

DYNAMIC
VISEGRAD
FOR EUROPE

SLOVAK PRESIDENCY 2013/2019 OF THE VISEGRAD GROUP

VISEGRÁD GROUP COUNTRIES

SELECTED INDICATORS
OF THE 2030 AGENDA
FOR SUSTAINABLE
DEVELOPMENT

2019



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SELECTED INDICATORS OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

2019

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Statistical Office of the Slovak Republic
Statistical Products and Services Provision Directorate
Miletičova 3
824 67 Bratislava
Slovak Republic

Information service
Phone: +421 2 50236 339
E-mail: info@statistics.sk
www.statistics.sk

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INTRODUCTION

● ...from history

● year 1335 - meeting of the three monarchs

At the castle of Visegrád, at that time a prominent seat of the Hungarian kings, the meeting of the Polish, Bohemian and Hungarian king is held. An agreement is reached on close cooperation in the field of policy and trade and a future successful Central European cooperation is being developed.

● year 1991 - meeting of the three government officials

The meeting of the President of the Czech and Slovak Federal Republic, the President of the Republic of Poland and the Prime Minister of the Republic of Hungary is held in the North Hungarian town, Visegrád. A grouping of three countries is formed, the so-called "Visegrád Triangle" and a declaration on mutual cooperation towards European integration is signed.

● year 1993 - grouping of four countries titled the Visegrád Four

● year 2019 - commemoration of its 28th anniversary

Within the Visegrád Group there is a mutual cooperation in the field of political, economic and social life. One of the spheres is also **statistics**. Experts from national statistical offices have long been communicating, sharing experiences, supporting joint projects, addressing problematic issues and challenges. A significant role is played by regional cooperation, which is developed in the form of cross-border projects. The result of these activities is the building of trustworthy relationships and the forming of common positions and solutions.

The definition of themes of common interest in the agreed statistical domains is formally reflected in the **"Memorandum of understanding on cooperation among the statistical institutes of the Visegrád Group countries"**, signed by the presidents of national statistical institutes in April 2018.



Marek Rojíček
President

Czech
Statistical Office

The 5th consecutive Slovak Presidency in the Visegrád Four began on 1 July 2018 and runs until 30 June 2019. Its slogan is the "**Dynamic Visegrád for Europe**". The Presidency will build on the achievements and lessons learned from the previous presiding countries. Its program, approved by the Prime Ministers of the Visegrád Region and co-ordinated by the Ministries of Foreign Affairs, is based on three main priorities:

- | Strong Europe
- | Secure Environment
- | Smart Solutions



Gabriella Vukovich
President

Hungarian Central
Statistical Office

These priorities have also become pillars for the preparation of the publication you are holding. We have included the Sustainable Development Indicators of the **2030 Agenda**, which has not only European but also global importance. We have selected for you those that will be reflected in the goals within the priorities of the current presidency.



Dominik Rozkrut
President

Statistics Poland

Through selected indicators, we provide you with a statistical overview of the progress made in the Visegrád Region. According to the availability of statistical data in the Eurostat database, we have been evaluating developments in this region over the past ten years. We present the data in an attractive and easily readable form.



Alexander Ballek
President

Statistical Office
of the Slovak Republic

Which direction do the countries of the Visegrád Four go? What has improved or deteriorated?

Get to know the Visegrád Four Region through selected indicators of the 2030 Agenda.

METHODOLOGICAL NOTES

Used symbols and abbreviations:

 - symbol for expression of a value which is out of the set scale in the graph

EU - European Union

V4 - Visegrád Group, Visegrád Four

AWU - annual work unit

GDP - gross domestic product

GHGs - greenhouse gas emissions

p.p. - percentage point

PPS - purchasing power standard

R&D - research and development

kgoe - kg of oil equivalent

toe - tonne of oil equivalent

USD - United States dollar

Selected indicators used in the publication are a part of the European indicator framework to the **2030 Agenda**.

The 2030 Agenda represents a programme of development for the international community until 2030 in the area of sustainable development. Its activity plan is formed into **17 sustainable development goals and 169 related targets** that balance three aspects of sustainable development - economic, social and environmental.

Goals are defined through a set of indicators, which are the essential tool for monitoring the progress achieved at all territorial levels, global, regional and national.

Each indicator contains the following parts:

INDICATOR, year

- methodological description
- short definition of the indicator used

graphic presentation

displaying of values of the current year, comparison of two years or development in last ten years
values for EU28 added for comparison

short text

brief evaluation of the development in the last ten years or by the data availability

Sum and share differences arise from rounding of absolute data

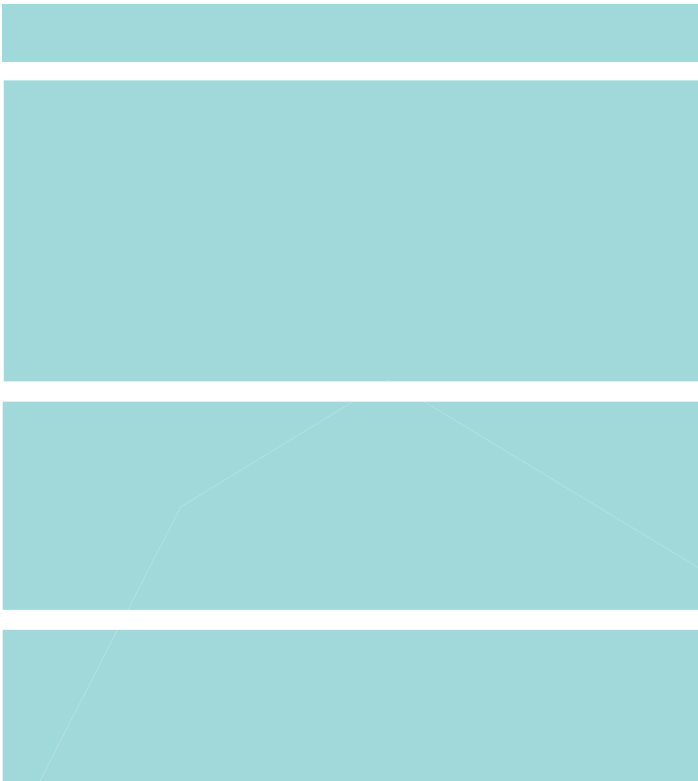
Data source

Eurostat, online database <https://ec.europa.eu/eurostat/data/database>

Tables on EU policy – Sustainable development indicators

Date of data extraction: by 31 January 2019

Data on population, area and population density presented in the chapter General Information are provided by national statistical offices.



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GENERAL INFORMATION

Poland

38 433 558 inhabitants

312 679 km²

123 inhabitants/km²

Czechia

10 610 055 inhabitants

78 870 km²

135 inhabitants/km²

Slovakia

5 443 120 inhabitants

49 034 km²

111 inhabitants/km²

Hungary

9 778 371 inhabitants

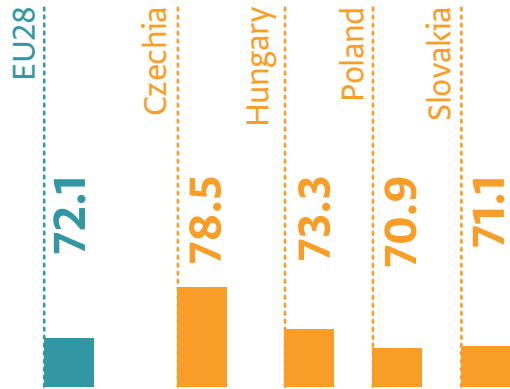
93 023 km²

105 inhabitants/km²

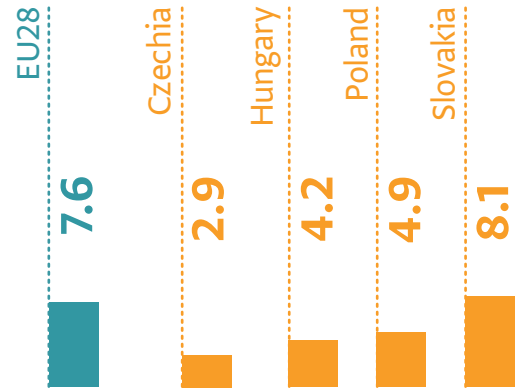


year **2017**
31 December

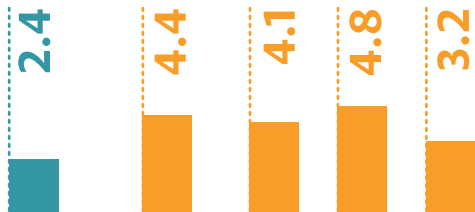
EMPLOYMENT RATE (20-64 years)
(%)



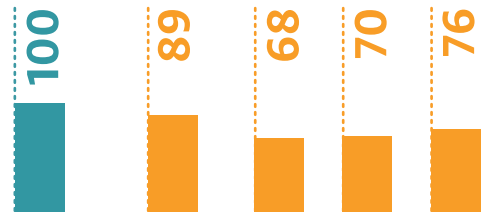
UNEMPLOYMENT RATE (20-64 years)
(%)



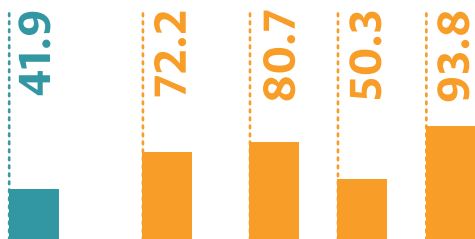
YEAR-ON-YEAR GROWTH OF GDP
(%)



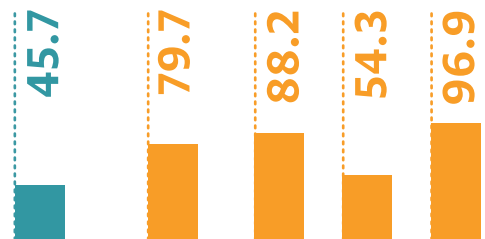
GDP PER CAPITA IN PPS
(EU28=100)



IMPORTS OF GOODS AND SERVICES
(% of GDP)



EXPORTS OF GOODS AND SERVICES
(% of GDP)



STRONG EUROPE

The objective is to achieve concrete results for citizens.

Priority
area

Main tasks

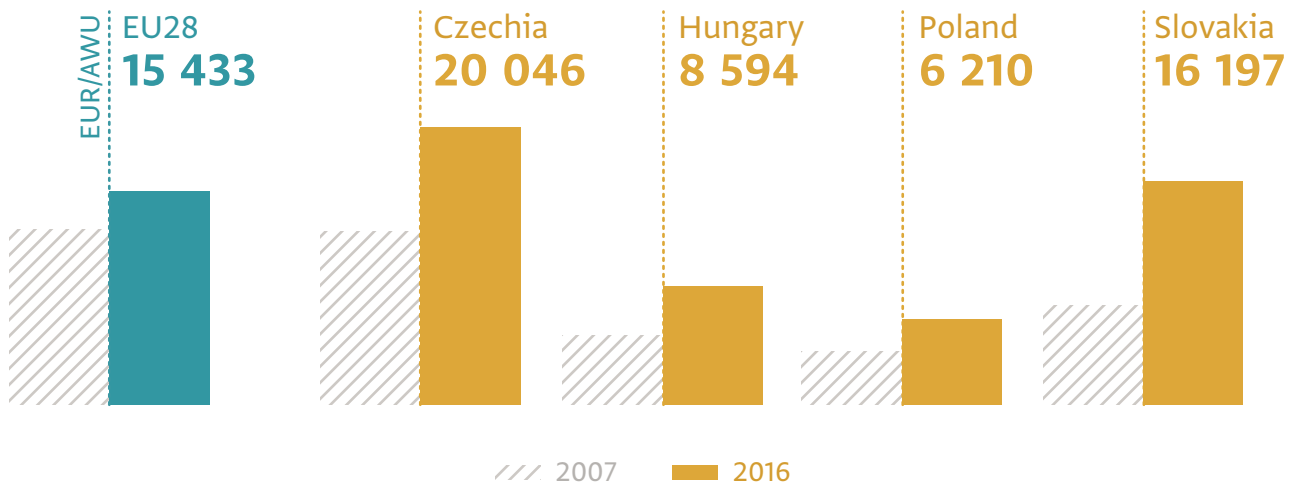
- | promotion of the active participation in strengthening EU unity
- | cooperation with the European and international partners and deepening of the existing partnerships
- | participation in the decisions on key EU policies
- | **maintaining** a strong position of cohesion policy and **the Common Agricultural Policy** which considerably contribute to the EU growth and employment
- | **construction of missing transport links** and thus contributing to higher regional competitiveness
- | **implementation of practical steps in social sphere, healthcare and education**
- | realization of activities which strengthen the sense of belonging to a common European family
- | strengthening of the civil dimension of the Visegrád cooperation
- | support of activities of the International Visegrád Fund

COMMON AGRICULTURAL POLICY



AGRICULTURAL FACTOR INCOME

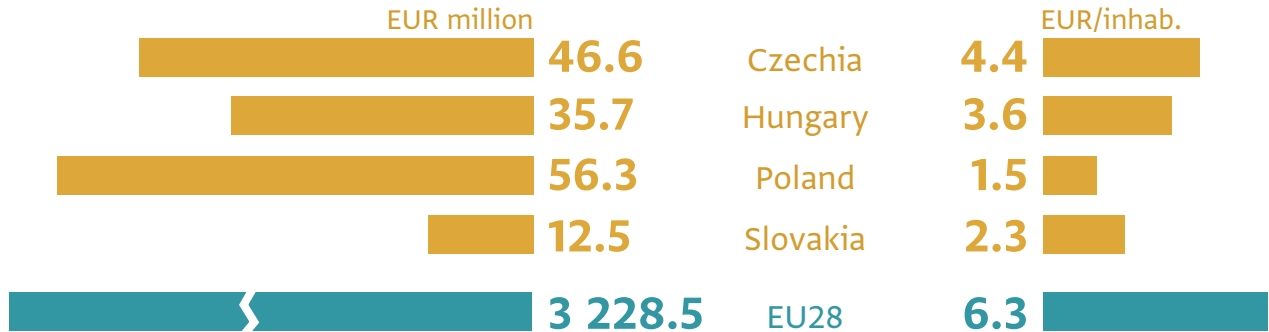
the income generated by farming, which is used to remunerate borrowed or rented factors of production (capital, wages and land rents) as well as own production factors (own labour, capital and land), expressed in euro per annual work units (the number of full-time equivalent jobs) at chain linked volumes (2010)



Since 2007, the indicator increased at both EU and V4 countries level. Within the **EU**, the income **went up by 21.5 %**. The **most significant growth** of income was in **Slovakia by 126.5 %**, the **lowest in Poland by 61.1 %**.

