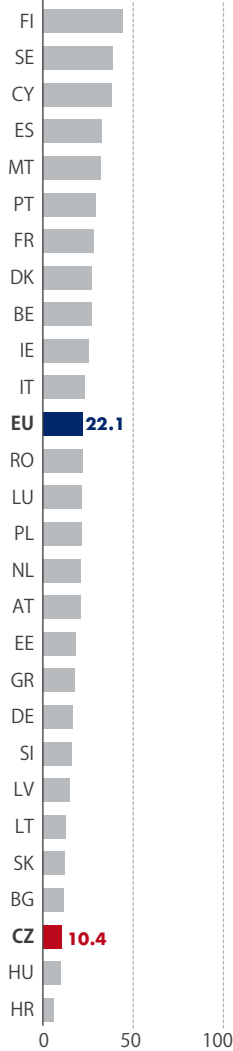
Enterprises, which conducted remote meetings via the internet



Enterprises applying some measures, affecting the amount of paper used for printing and copying



Enterprises, which have guidelines for favouring remote meetings via the internet instead of business travelling



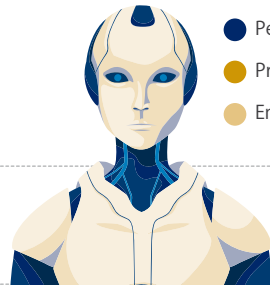
Enterprises' total turnover from e-commerce sales in 2022 (% of total turnover)



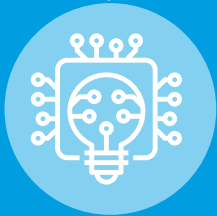
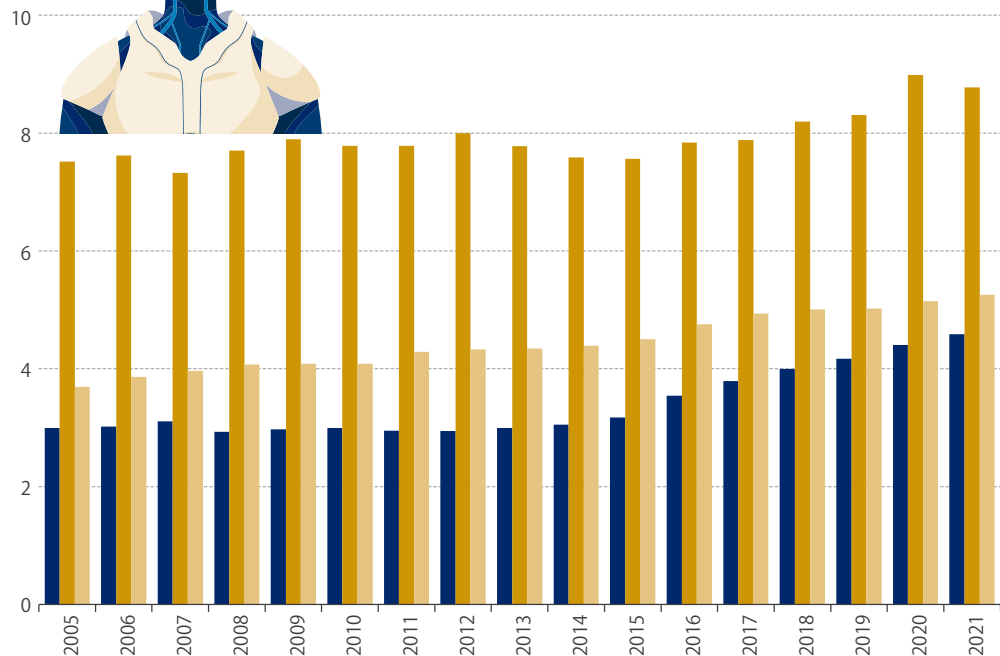
Three quarters of the high-tech sector in Czechia consist of ICT services

Enterprises dealing with high-tech production and services comprise about 5% of the total number of enterprises in Czechia and their share in employment is similar, too. However, proportion of ICT services in the formation of the gross value added reaches almost a tenth. During the last twenty years, the number of enterprises in the high-tech sector has almost doubled, whereas this increase is mainly owing to activities in the area of providing of ICT services. On the other hand, the number of industrial enterprises remained stable. As for comparisons with the EU, Czechia is above the average regarding employment in the high-tech sector as well as the share of high-tech products in exports.

