METHODOLOGICAL NOTES

Methodological notes comprise basic methodological information on data contained in this publication as well as for tables with regional comparisons, which are available in the electronic version of the publication on the Internet. Extended comparisons of regions that copy the structure of regional statistical yearbooks have been put into a separate publication called Comparison of Regions in the Czech Republic (publication code 330205-19). To be easy to follow, tables in chapters are numbered starting from number 1 on in the printed publication and tables with regional comparisons are numbered starting from 101. In the end there are references and links to more detailed information that can be found on the Internet.

As for the territorial structure, the data are always published relating to the structure valid in the relevant year. As at 1 January 2016, the Brdy military district was abolished and territories of other military districts were reduced. It was reflected in a change to the territories of several regions (districts). However, that applied mainly to transfers of empty areas; no significant changes to the population numbers occurred. Since the year 2000, larger transfers were made as at 1 January 2005 between the Vysočina Region and the Jihomoravský Region and between the Moravskoslezský Region and the Olomoucký Region. As at 1 January 2007, territories of some districts changed. More detailed information on changes to the territories is provided in the Chapter 1 Basic characteristics, districts.

1. BASIC CHARACTERISTICS, DISTRICTS

In long-term time series an emphasis is put mainly on the data comparability in terms of the applied methodology. A number of changes were made over the whole period as the State Statistical Service made efforts to keep methods and results of surveys internationally comparable. The organizational structure of the national economy was gradually changing, too. Therefore it was necessary to recalculate the time series of indicators according to the methodology and organizational structure of the latest year published (i.e. 2018) in order to be able to assess the long-term development in correct manner. All the value indicators are given at current prices because sufficiently relevant data on price developments in neither the production area nor the consumption one to carry out conversions to constant prices have been available in the regional breakdown.

If a conversion to a comparable methodology was not feasible, the fact is mentioned in methodological notes under respective tables or it is explained in the methodology sections of respective chapters. Therefore in this section we draw attention only to changes, which concern the comparability of long-term time series.

Data on the **population** before the year 2001 followed the results of the Population and Housing Census as at 3 March 1991. From 2001 they followed the results of the Population and Housing Census as at 1 March 2001 and since 2011 they have followed the final results of the Population and Housing Census as at 26 March 2011. Demographic balances in a given decade follow the Census every year (births, deaths, immigrants, emigrants). In accordance with international conventions, the data also include numbers of foreigners staying long-term in the country.

In the **labour market** domain, comparability of data on the number of employees and average wages taken from business statistics is adversely affected by changes in the size threshold between larger enterprises (surveyed) and smaller ones (not surveyed). These changes are mostly reflected in the development of the number of employees and, to a lesser extent, of the average monthly wage. The development in the set of reporting units was as follows:

- 2000 to 2001 the set includes enterprises with 20+ employees, incorporated and unincorporated, all entities classified to financial and insurance activities, all entities classified to the non-business sphere, excluding armed forces; and
- 2002 to 2018 the set includes all entities, including units of the Ministry of the Interior and the Ministry of Defence not published before.

On 1 January 2013, an indicator of **share of unemployed persons** was introduced. The methodology of which is explained in chapter Labour Market. A comparable time series is available from 2005. The indicator of the registered unemployment rate ceased to be used in 2012.

Since 2002 entities (agricultural holdings) which exceed the so-called "threshold values" have been measured within **agriculture**, in accordance with standards of the European Union. Smaller agricultural holdings have been classified to the household sector as "hobby activities" of the population and the extent of their activities at the regional level is impossible to determine with sufficient reliability. Retroactive recalculation of time series to a comparable basis is also impossible.

In **industry**, only data referring to years from 1997 are comparable. Since that year, data have been processed on the regional level referring to enterprises with 100+ employees with registered offices on the territory concerned. In **construction**, construction work in the long-term time series are given by location of the construction site.

In **tourism**, data since 2012 have been surveyed based on results of the project of the Ministry of Regional Development called "Quality Improvement of Data on Selected Tourism Sectors". Data before 2012 are thus incomparable.

In **education**, the secondary education cannot be clearly broken down by type of schools any more (secondary technical schools, secondary vocational schools). All types of schools now cover pupils who were before independently reported by special schools.