GOVERNMENT SUPPORT TO AGRICULTURAL R&D, 2017

the government support to research and development activities, how much priority governments place on the public funding of R&D



Government support to agricultural R&D decreased at **EU level by 0.3 %** since 2008. Among V4 countries the indicator **went down by 15.6 %** only in **Hungary**. The **highest growth** was reached in **Poland by 163.1 %**.

ORGANIC FARMING, 2017

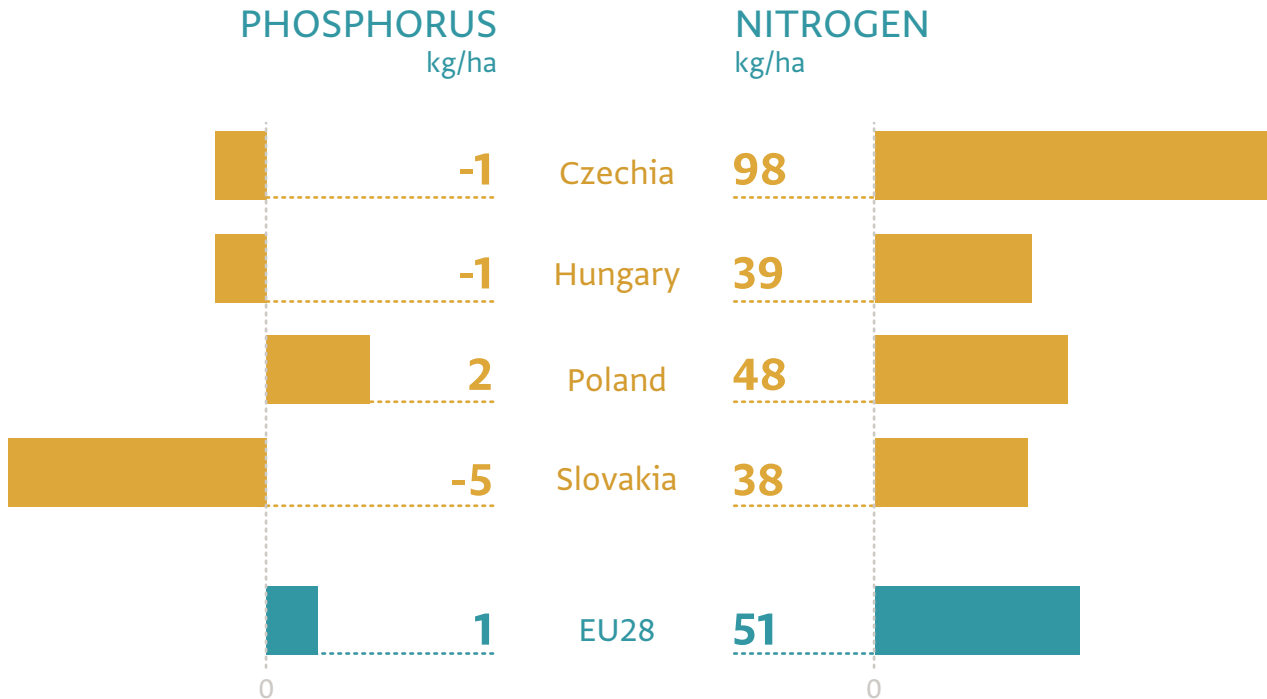
the share of total utilised agricultural area occupied by organic farming (existing organically-farmed areas and areas in process of conversion)



Since 2012, the **area in the EU** used for organic farming **increased by 1.4 p.p.** Since 2008, organic farming had more areas in all V4 countries with the **highest growth in Czechia by 5.1 p.p.** and the **lowest in Poland by 1.4 p.p.**

GROSS NUTRIENT BALANCE ON AGRICULTURAL LAND, 2015

the potential surplus or deficit of nitrogen and phosphorus in agricultural soils; the input/output of nutrition to the soil should be balanced



Since 2006 at **EU level**, the **nitrogen level decreased by 8.9 %**. In V4 countries, the **lower** nitrogen level was reported also in **Poland by 22.6 %** and **Slovakia by 5.0 %**. A significant **growth** was in **Hungary by 44.4 %**. Increase was also observed in **Czechia by 19.5 %**.

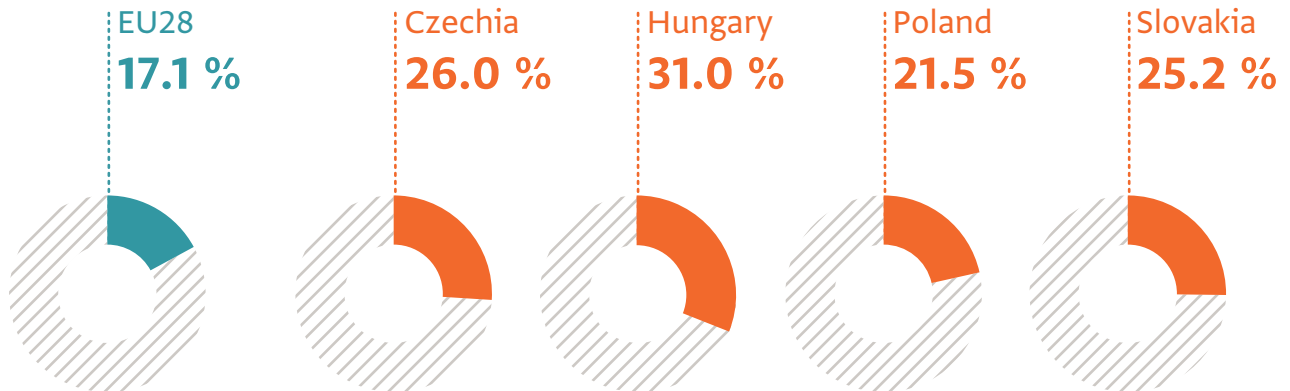
The amount of **phosphorus** in agricultural soils decreased at the **EU level** from **4 kg in 2006** to **1 kg per hectare in 2015**. The highest **phosphorus deficiency** was in **Slovakia** decreasing by 3 kg per hectare. Only in **Poland** was the nutrient in **surplus**, despite the decrease by 8 kg per hectare since 2006.

CONSTRUCTION OF MISSING TRANSPORT LINKS



COLLECTIVE PASSENGER TRANSPORT, 2016

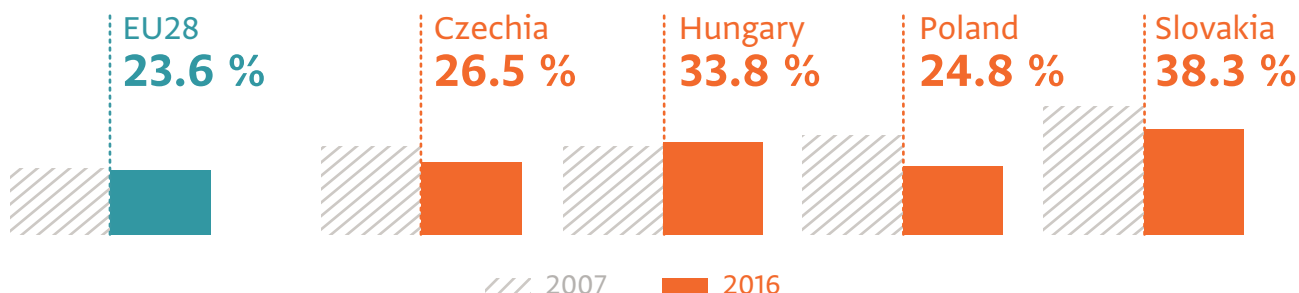
the share of buses, incl. coaches and trolley-buses, and trains in total inland passenger transport performance in passenger-kilometres



Since 2007, the **EU share increased by 0.2 p.p.** Among V4 countries, a **growth** was only **in Czechia by 1.7 p.p.** A decrease of shares reached **1.5 p.p. in Hungary, 2.8 p.p. in Slovakia and 7.8 p.p. in Poland.**

INLAND FREIGHT TRANSPORT

the share of rail and inland waterways in total inland freight transport in tonne-kilometres

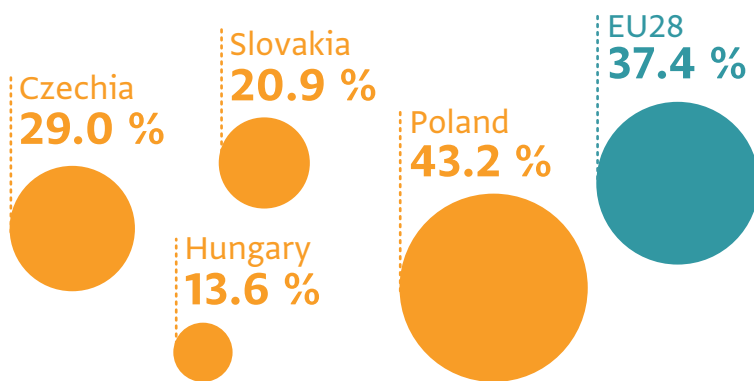


Since 2007, the **EU share decreased by 0.9 p.p.** Three V4 countries reported a decline, ranging from **6.0 p.p. in Czechia** through **8.4 p.p. in Slovakia** to **11.6 p.p. in Poland**. Only **Hungary** reported a **higher share by 1.9 p.p.**

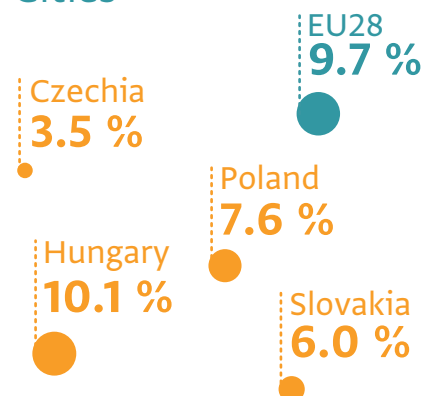
ACCESS TO PUBLIC TRANSPORT BY DEGREE OF URBANISATION, 2012

the share of population reporting high or very high level of difficulty in accessing public transport

Rural areas



Cities



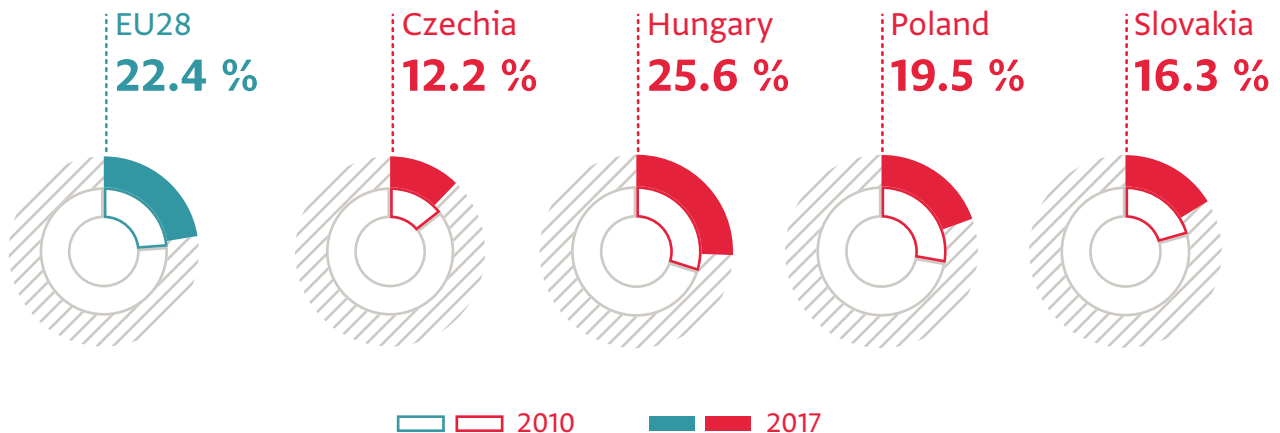
Within the V4, the total shares varied from **12.9 % in Hungary** through 15 % in Czechia, 15.8 % in Slovakia up to **24.7 % in Poland**.