Development of key indicators on the high-tech sector in the Czech economy



- Percentage of enterprises in the high-tech sector in the total number of enterprises
- Proportion of the high-tech sector in the gross value added of enterprises (%)
- Employment in the high-tech sector (as % of employment in enterprises)

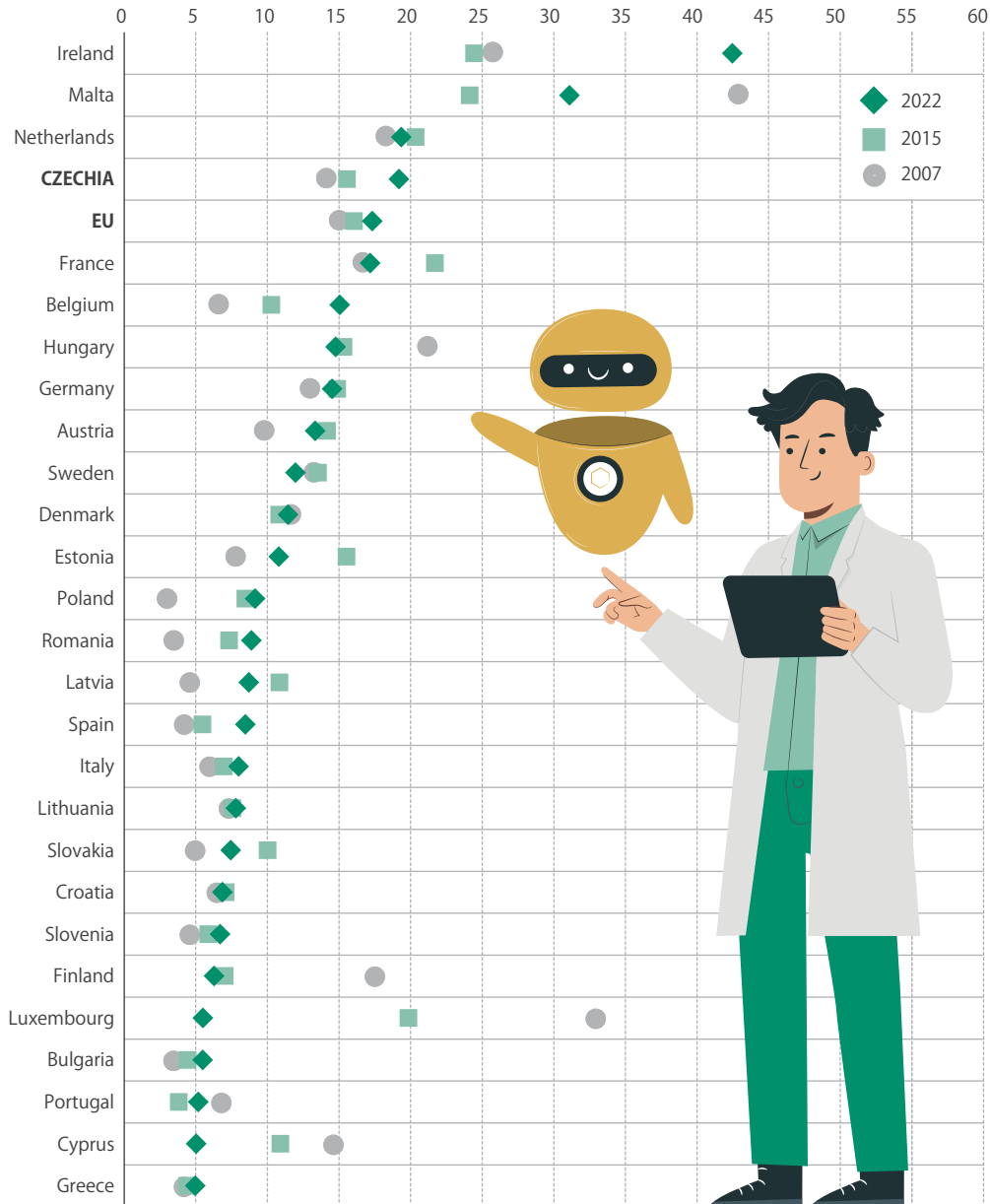


57 494

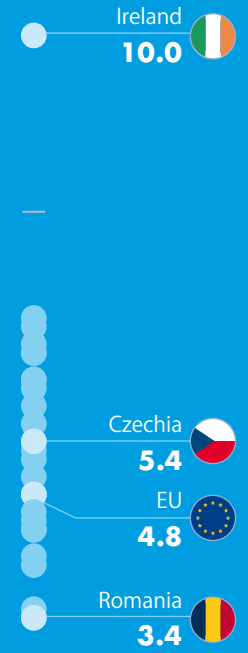
the number of enterprises in the high-tech sector in Czechia in 2021.