In **health**, the time series is comparable since 2000, when data on the health establishments falling under all ministries have been given. Detached units of the health establishments are not covered (unlike in Chapter 27). Since 2007 the number of physicians includes also contractual workers.

In **social security**, data on the number of old-age pensioners and their pensions are comparable since 2010 and data on social services since 2009. The changes are explained in detail in the relevant chapter.

In the end of the chapter, **changes to territories of regions and districts** as at 1 January 2016 related to the abolished military districts or reduced territories thereof are listed. There is also an overview of changes to territories of regions and districts, which were made as at 1 January 2005 and 1 January 2007.

2. AREA AND CLIMATE

The opening table contains basic data on the **territory of regions and districts of the Czech Republic**. Data on areas of regions and districts as at 31 December 2018 have been derived from official data of the Czech Office for Surveying, Mapping and Cadastre in Prague.

The size structure of municipalities was processed according to the territorial-administrative arrangement as at 31 December 2018.

Climate is presented by basic meteorological data measured at weather stations located on the territory of the region. Data from the stations were taken over from the Czech Hydrometeorological Institute in Prague.

3. ENVIRONMENT

The environment comprises anything that creates natural conditions for the existence of organisms, including human beings, and is a prerequisite for their further evolution. Its compartments are especially air, water, rocks, soil, organisms, ecosystems, and energy.

The Act of the Czech National Council No 114/1992 Sb, on nature conservation and landscape protection distinguishes six categories of specially protected areas as follows.

Large-size protected areas

- National parks are large areas unique at the national or international scales, major parts of which are occupied by natural or nature-close ecosystems where species of flora and fauna, and abiotic nature are of extraordinary scientific and educational importance; and
- Protected landscape areas are large areas with harmonically formed landscape, characteristic relief, significant shares of forest and permanent grassland natural ecosystems, high abundance of tree species, or, as the case may be, preserved monuments of historical settlements.

Small-size protected areas

- National natural monuments are smaller natural formations (including those formed by human activity besides the forces of nature), deposits of minerals or habitats of endangered species on fragments of ecosystems of the national or international environmental, scientific, or aesthetic importance;
- National nature reserves are smaller areas where ecosystems important at the national or international levels of extraordinary natural value are bound to natural their relief with a typical geological structure;
- Natural monuments are areas defined similar way as the national natural monuments yet important at the regional level only; and
- Natural reserves are smaller areas of concentrated natural value with represented ecosystems characteristic to and important for the given geographical area.

On 1 March 2007 the methodology of the calculation of total land areas of protected areas was changed. Since then the land areas of specially protected areas has been calculated from the boundary perimeter of the specially protected areas instead of formerly given data according to respective decrees establishing the areas.

Natura 2000 is a system of protected areas which is created by every Member State of the European Union on their territory adhering to unified principles. The Natura 2000 system development was imposed by two most important European regulations on nature protection – the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds and the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. The Natura 2000 system consists of two types of territories of special protection areas (for birds) and special areas of conservation (for habitats and wild fauna and flora).

Environmental protection expenditure includes investment expenditure on the acquisition of tangible fixed assets and non-investment expenditure related to environmental protection activities. **Tangible fixed assets** (TFA) for environmental protection are the sum expended by reporting units on the TFA acquisition (by purchase or own activities) and the total value of the TFA acquired for free or by transfer according to relevant legislation or by a change from private use to business. The **non-investment expenditure** for environmental protection includes wages and salaries, payments for rent, energy and other material, and payments for services the main purpose of which is to protect the environment.

Economic benefits from environmental protection activities refer to revenues from sale of environmental protection services, revenues from sale of by-products, and savings generated from reuse of by-products that originated at activities related to environmental protection.

Emissions shall mean pollutants of various states which are released into the atmosphere. Emissions are given in kilograms per hour or in tonnes per year. Amounts of the given pollutants released into the air are listed in the **Register of Emissions and Air Pollution Sources** (REZZO). Data in tables are broken down by type of pollution sources to

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REZZO 1–3 (for stationary pollution sources) and REZZO 4 (for mobile pollution sources, especially road motor vehicles, railway vehicles, boats, vessels, and aircraft).