PRACTICAL STEPS IN SOCIAL SPHERE



PEOPLE AT RISK OF POVERTY OR SOCIAL EXCLUSION

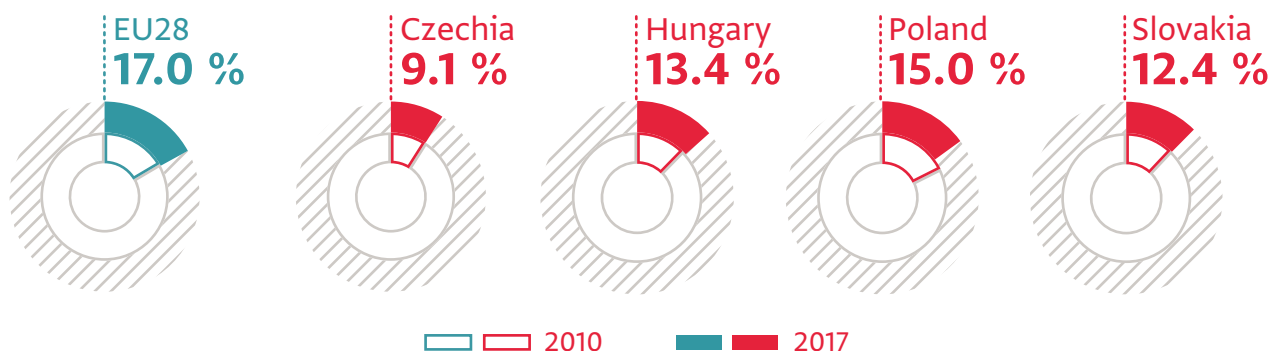
the share of persons who are at risk of poverty after social transfers, severely materially deprived or living in households with very low work intensity



In the **EU** the share of persons at risk of poverty had been **decreasing continuously by 2.4 p.p.** since 2012, until 2012 the development had a slightly increasing trend. Since 2010, a **decrease** of shares was reported in all V4 countries, most significantly in **Poland by 8.3 p.p.** The **lowest decline** of the share was reached in **Czechia by 2.2 p.p.**

INCOME POVERTY

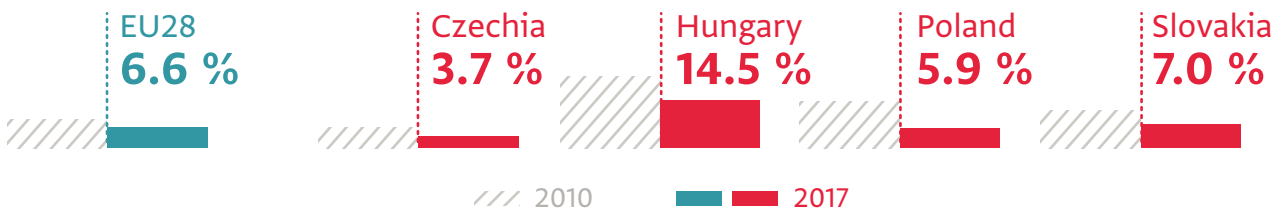
the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers



Since 2010 in the **EU**, the share of people at risk of income poverty **increased by 0.5 p.p.** An increasing trend was in V4 countries but **Poland** with the **decline by 2.6 p.p.** Despite this fact, the Polish share was the highest in the V4 group. **The Hungarian share grew the most by 1.1 p.p.**

SEVERE MATERIAL DEPRIVATION

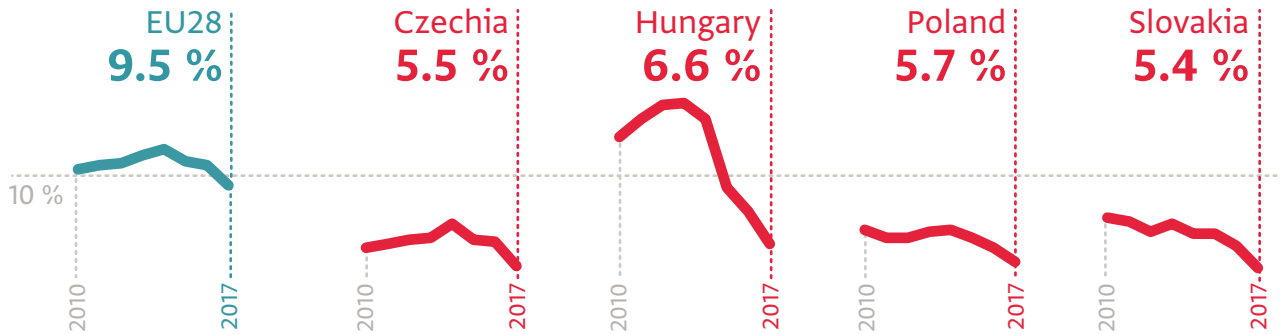
the share of severely materially deprived persons who have living conditions severely constrained by a lack of resources; they cannot afford at least 4 out of 9 deprivations items



Compared with 2010, the share of severely materially deprived persons **decreased at EU level by 1.8 p.p.** The **decline** was monitored in all four countries, most significantly in **Poland by 8.3 p.p.** A considerable development was seen in **Hungary**. The share went up with a **peak in 2013 reaching 27.8 %**, by 18.2 p.p. above the EU average, and **then it gradually decreased by 13.3 p.p.**

LOW WORK INTENSITY

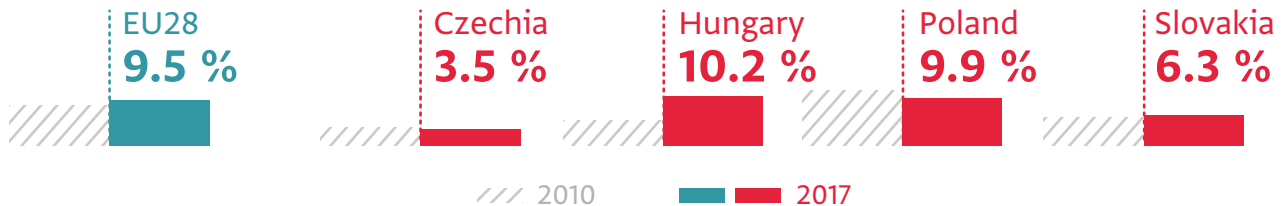
the share of people aged 0-59 living in households with very low work intensity; households where on average the adults (aged 18-59, excluding students) work 20 % or less of their total work potential during the past year



The **EU** share of persons aged less than 60 years in households with very low work intensity **decreased by 0.8 p.p.** since 2010. The shares in all V4 countries **dropped**, most significantly in **Hungary by 5.3 p.p.** The **lowest decline** was in **Czechia by 0.9 p.p.**

IN WORK AT-RISK-OF-POVERTY RATE

the share of persons aged 18 or over who are employed and have an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers



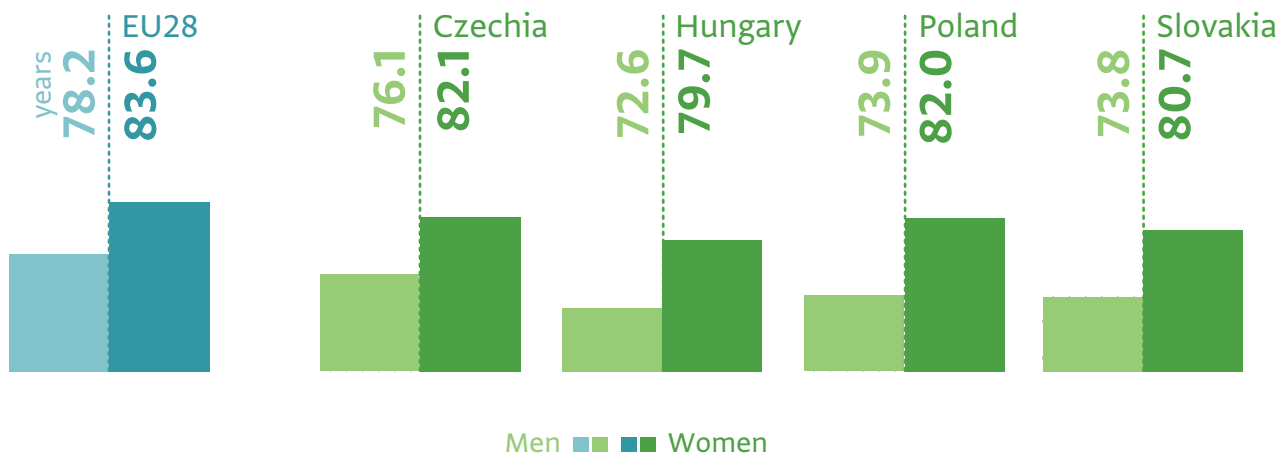
Since 2010, the share of employed with income below the risk-of-poverty threshold **grew in the EU by 1.2 p.p.** When evaluating the period 2010-2017 in the V4 group, the **share increased** also in **Hungary** and Slovakia, most significantly in the first mentioned country **by 4.9 p.p.** The highest **decrease** of the share was reached in **Poland by 1.5 p.p.** In the long term **Czechia** has been keeping **the lowest level of the share** within the group.

PRACTICAL STEPS IN HEALTHCARE



LIFE EXPECTANCY AT BIRTH, 2016

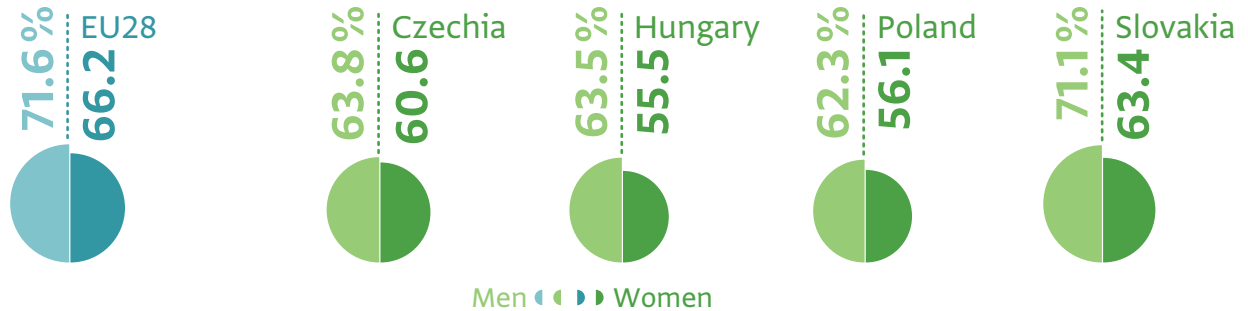
the mean number of years that a new-born child can expect to live if subjected throughout his life to the current mortality conditions



Compared with 2007, in the **EU** the **male** life expectancy at birth **increased by 2.2 years** and **female by 1.4 years**. In all V4 countries, the growth of the indicator for both sexes was higher than the European one. The **highest growth** was in **Slovakia, by 3.2 years for men and 2.3 years for women**. The same growth of males was reached also in Hungary. In 2016, the **gender gap** ranged from **6 years in Czechia** to **8.1 years in Poland**.

SELF-PERCEIVED HEALTH, 2017

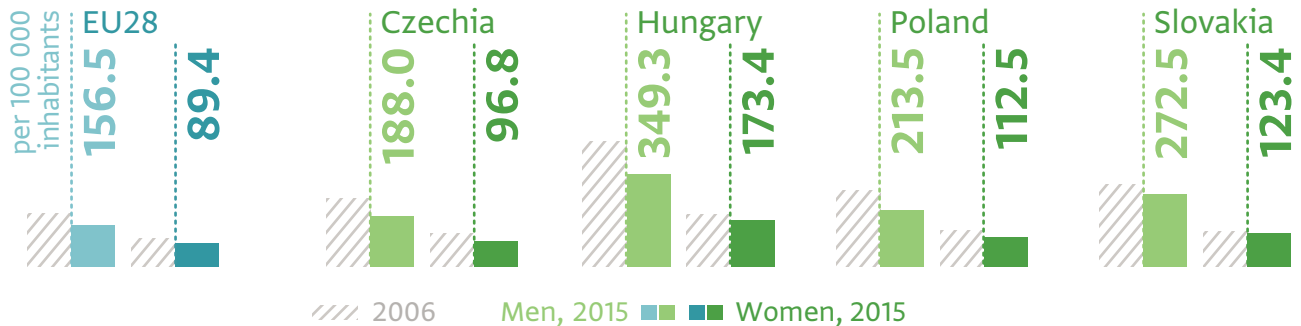
the share of the population aged 16 or over perceiving itself to be in good or very good health



The self-perceived health of the EU population **improved** very slightly, **since 2010 by 0.6 p.p.** for both sexes. In the V4 group, the shares mostly increased. The **highest growth** of the share for **men** was in **Hungary by 4.4 p.p.**, for **women in Slovakia by 4 p.p.** The share **dropped** only in **Czechia** for the **male** population **by 1.2 p.p.**

DEATH RATE DUE TO CHRONIC DISEASES

deaths due to chronic diseases occurred before the age of 65; expressed as the standardised death rate of chronic diseases calculated on the basis of a standard European population per 100 000 inhabitants aged less than 65



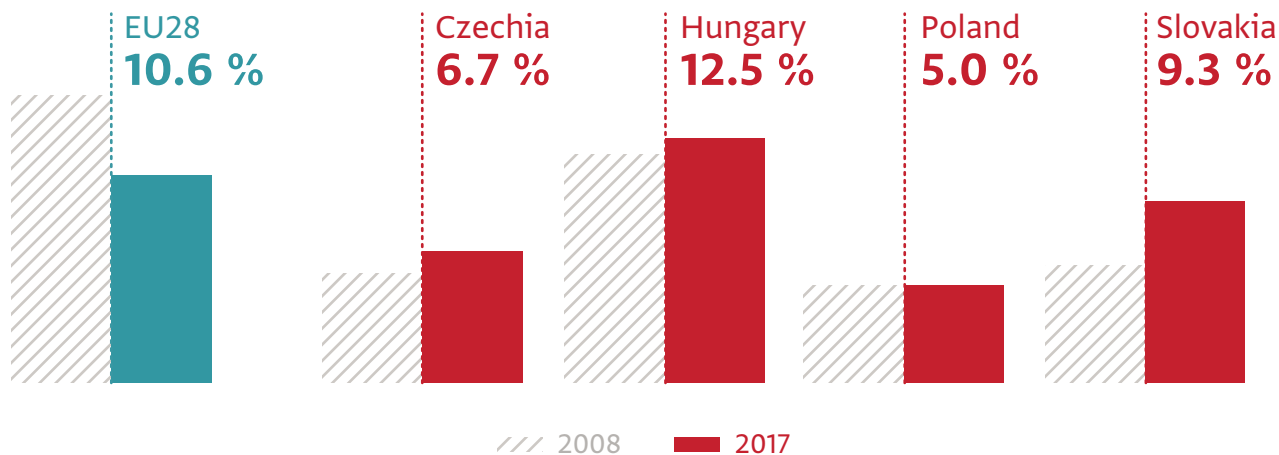
Compared with 2006, the mortality rate in the **EU decreased, by 20.5 % for men** and **14.2 % for women**. The rate dropped in all V4 countries with the **highest declines in Czechia, by 26 % for men** and **21.6 % for women**. The **decrease in Slovakia reached 11.9 % in male** mortality and **7.1 % in female** mortality.