Exports of high-tech products as a percentage of the total export of goods in 2007, 2015, and 2022 (%)



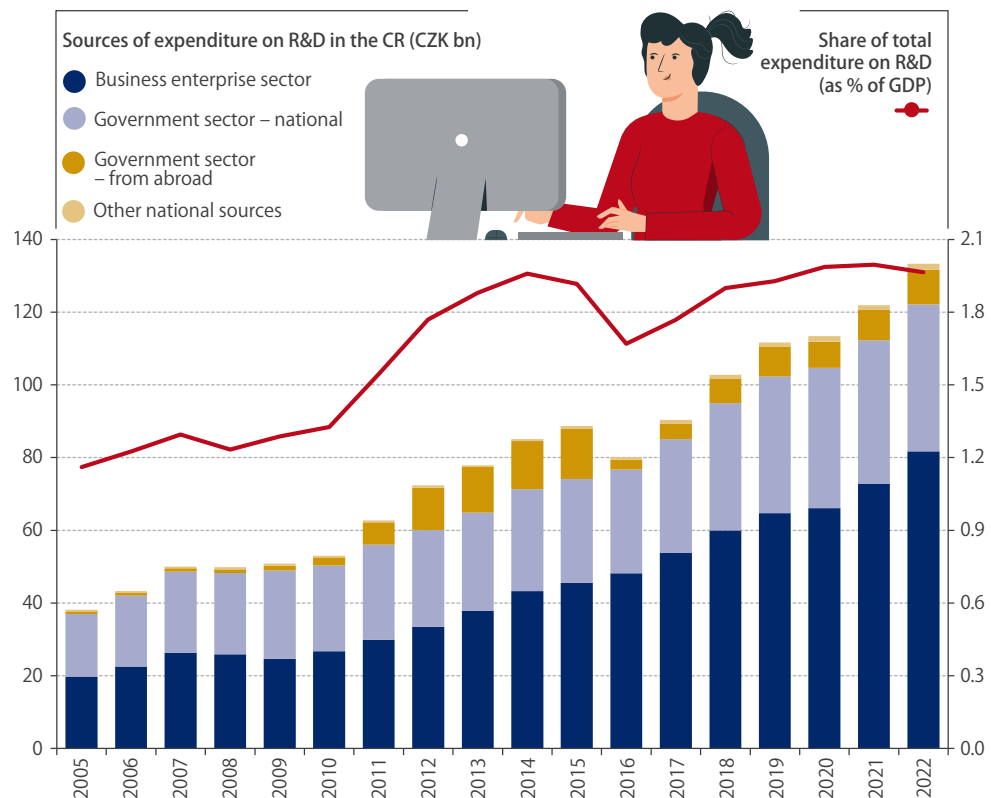
Employment in high-tech manufacturing and knowledge-intensive high-tech services in 2022 (as % of total employment)



Sources of funding of R&D from abroad mostly go to universities

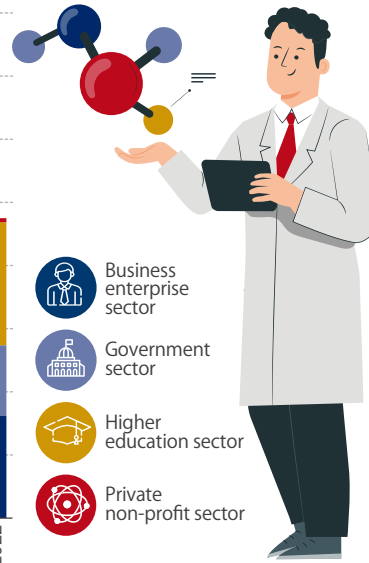
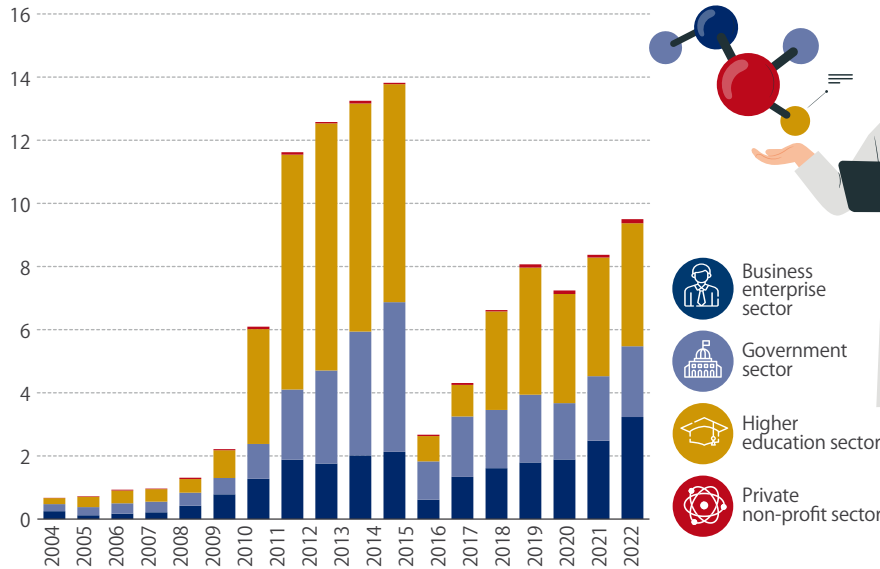
During the last decade, Czechia has been spending about 2% of GDP on science, research, and development. Private sources made approximately 60% of the R&D financing. Roughly a third of the expenditure is covered by the government sector and the rest from the “government sector – from abroad”, especially from the European Union. Although during the recent years its volume has no longer been as high as during the peak of the programme period of 2007–2013, it is still a significant source. Sources from abroad covered in 2018–2022 about 15% of financing of science and research in universities and a tenth in research institutions belonging to the government sector (such as, for example, the Czech Academy of Sciences).