In 2018 the emission balance for the period 1991–2017 was newly compiled while the new compilation reflected numerous changes to the methodology. The most important changes were the application of the European tool of COPERT 5 for the calculation of emissions from the road transport sector and the use of the CZSO statistical survey ENERGO 2015 for estimation of incineration emissions from households. These two new inputs caused the new published data are essentially different from those published in previous years.

Waste shall mean any movable thing which its owner disposes of or intends to dispose.

The **municipal waste** shall mean the household waste and similar waste according to the Commission Decision of 18 November 2011 establishing rules and calculation methods for verifying compliance with the targets set in Article 11(2) of Directive 2008/98/EC of the European Parliament and of the Council (notified under document C(2011) 8165). The household waste means waste generated by households and similar waste means waste in nature and composition comparable to household waste, excluding production waste and waste from agriculture and forestry.

The **industry of water supply and sewerage systems** involves water management activities related to the administration and operation of water supply and sewerage collection systems that means with the providing for sufficient supply of quality drinking water and for removal of waste water and its treatment. **Public water supply systems and sewerage systems** include water supply systems and sewerage systems established and run in the public interest. The **water produced** includes both invoiced and non-invoiced water. The sum of data for invoiced and non-invoiced water may differ from amounts of the water produced for an amount of water taken from other organizations, or for water handed over to other organizations.

Since 2014 there has been a more precise definition of sewerage and of water invoiced to households due to an amendment to the Decree No 428/2001 Sb establishing execution of the Act No 274/2001 Sb on public water supply and sewerage systems.

Since 2013 the "wastewater discharged into public sewerage systems" has been including also levied rainwater, besides sewerage, industrial, and other wastewater.

The waste water treatment plant (WWTP) shall mean premises and equipment serving for waste water treatment having the mechanical, biological, and/or further stage of treatment. Equipment used for coarse pre-treatment of waste water (racks, grit traps, oil traps, etc.), cesspools, sumps, and simple devices with a mechanical function, which are not monitored and operated regularly, are not considered to be waste water treatment plants.

The **WWTP** capacity refers to the design capacity (m³/day) thereof. A higher capacity than the design one is given where implemented intensification measures have been approved by the water authority.

4. POPULATION

The data showing the size and distribution of the population are derived from population censuses, which are followed by annual statistical balances of data on births, marriages, divorces, deaths, and migration. Unless otherwise stated, statistical reports from registries are the data sources. The territorial breakdown of data in the chapter corresponds to the territorial structure valid as at 1 January of the relevant year.

All data refer to the entire population permanently resident on the given territory, no matter what their citizenship is. Since 2001 (following the 2001 Population and Housing Census), data include also foreigners with visa for stay over 90 days and foreigners with asylum granted. Since 1 May 2004, nationals of the EU Member States with temporary residence on the given territory and third-country nationals with a long-term residence permit on the given territory of the Czech Republic are also included.

The **mid-year population** is the population of the given territory balanced as at 1 July of the reference year. The **natural change** of the population is the difference between live births and the total number of deaths. The **total population change** is the sum of the natural change and net migration. The **migration** is a change of permanent residence or long-term residence of a person across the border of a given territory. The CZSO receives the data on migration from information systems of the Ministry of the Interior and the Directorate of the Alien Police Service.

Births – a born child is counted in the region (district) according to the residence of the mother at the delivery. The **average age of mother** at childbirth is calculated from the distribution of numbers of births by age of mother. The **total fertility rate** is the average number of children that would be born alive to a woman provided that age-specific fertility rates recorded in a reference calendar year remain unchanged during her childbearing period (age 15–49 years).

Tables on **abortions** are compiled from a set of individual data received by the CZSO from the Institute of Health Information and Statistics of the CR. The **total abortion rate** is the average number of abortions that a woman would have provided that age-specific abortion rates recorded in a reference calendar year remain unchanged during her childbearing period (age 15–49 years).

The **stillbirth rate** is the number of stillbirths per 1 000 births in total. The **infant mortality rate** is the number of deaths among children under 1 year of age per 1 000 live births. The **neonatal mortality rate** is the number of deaths among children under 28 days of age per 1 000 live births.