PRACTICAL STEPS IN EDUCATION



EARLY LEAVERS FROM EDUCATION AND TRAINING

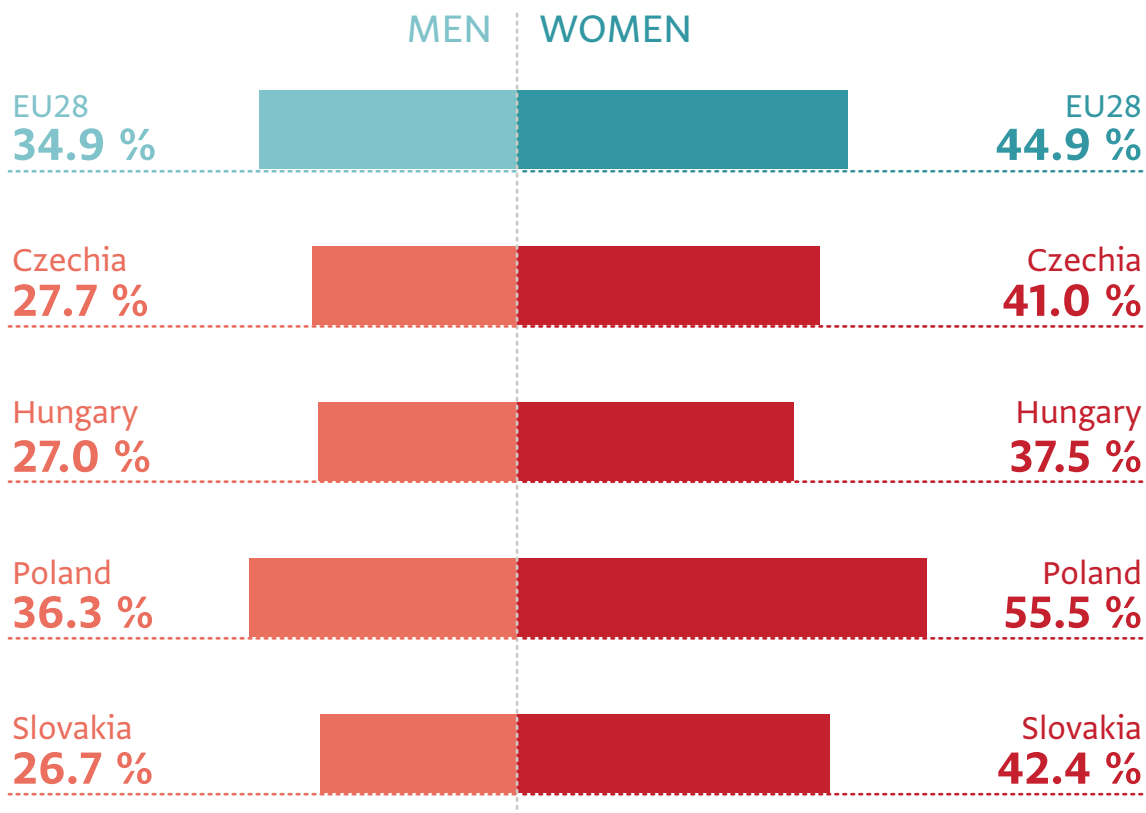
the share of the population aged 18-24 with at most lower secondary education who were not involved in any education or training during the four weeks preceding the survey



Since 2008, **the total share** of the early leavers **decreased in the EU** by 4.1 p.p. to **10.6 %**, while the share of males lowered by 4.6 p.p. and females by 3.8 p.p. Since 2008, the **highest growth** was observed in **Slovakia**, for males by 1.4 p.p. and for females by 5.4 p.p. Only **the male shares decreased**, in **Hungary** by 0.4 p.p. and **Poland** by 0.1 p.p.

TERTIARY EDUCATIONAL ATTAINMENT, 2017

the share of the population aged 30-34 who have successfully completed tertiary studies



From **2008 to 2017**, the **total share** of the population with completed tertiary education **increased in the EU by 8.7 p.p to 39.9 %**. The share of males was higher by 6.9 p.p. and the share of females increased by 10.6 p.p. During the monitored period, all V4 countries reported an **increase** of shares, **the most in Czechia** for males by 12.9 p.p. and females by 25.1 p.p. The **growth** was the **slowest in Hungary** for males by 7.9 p.p. and for females by 10.9 p.p.

EARLY CHILDHOOD EDUCATION, 2016

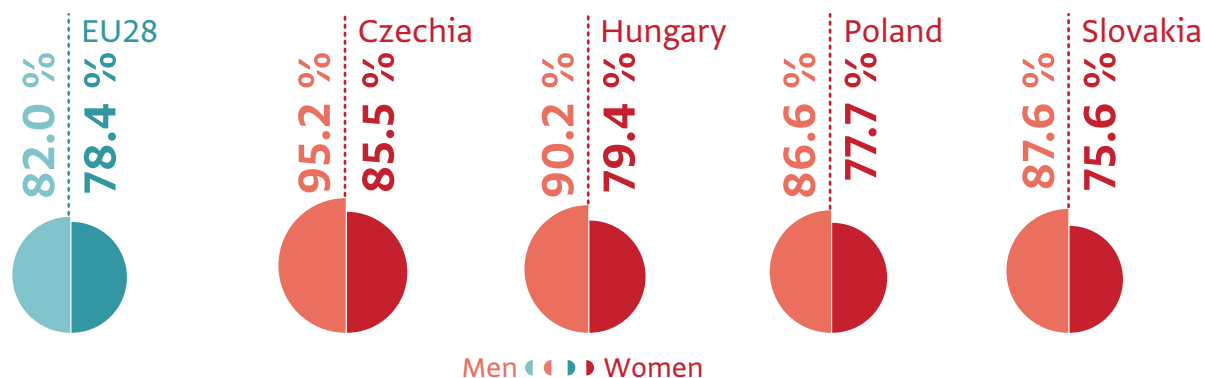
the share of the children between the age of four and the starting age of compulsory primary education who participated in early childhood education



From 2007 to 2016, the **EU share increased by 4.8 p.p.** The most significant **increase** within the V4 group was reported in **Poland by 26.3 p.p.** A **decline** was seen in **Czechia** and **Slovakia**, a more significant in the first mentioned country by 2.6 p.p.

EMPLOYMENT OF RECENT GRADUATES, 2017

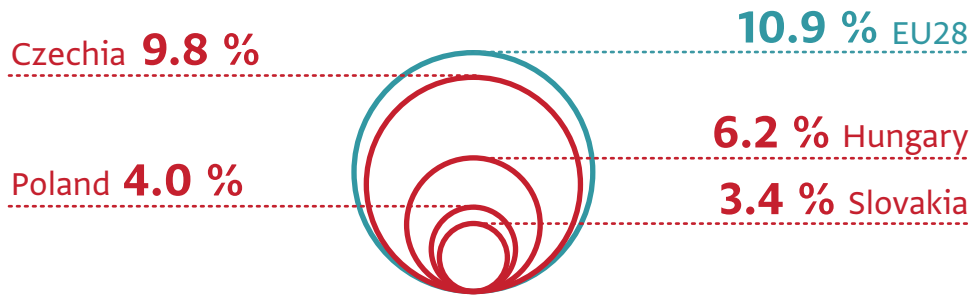
the share of persons aged 20-34 being employed, with at least upper secondary education, completed 1, 2 or 3 years before the survey and not having received any education or training in the four weeks preceding the survey



The employment rate of graduates in the **EU decreased by 1.9 p.p.** to the level of 80.2 %, **from 2008 to 2017.** A decline was seen also by gender, the share of males lowered by 2.6 p.p. and females by 1.3 p.p. Within the V4 countries, the **most significant increase of male rate** was reported in **Hungary by 6 p.p.** The **highest growth** of female rate was in **Czechia by 3.1 p.p.**, the **lowest in Slovakia by 1.4 p.p.**

ADULT LEARNING, 2017

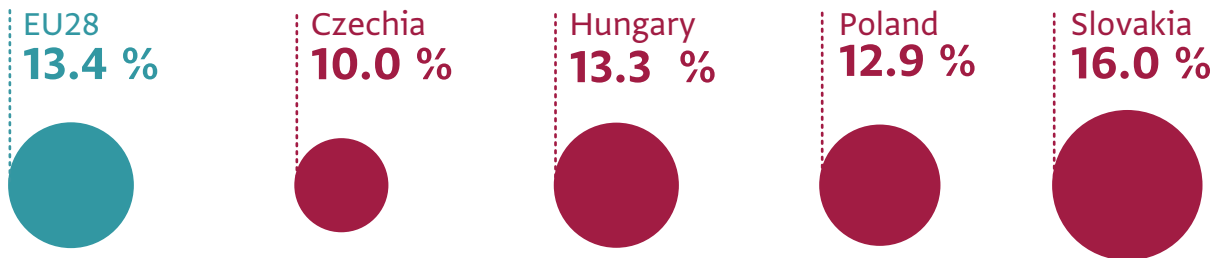
the share of people aged 25-64 who stated that they received formal or non-formal education and training in the four weeks preceding the survey



Since 2008 at **EU level**, the share **increased by 1.4 p.p.** Within the V4 countries, the **highest growth** was reported in **Hungary by 2.8 p.p.** A **decline** of the shares was monitored in two countries, in **Poland by 0.7 p.p.** and in **Slovakia by 0.2 p.p.**

YOUNG PEOPLE NOT IN EMPLOYMENT, EDUCATION OR TRAINING, 2017

the share of the population aged 15-29 who is not employed and not involved in education or training in the four weeks preceding the survey



Since 2008, the share of population without employment or education in the **EU rose by 0.4 p.p.** Within the V4 countries, the share **increased** the most in **Slovakia by 0.7 p.p.**, a decrease was reported in two countries, the **highest in Hungary by 2.6 p.p.**

SECURE ENVIRONMENT

The objective is to promote good and stable international relations.

Priority
area

Main tasks

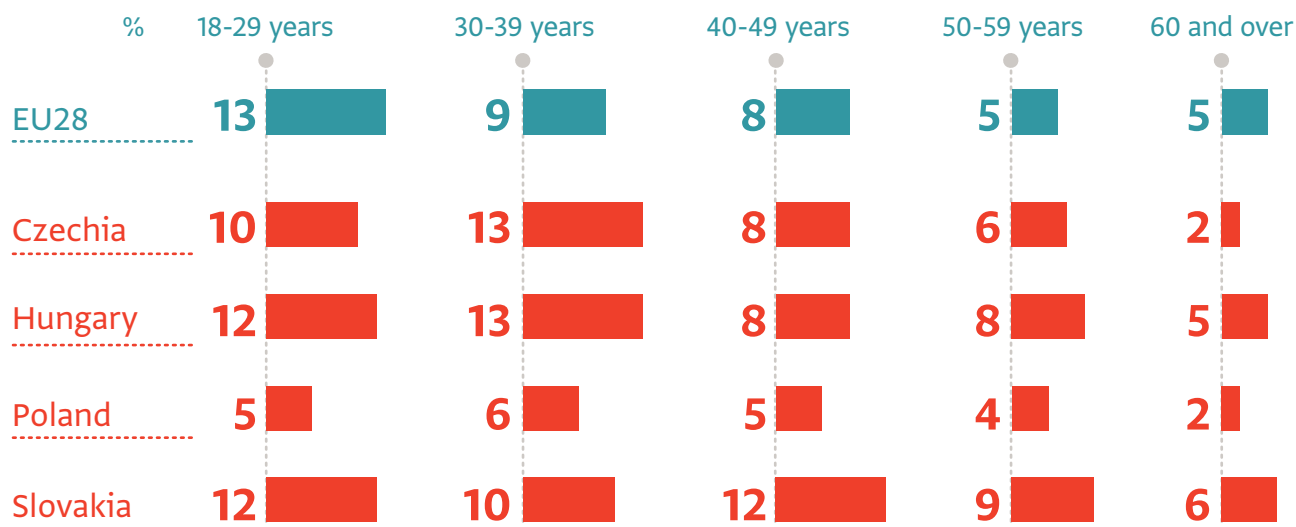
- | more intensive cooperation in the field of Common Foreign and Security Policy, strengthening of the European security and defense
- | continuation of a regular policy dialogue with the Western Balkan and the Eastern Partnership countries
- | forming of common positions of the V4 countries in the field of migration
- | restoration of the proper functioning of the Schengen area
- | contribution to **improving the feeling of security**
- | paying **attention to energy and climate security** with using nuclear energy and other environmentally friendly solutions
- | implementation of effective measures on dual food quality