Sources of expenditure on R&D in the CR and share of total expenditure on R&D

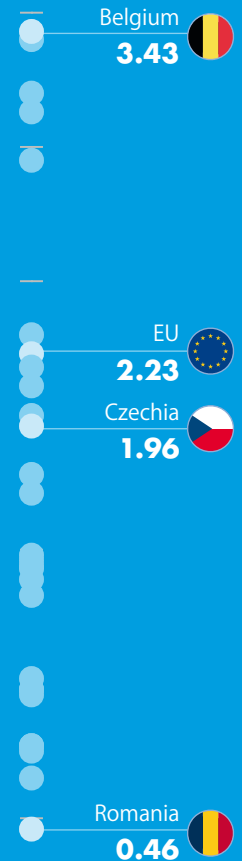


7.2%
the share of the “government sector – from abroad” in expenditure on research and development in 2022.

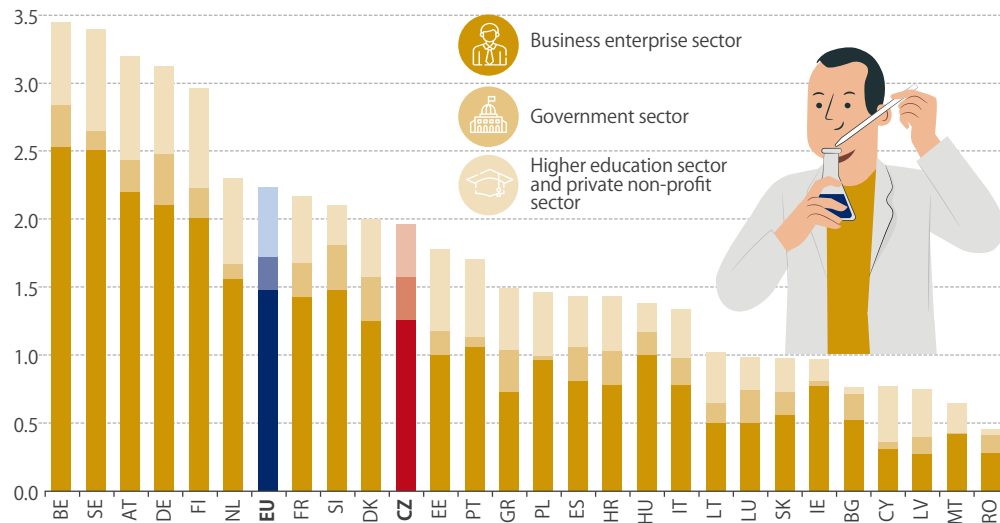
Expenditure on R&D in the CR financed from the government sector from abroad by sector of performance (CZK bn)



Gross domestic expenditure on R&D in 2022 (% of GDP)



Gross domestic expenditure on R&D by sector of performance in 2022¹⁾ (% of GDP)



¹⁾ Denmark: value from 2021

Czechia: 20 years in the European Union

Karolína Zábajníková and Jiří Kamenický

Published by: Czech Statistical Office, 2024
Na padesátém 81 street, Prague 10, Czech Republic
First edition, Prague 2024
Publication code: 320350-24

Edited by: Jana Kučerová

Cover design and layout by: Veronika Wölfelová

Typeset by: Helena Mešková

Translated by: Milada Matoušová

Number of pages: 70

Printed by: Czech Statistical Office

ISBN 978-80-250-3468-2 (brochure)
978-80-250-3469-9 (pdf)

CONTACT

CZECH STATISTICAL OFFICE

Na padesátém 81
100 82 Prague 10
Czech Republic

PHONE: (+420) 274 052 304 | 274 052 451

E-MAIL: infoservis@czso.cz

www.czso.cz/20yearsCRinEU-publication