Data on **deaths by cause of death** are classified according to the 10th decennial revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) in force since 1 January 1994. Since 2013, data on causes of death come from the Death certificate (Report on examination of the deceased person) and are received via the Institute of Health Information and Statistics of the CR.

The **ageing index** is the ratio of the population aged 65+ years per 100 persons aged 0–14 years. The **life expectancy** (the expectation of life) shows the number of years to be lived by an x-year-old individual, given the mortality conditions of the reference period from the life table. With regards to elimination of random deviations, life tables for regions are processed for two-year periods and for districts for five-year periods. The life expectancy in Table **4-**1. for a given year corresponds to the life expectancy for the period ending by the given year (e.g. the 2018 column provides the life expectancy in the Region in the period of 2017–2018).

Marriages are included in a respective territory according to the place of residence of the groom. The average age at the conclusion of a marriage and the average age at the conclusion of the first marriage are calculated from the distribution of the numbers of marriages by age of the groom. Divorces are broken down by territory according to the last common place of residence of the spouses. The CZSO receives the data from the information system of the Ministry of Justice. The average age at the divorce is calculated from the distribution of the numbers of divorces by age of the male/female.

A foreigner is a natural person who is not a citizen of the Czech Republic.

In tables **4**-11. and **4**-12. the total number of foreigners includes foreigners with permanent residence, nationals of Member States of the EU, the EEA, and Switzerland and their family members with temporary residence, third-country nationals with a long-term residence permit or with long-term visas. Data come from the records of the Directorate of the Alien Police Service.

5. MACROECONOMIC INDICATORS

Regional accounts, the most important source of regional macroeconomic indicators, are a regional analogy to national accounts. They result from annual national accounts compiled for the Czech Republic; as for the methodology they correspond to the European System of Accounts (ESA 2010) and consistently observe rules and recommendations valid for Member States of the European Union, which means that they are comparable to them – harmonized.

In accordance with the ESA 2010 methodology indicators are surveyed by a **workplace method**, which means that indicators for enterprises are allocated to regions according to the real location of a workplace of a unit. Gross value added for organizations, which are active in more regions, is allocated based on the number of their employees in individual regions. Indicators of household accounts are related to the place of **residence of the households**.

Gross domestic product (GDP) is a key indicator of the development of the economy. It is a set of values added of individual institutional sectors or individual industries in activities considered by the ESA to be productive (i.e. including both market and non-market services) and net taxes on products (it is thus expressed in purchase prices). From the point of view of use, the GDP is equal to the sum of final consumption (of households, general government, and non-profit institutions serving households), gross capital formation (fixed capital, balance of inventories, and acquisitions less disposals of valuables), and the external trade balance.

Gross value added (GVA) is the sum of values added of individual industries (i.e. GDP excluding net taxes on products, which cannot be divided among individual industries). The industrial structure is arranged according to the CZ-NACE classification, which corresponds as for its content to the European NACE Rev. 2 classification.

Gross fixed capital formation (GFCF) includes the value of acquisition of both tangible and intangible fixed assets (purchased, acquired free of charge, or produced by own activities), minus the value of its sale and the value of assets handed over free of charge. It also includes acquisition in the form of financial leasing. The target of the acquisition is always to use the fixed assets for a productive activity including housing in the dwelling of its owner. Only assets used in production for a period longer than one year are fixed capital. It includes also e.g. equipment for military purposes, research and development expenditure and the like.

Net disposable income of households is an amount that households can give to final consumption, savings in the form of financial assets, and to accumulation of tangible and intangible assets. Disposable income results from the generation and distribution of income and it is the balancing item of the secondary distribution of income account.

For the needs of international comparisons, selected **indicators are converted** to euros and purchasing power standards, namely according to the coefficients issued by the Statistical Office of the European Communities (Eurostat).

Regional macroeconomic indicators are revised in harmony with revisions of annual national accounts. Update data include results of a standard revision of the annual national accounts in 2018. Data for 2017 are based on a notification version of the annual national accounts.