IMPROVING THE FEELING OF SECURITY



PHYSICAL AND SEXUAL VIOLENCE, 2012

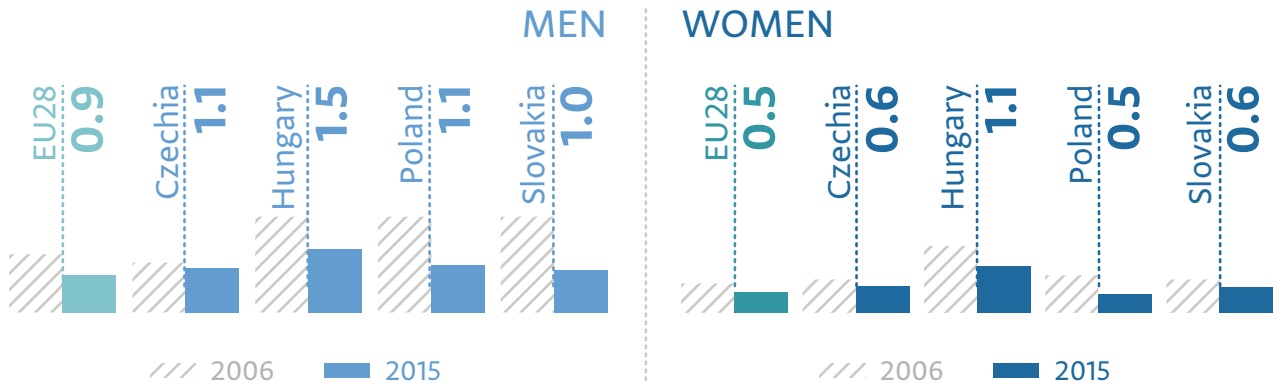
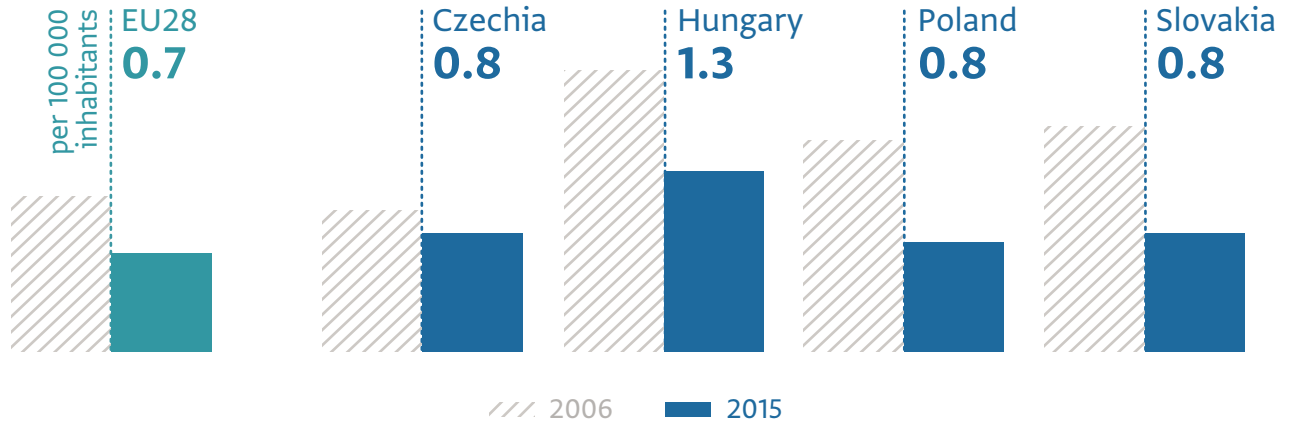
the share of women from the age of 15 who answered they have experienced physical and/or sexual violence by a partner or non-partner in the 12 months prior to the interview



In the EU, in total 8 % of women aged 15-74 was **threatened** by physical and/or sexual violence. Among V4 countries, **the highest share** was surveyed in **Slovakia** at the level of **10 %**, followed by Hungary with 9 % and Czechia with 8 %. **In Poland only 4 %** of women experienced violence.

DEATH RATE DUE TO HOMICIDE

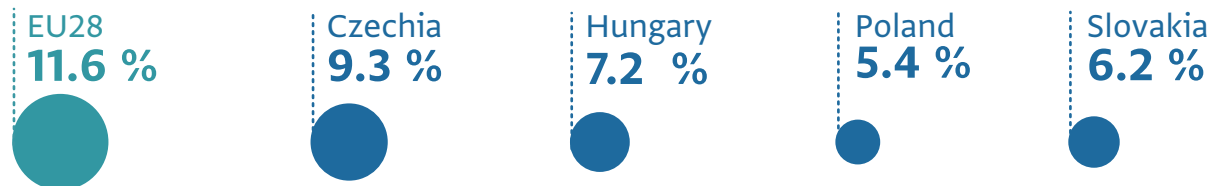
deaths due to homicide and injuries inflicted by another person with the intent to injure or kill by any means, expressed as the standardised death rate per 100 000 inhabitants



Number of homicides had been **decreasing** since 2006 **for both sexes**. Male rates declined more significantly, reaching by 0.5 deaths lower level in the EU compared with 2006. Among V4 countries, the **male rate went down** the most in **Slovakia**, by 1.3 deaths per 100 thousand inhabitants over the monitored period. The **female rate declined** most in **Hungary and Poland by 0.5 deaths** per 100 thousand inhabitants.

REPORTED OCCURRENCE OF CRIME, VIOLENCE OR VANDALISM, 2017

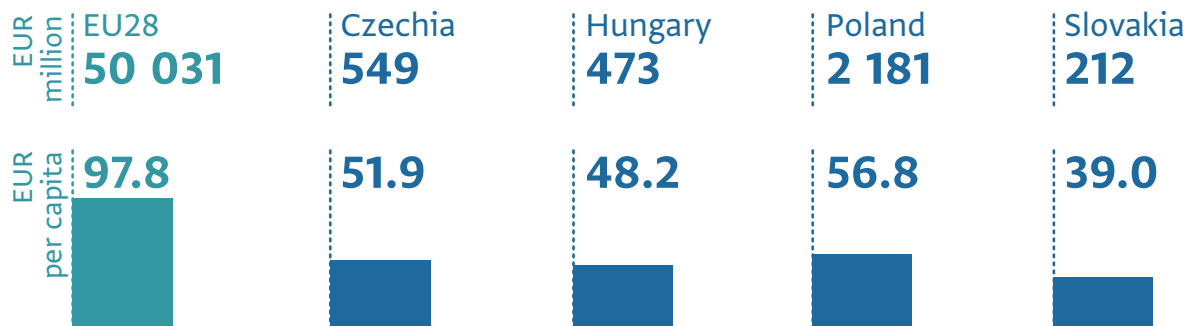
the share of the population who reported that they face the problem of crime, violence or vandalism in their local area, although this perception is not necessarily based on personal experience



Since 2010 in the **EU**, the share of population who faced the crime **decreased by 2.8 p.p.** The same development trend was seen also in V4 countries. Compared with 2008, the share **dropped from 1.9 p.p. in Poland to 5.9 p.p. in Hungary.**

EXPENDITURE ON LAW COURTS, 2016

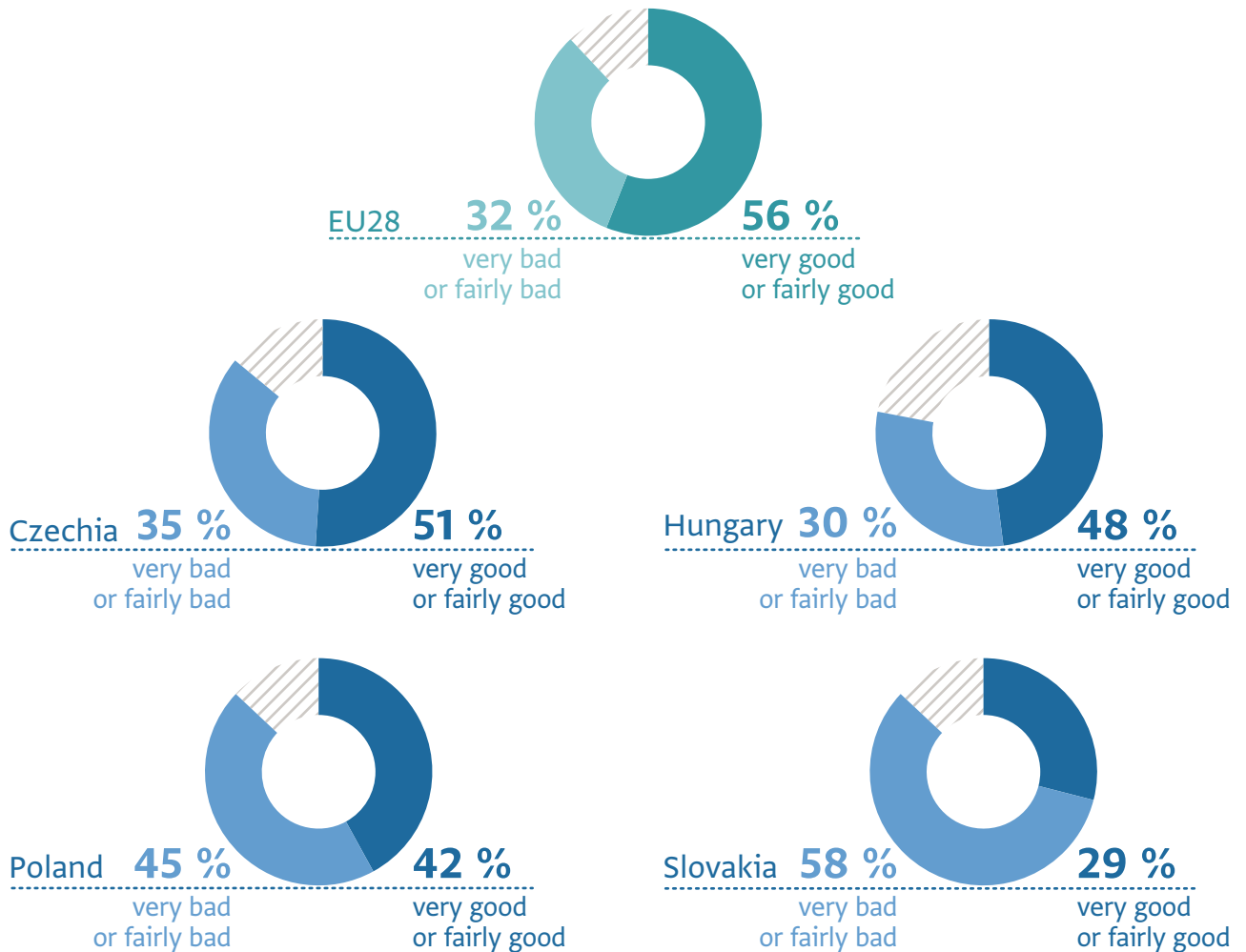
the general government total expenditure on law courts according to the classification of the functions of government



Since 2007, the volume of total expenditures on law courts **rose by 11.1 % in the EU.** Also V4 countries increased expenditure **growing from 14.8 % in Hungary up to 45.2 % in Slovakia.** Expenditure per capita went up reaching the **highest growth by 44.4 % in Slovakia** and the **lowest by 15.9 % in Poland.**

PERCEIVED INDEPENDENCE OF JUDICIARY, 2018

the percentage of population with the given opinion representing respondent perceptions about the independence of the judiciary



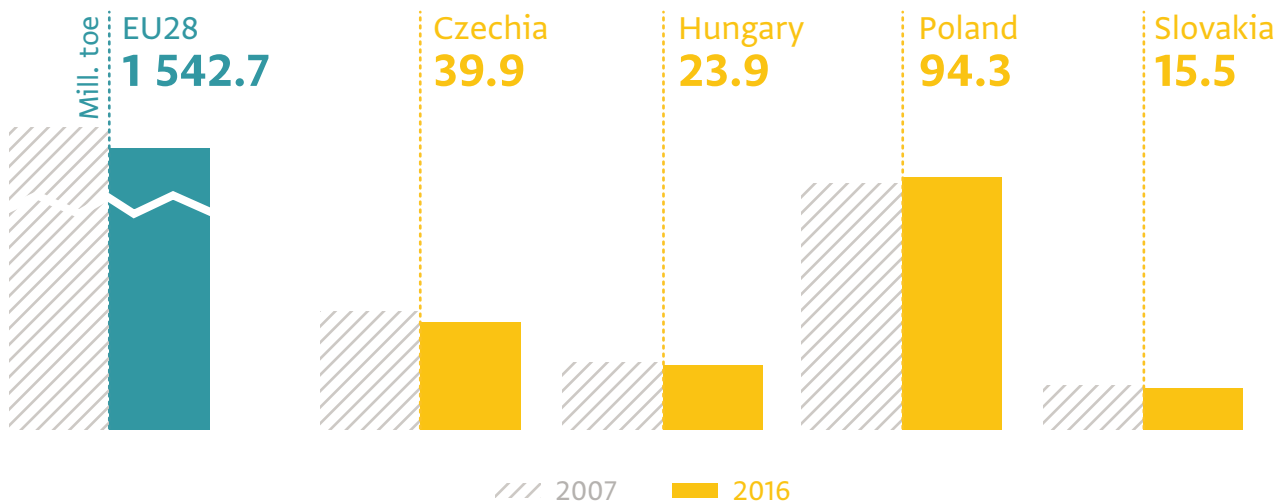
Since 2016, the trust of the **EU population** in judiciary slightly **increased by 4 p.p.** Among V4 countries, the **Czech population** perceived the justice system most positively with the **growth** of the share **by 4 p.p.** Despite the highest growth of the share of inhabitants with positive perception by 8 p.p., **Slovakia** reached the **highest share** of population **thinking very bad or fairly bad** about the justice system.

ENERGY SECURITY



PRIMARY ENERGY CONSUMPTION

the total energy demand of a country in million tonnes of oil equivalent; covering the energy consumption by end users and of the energy sector, including losses occurring during transformation and distribution of total energy



Compared with 2007, the primary energy consumption at the **EU level declined by 8.9 %**. A **decrease** was monitored also in three V4 countries, the **highest one** reached in **Czechia by 8.9 %**. Only in **Poland** the consumption **went up by 2.9 %**.

FINAL ENERGY CONSUMPTION, 2016

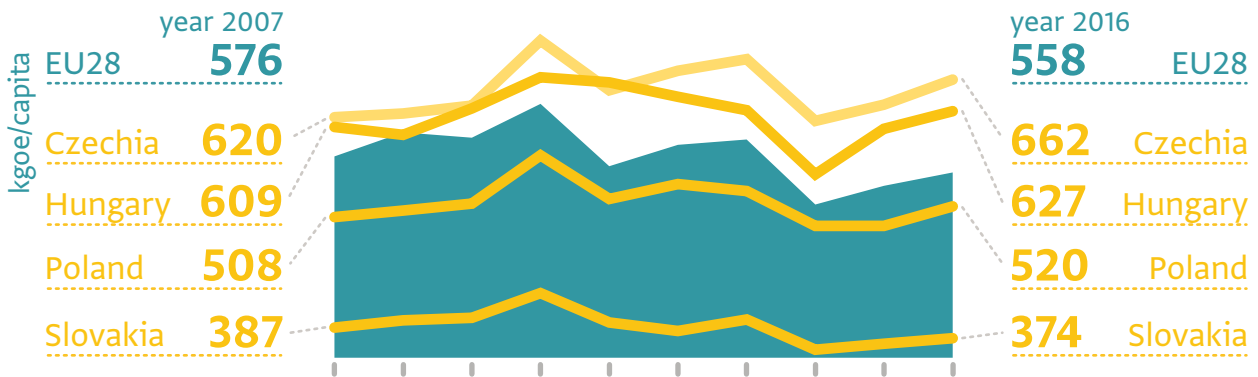
the total energy demand of a country in million tonnes of oil equivalent; covering only the energy consumption by end users



In the **EU**, the final energy consumption during years **2007 to 2016 declined by 5.6 %**. A decrease was also in **Czechia** and **Slovakia**, higher in the latter country reaching 7.1 %. The **highest growth** was monitored in **Poland by 8.3 %**.

FINAL ENERGY CONSUMPTION IN HOUSEHOLDS

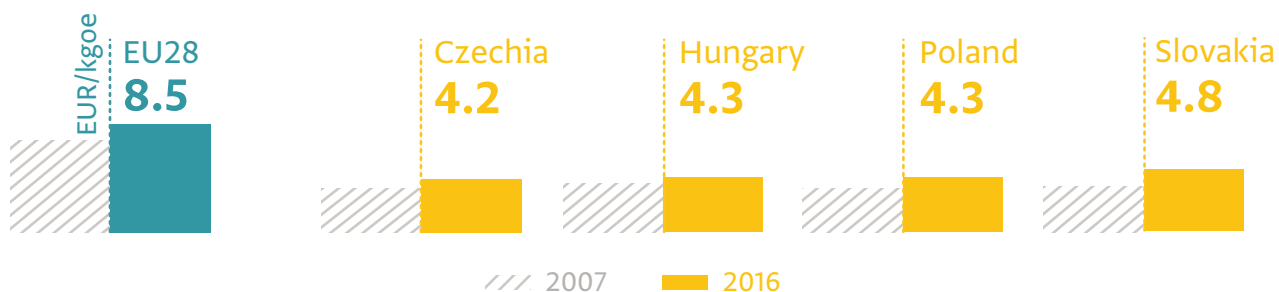
the amount of electricity and heat expressed in kilograms of oil equivalent consumed by every citizen at home excluding energy used for transportation



In the period **2007-2016**, the final energy consumption in households had the **fluctuating development**. In the **EU**, the indicator **decreased by 3.1 % since 2007** and the decline was monitored also in **Slovakia by 3.4 %**. In the other three countries the consumption **went up**, ranging from **2.4 % in Poland** to **6.8 % in Czechia**.

ENERGY PRODUCTIVITY

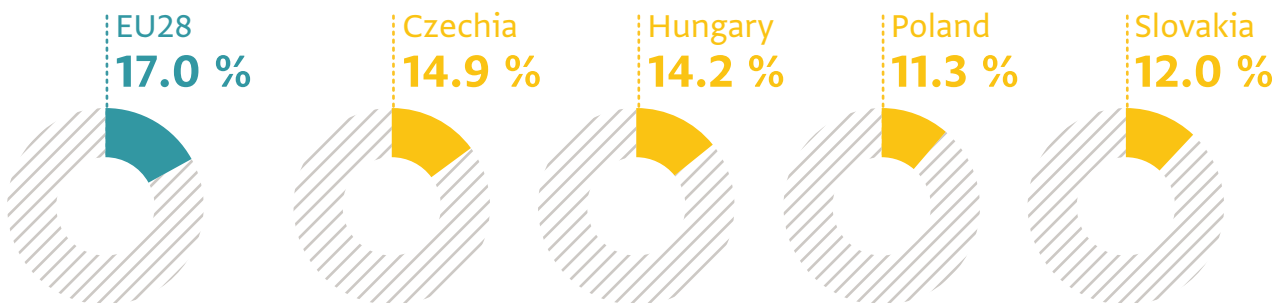
the amount of economic output produced per unit of gross inland energy consumption in euro per kilogram of oil equivalent in chain-linked volumes to the reference year 2010 at 2010 exchange rates



Since 2007, the energy productivity went up at both the European level and V4 countries. In the **EU** the indicator was **higher by 1.3 eur per kgoe**, in the **V4 group** the **highest increase** was reached in **Slovakia** by 1.2 eur per kgoe, the **lowest in Hungary** by 0.5 eur per kgoe.

RENEWABLE ENERGY, 2016

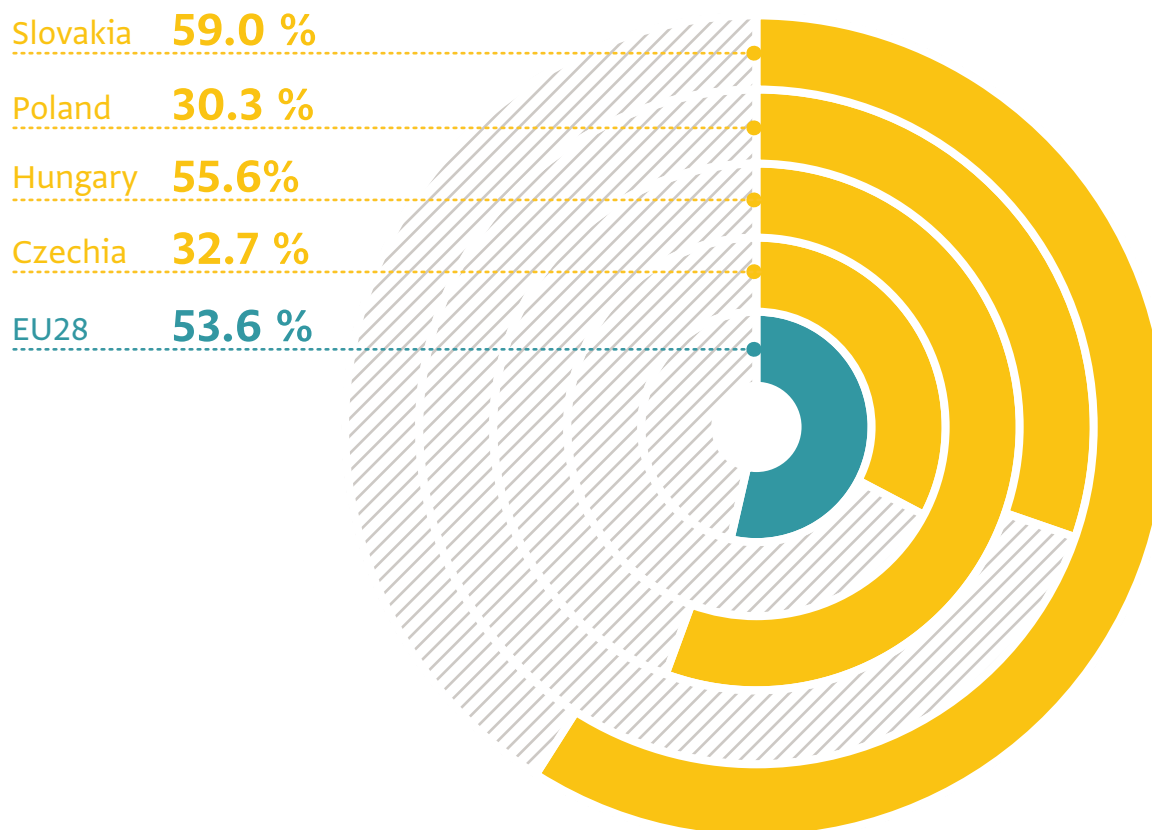
the share of renewable energy consumption in gross final energy consumption



Compared with 2007, the share of renewable energy **grew in the EU by 6.5 p.p.** Shares in all V4 **went up**, most significantly in **Czechia by 6.9 p.p.** The **slowest increase** was reported in **Slovakia by 4.2 p.p.**

ENERGY DEPENDENCE, 2016

the share of total inland energy needs met by imports from other countries of gross inland energy consumption



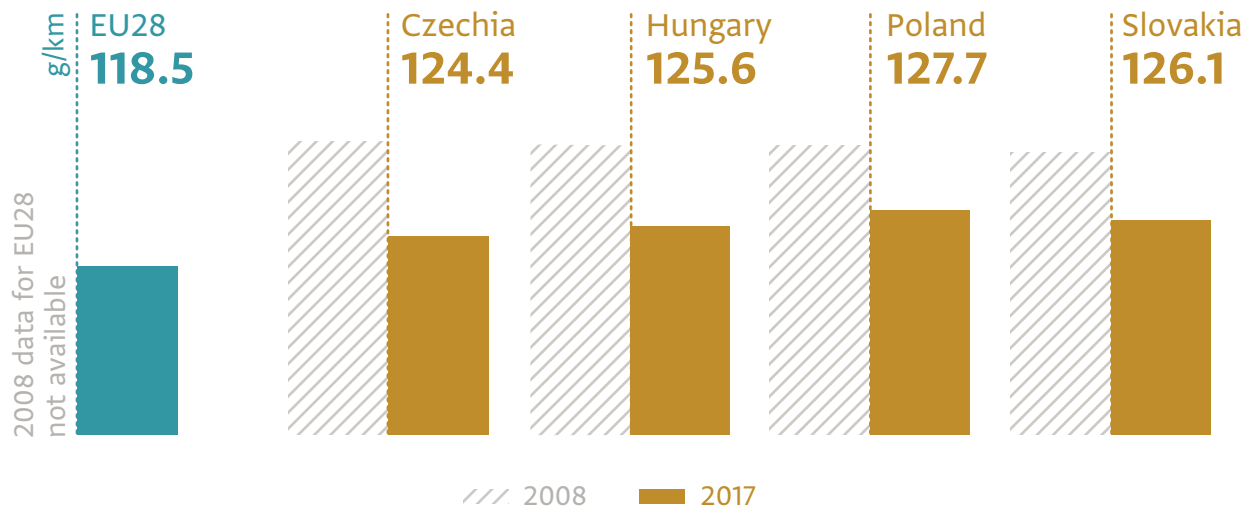
The energy dependence in the **EU rose by 0.8 p.p since 2007**. The **growth** was reported in two countries in the V4 group, the highest in **Czechia by 7.7 p.p.** and **Poland by 4.8 p.p.** Despite the **decrease by 9.3 p.p. in Slovakia** and **4.4 p.p. in Hungary** compared with 2007, both countries were the most dependent on imported energy.

CLIMATE SECURITY



CO₂ EMISSIONS FROM NEW PASSENGER CARS

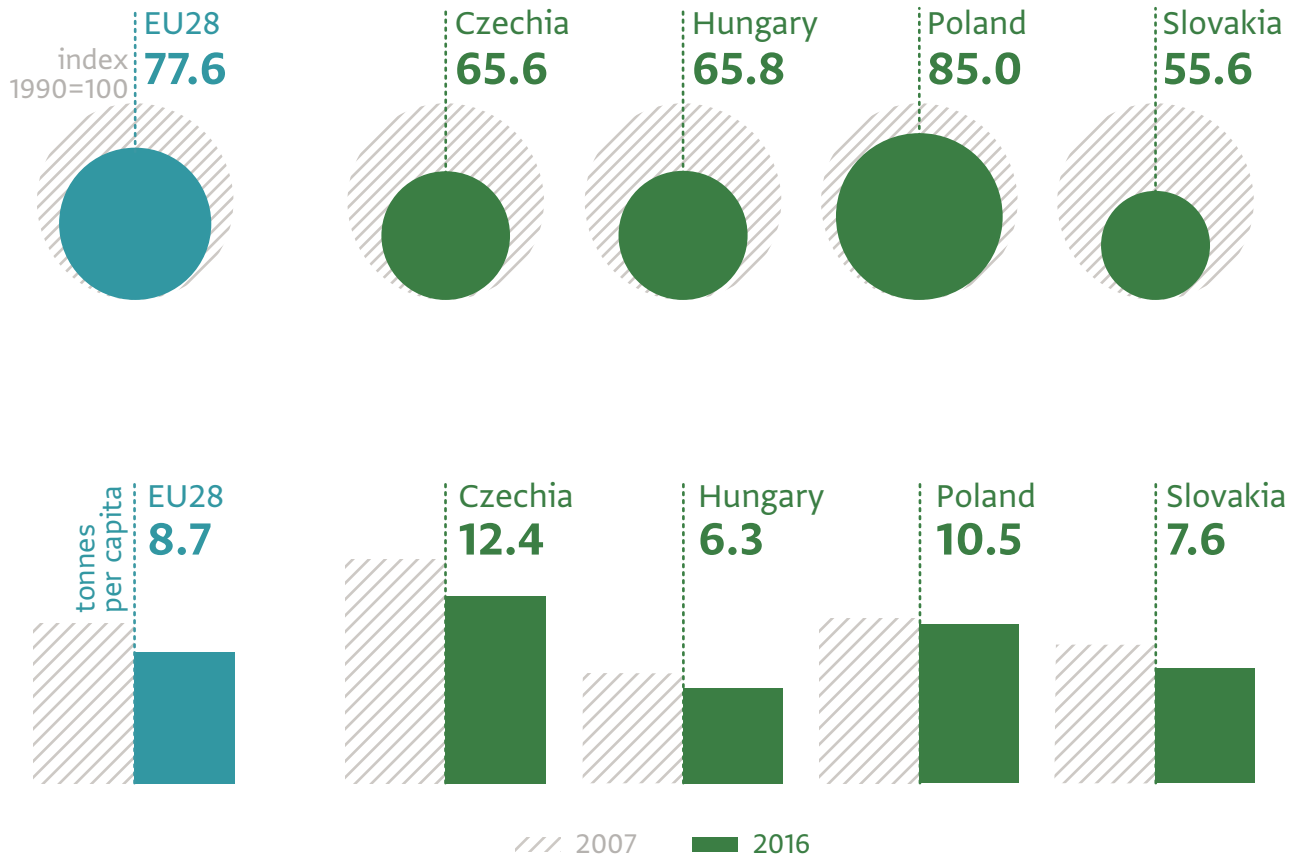
the average amount of carbon dioxide emissions, by new passenger cars in a given year



Since 2014, CO₂ emissions in the **EU** **dropped by 4.0 %**. Since 2008, all V4 countries lowered the emissions. **Czechia** had the **highest decrease by 19.4 %**, followed by **Hungary** with **18.1 %** and **Poland** with **16.6 %**. **Slovakia** reported the **lowest decline among V4, by 16.2 %**.

GREENHOUSE GAS EMISSIONS, 2016

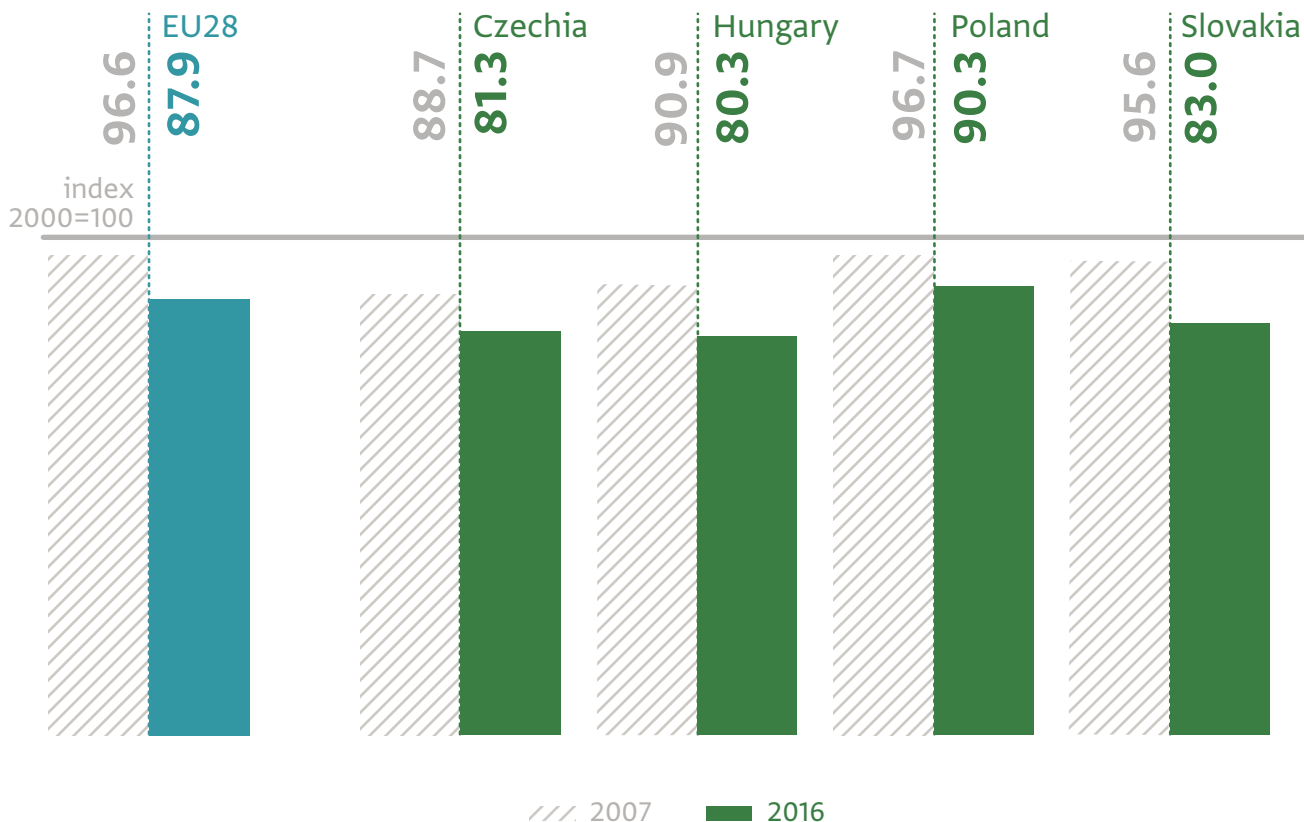
all man-made emissions of the so called Kyoto basket of greenhouse gases, including carbon dioxide, methane, nitrous oxide and the so-called F-gases, expressed in units of CO₂ equivalents to base year 1990



Since 2007, emissions in the **EU lowered by 15.1 index points**. Among V4 countries, the most significant **decrease** was reported in **Hungary by 12.3 index points** and the least in **Poland, by 3.5 index points**. Emissions **lowered by 1.9 tonnes per capita in the EU**. The most considerable **decrease** was monitored in **Czechia by 2.4 tonnes per capita**, the lowest in **Poland by 0.4 tonne per capita**.

EMISSIONS FROM ENERGY CONSUMPTION

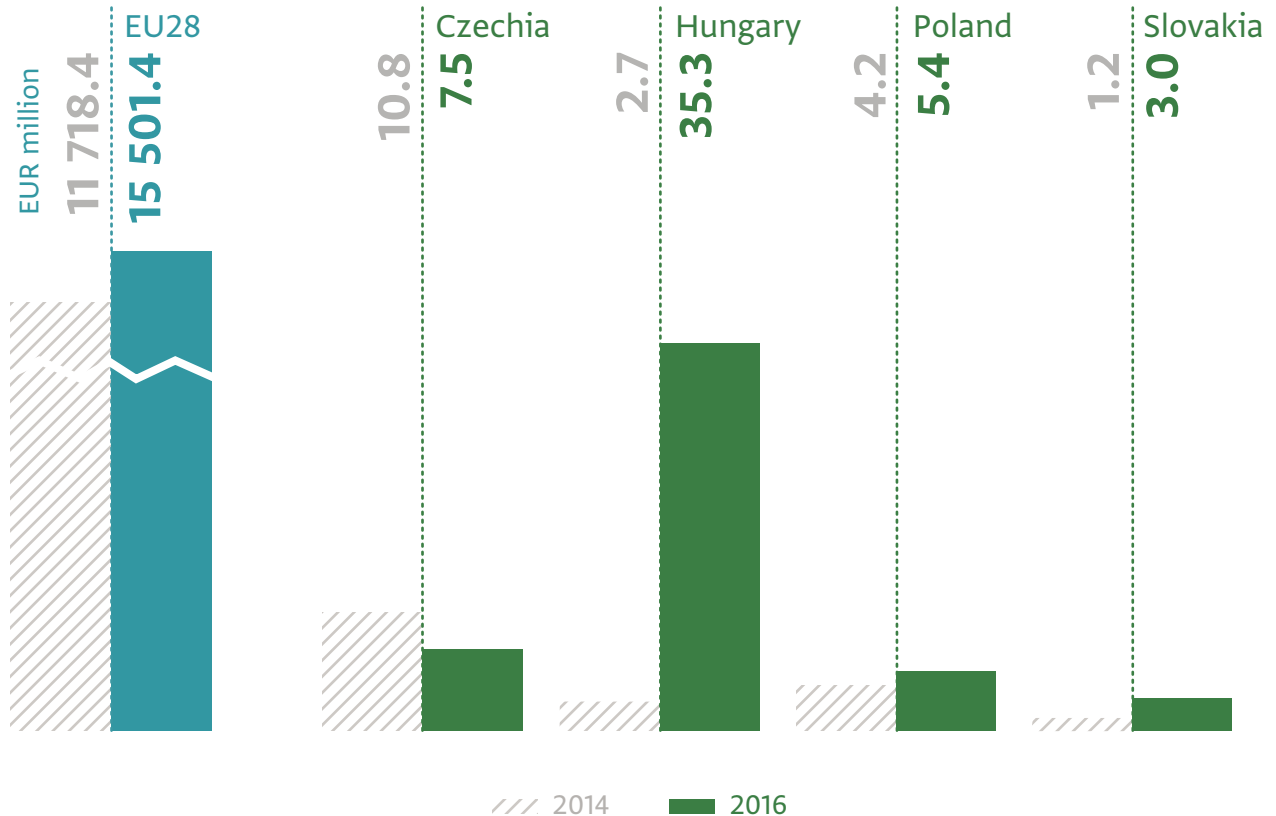
the ratio between energy-related greenhouse gas emissions and gross inland consumption of energy, expressing how many tonnes of CO₂ equivalents of energy-related GHGs are being emitted in a certain economy per unit of consumed energy



From 2007 to 2016, the ratio in the **EU decreased by 8.7 index points**. Also V4 countries reported a decline of the ratios. **Index lowered** the most markedly in **Slovakia by 12.6 points**, followed by **Hungary with 10.6 points** and **Czechia by 7.4 points**. The lowest decrease of the ratio was in **Poland by 6.4 index points**.

CLIMATE RELATED EXPENDITURE

the total amount spent from the annual budget of the EU Member States, in order to contribute to the international billion 100 USD commitment for climate finance under the United Nations Framework Convention on Climate Change



Since 2014, total amount spent in the **EU rose by 32.3 %**. Also three countries from V4 group reported the increase. The **most remarkable growth** was in **Hungary**, the financial support **went up by EUR 32.6 million**. The amount in **Slovakia was higher by EUR 1.8 million** and in **Poland by EUR 1.2 million**. A **decline** was monitored only in **Czechia by EUR 3.3 million**.

SMART SOLUTIONS

The objective is to create optimal
and user-friendly conditions for the online world.

Priority
area

Main tasks

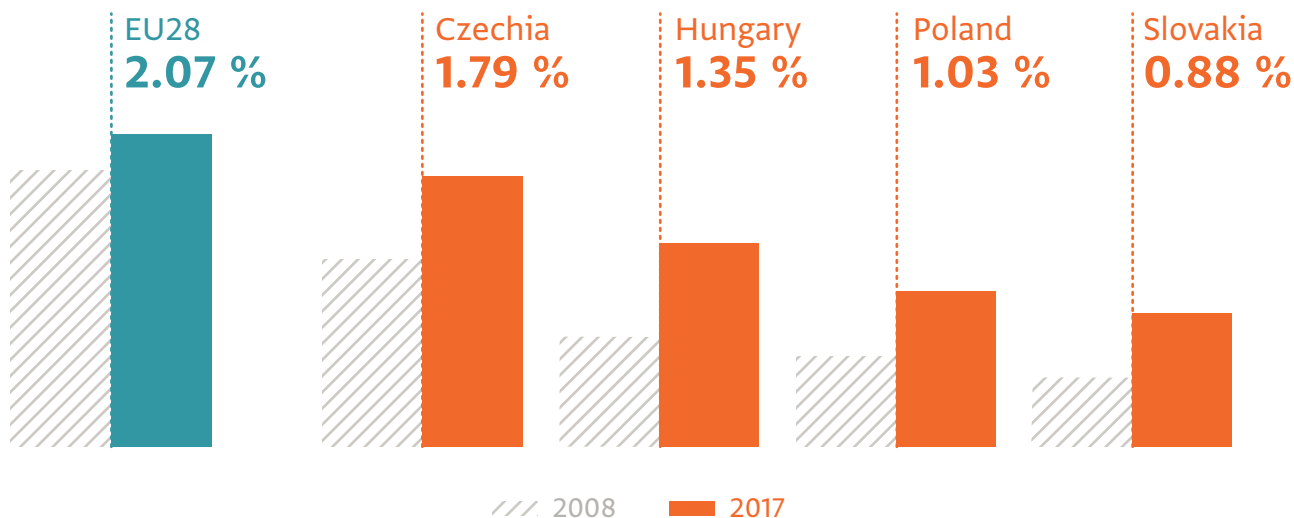
- | cooperation and joint coordination of the digital agenda actions
- | addressing the digital transformation challenge from all parts of the society
- | active response to the **current innovative technological trends** with their wider use in real economy, further development of the innovative fields such as **circular economy and waste management**
- | stimulation of an open discussion on policies that foster the innovation potential of the V4 economies and new investments

CURRENT INNOVATIVE TECHNOLOGICAL TRENDS



R&D EXPENDITURE

gross domestic expenditure on research and development as a percentage of the GDP



Since 2008, the percentage of expenditure on R&D on the GDP **increased in the EU by 0.24 p.p.** All V4 countries increased the expenditure as well. The **growth** of shares varied from **0.37 p.p. in Hungary to 0.55 p.p. in Czechia.**

R&D PERSONNEL, 2017

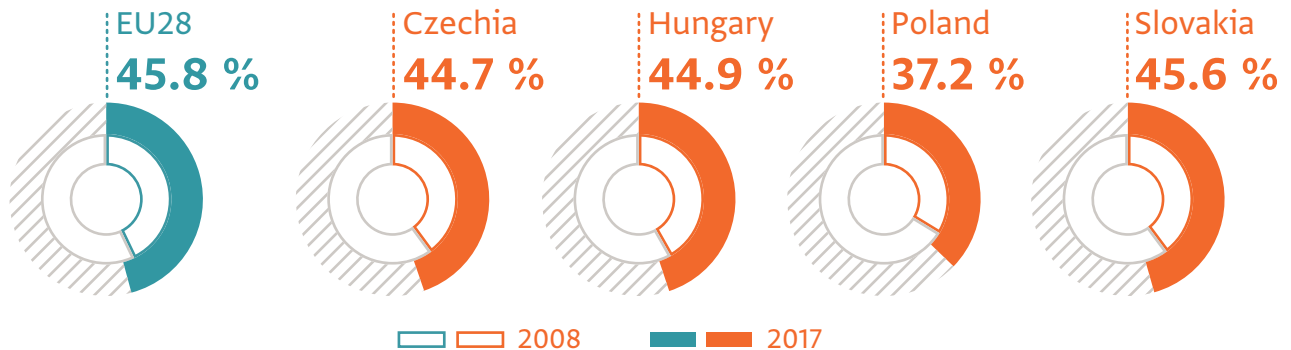
the share of R&D personnel of the economically active population



Since 2008, the share of R&D personnel of the economically active population **rose in the EU** very slightly by **0.22 p.p.** In the V4 countries, the **growth** of the shares ranged from **0.12 p.p. in Slovakia** to **0.34 p.p. in Czechia**.

EMPLOYMENT IN HIGH-TECH MANUFACTURING AND KNOWLEDGE-INTENSIVE SERVICES

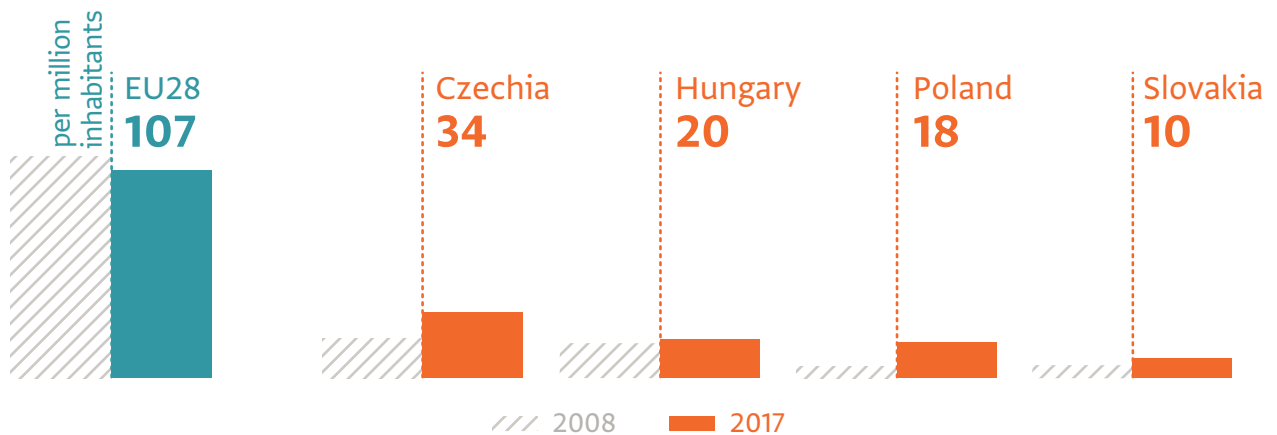
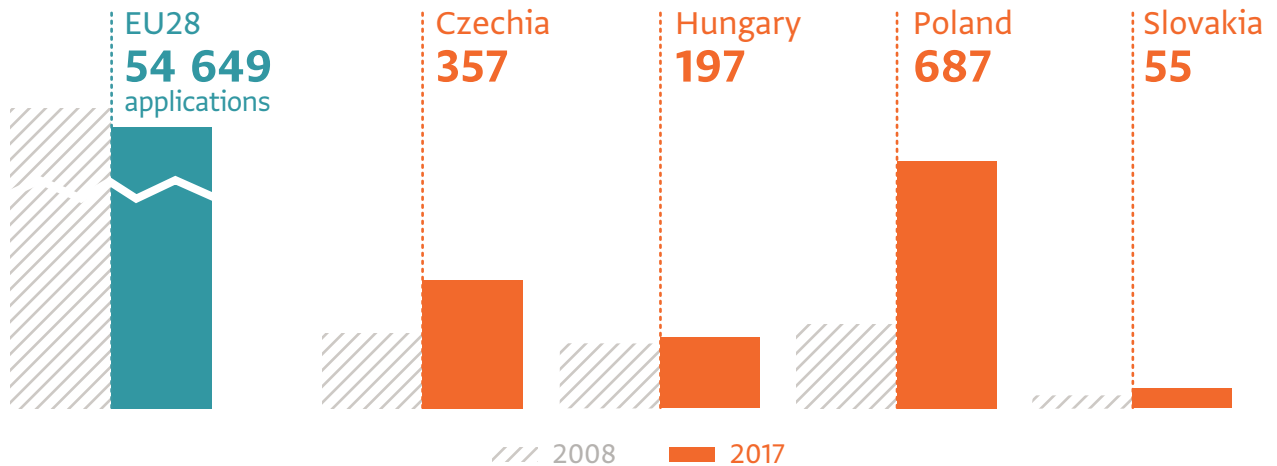
the share of the employed in high- and medium-high technology manufacturing sectors and in knowledge-intensive service sectors of the total employment



Since 2008, the employment in high-tech and knowledge-intensive services sectors **increased in the EU** by **2.9 p.p.** The shares increased in all V4 countries reaching the highest **growth in Slovakia** by **5.8 p.p.** and the lowest in **Hungary** by **3.1 p.p.**

PATENT APPLICATIONS

the total number of applications per country and per million inhabitants; the application is divided equally among all inventors and subsequently among their countries of residence



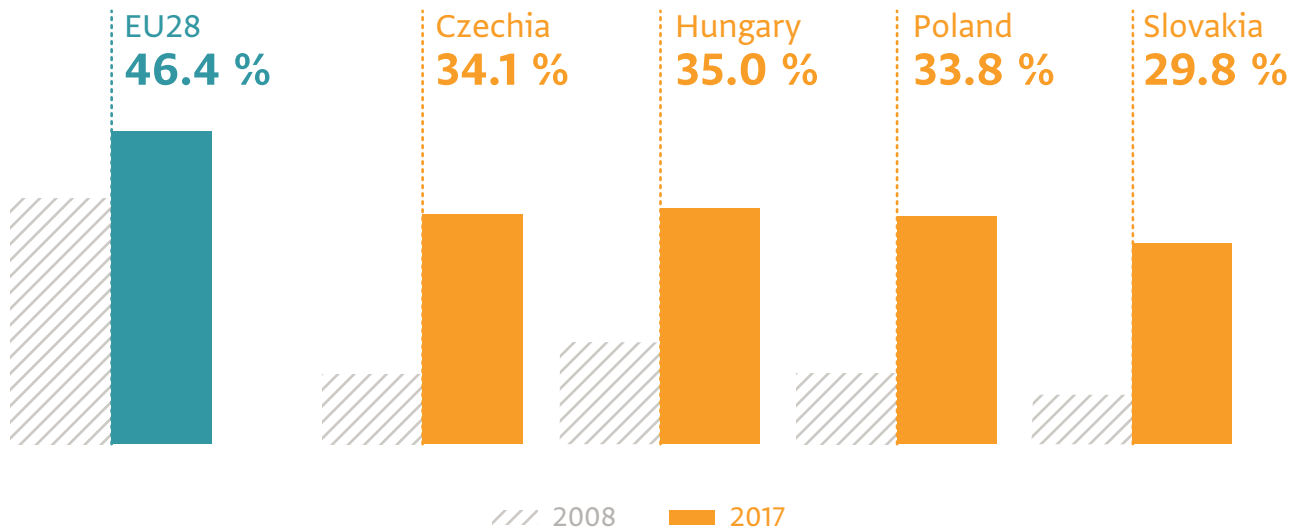
Since 2008, the number of patent applications **lowered at EU level by 4.2 %**. In all V4 countries the number rose. While in **Hungary** there was an **increase** of patent applications **by 16** and in **Slovakia** **by 18**, in **Czechia** the number **increased by 148** and in **Poland** even **by 453 applications compared with 2008**. Patent applications per million inhabitants increased in Czechia by 14 applications per million inhabitants and in Poland by 12.

CURRENT INNOVATIVE TRENDS IN CIRCULAR ECONOMY AND WASTE MANAGEMENT



RECYCLING OF MUNICIPAL WASTE

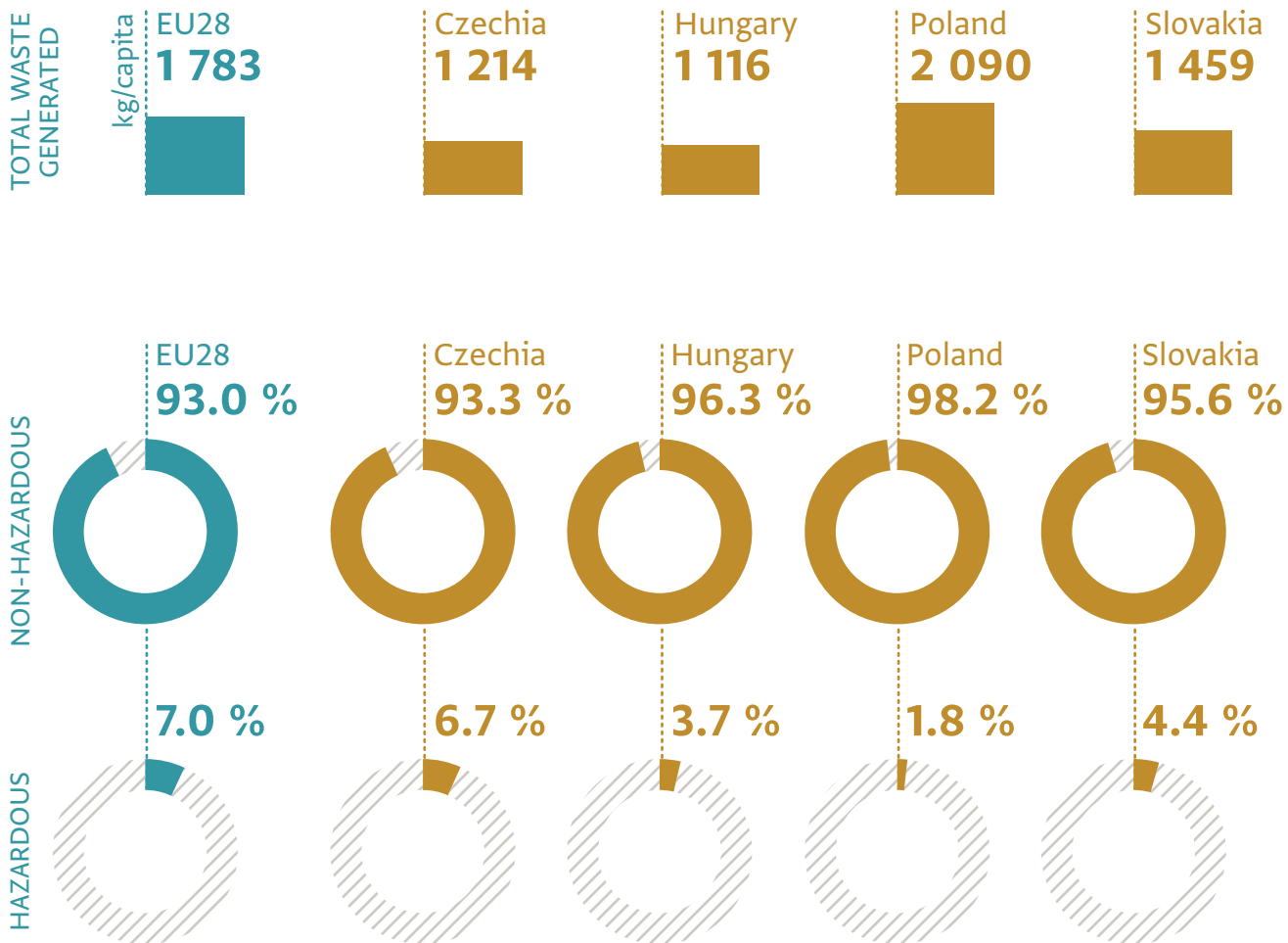
the share of the tonnage recycled from the total municipal waste generated



Since 2008, the shares increased at the EU level and in all V4 countries. In the **EU it grew by 9.9 p.p.** The **most significant rise** of the share was in **Czechia** by 23.7 p.p. and the **lowest** in **Hungary** by 19.8 p.p.

GENERATION OF WASTE BY HAZARDOUSNESS, 2016

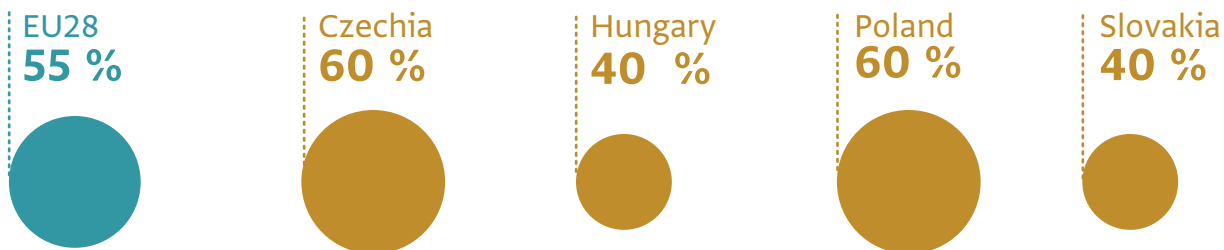
● all waste generated in a country, except major mineral wastes, dredging spoils and soils



Total waste generated in the **EU decreased by 1.1 % since 2008**. The amount of **hazardous waste increased by 11.7 %**. Among V4 countries, two countries reported the **growth of the total waste**, the highest in **Poland by 33 %** and **Czechia by 1.8 %**. The **amount dropped** most significantly in **Slovakia by 11.6 %**. The amount of **hazardous waste went up in Poland** by 23.3 % and **Slovakia** by 8.3 %.

RECYCLING RATE OF WASTE, 2014

the share of country's own waste, which is recycled, from the total waste treated



Since 2010, the share in the **EU increased by 2 p.p.** Among V4 countries, the share **grew** most significantly in **Czechia by 10 p.p.**, in Hungary by 4 p.p. and in **Poland** and **Slovakia** equally **by 2 p.p.**

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FOR SUSTAINABLE DEVELOPMENT

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