6. LOCAL GOVERNMENT BUDGETS

The chapter contains selected data on revenue and expenditure of regions, municipalities, and voluntary unions of municipalities. Data are received from the Ministry of Finance, which processes the necessary data from accounting and financial statements of individual territorial units.

Revenue and expenditure are after **consolidation**, i.e. after elimination of entries, which are not a direct part of the financial performance and after removal of duplicates.

7. PRICES

Consumer prices of selected price representatives are average consumer prices surveyed in the region in December of a reference year. Their arrangement in the table is based on the consumer basket structure (i.e. a set of selected kinds of goods and services paid for by the population, including weights assigned to them).

Data on **prices of selected types of real estate** are derived from data of the Ministry of Finance. The data source is the real estate acquisition (transfer) tax returns, which new owners (purchasers) of real estate are bound to submit to the competent internal revenue authorities by the end of the third calendar month following the month, in which the record of the property rights was entered into the Real Estate Register. Establishing of the database of price information at internal revenue offices was commenced by the processing of tax returns data for 1998 according to the Decree No 279/1997 Sb. The database covers nationwide the entire population of transactions on the real estate market and is based on real (admitted) prices. Owing to additional recalculations of data from administrative sources the data for respective years published in the preceding yearbooks may not be compared.

Prices of agricultural products are measured in the network of selected agricultural producers. They are mostly nominal prices of selected agricultural products by main (specified) quality grades. The monthly average prices of measured products are calculated as a simple arithmetic mean of reported prices of respective producers.

8. LIVING CONDITIONS

Based on the membership in the European Union, the Czech Statistical Office carried out further round of the EU-SILC (Statistics on Income and Living Conditions) sample survey in households called "Living Conditions 2018". The aim of the survey is to obtain on a long-term basis comparable data on social conditions of households, which are comparable also with other EU countries due to the survey unified methodology.

The survey applies the method of a four-year sample rotation; about a quarter of the observed households is replaced every year. The survey results are representative only up to the level of regions due to the sample size. When interpreting and analysing the survey results it is necessary to keep in mind that they have some statistical errors (both sample and non-sample ones). More information (e.g. tables with 95% confidence intervals estimates, from which the interval, in which the real value of the estimated characteristic occur with 95% probability, is clearly seen) can be found, along with the detailed methodology, in the publication "Household Income and Living Conditions 2018" on the website www.czso.cz, in section Statistics – Living Conditions, Household Income and Expenditure.

The survey included all persons, who in the reference period had their regular residence in the selected dwelling, including persons temporarily absent. This also held to foreign nationals and subtenants. Data for **private households** are usually calculated to equivalent sizes of household. The recalculation to the **equivalent size** of household takes into account the size and demographic composition of households. The calculation is constructed the way to reflect size savings of multimember households, i.e. savings on costs of consumer durables and services serving to a higher number of the household members (as household appliances, electricity, etc.). The OECD scale assigns the weight of 1.0 to the first adult in the household; any other adult (aged 14+ years) has 0.7; and any child (aged 0–13 years) has 0.5. The OECD-modified scale weights take more into account the household size (number of members) related savings and are defined as follows: the first adult in the household has 1.0; any other adult (aged 14+ years) has 0.5; and any child (aged 0–13 years) has 0.3.

Income of persons and income of households are surveyed always for the calendar year before the survey. The gross money income includes all income from work (from employment or self-employment), social income, and all other kinds of regular and irregular income awarded to the household or its individual members. The **net money income** of the household was obtained by subtracting of appropriate health and social insurance contributions and income taxes. The total net income of the household includes income in kind comprising of consumption of own-account production and/or employee benefits in kind (e.g. contributions for board).

Lines for the **quintile distribution of households** by the net money income per person were calculated from the total for all households of the Czech Republic. Corresponding households and their members were categorized into five income groups determined this way for respective regions.

9. LABOUR MARKET

The source of information on the labour market surveyed in the households of respondents is the **Labour Force Sample Survey** (LFSS). The methodology of indicators measured by the LFSS is in line with the definitions and recommendations of the International Labour Organisation (ILO). Thus the data may serve as a basis for direct international comparability of labour market characteristics in various countries. At the same time, the implementing methodology of Eurostat, which explains the contents of particular market characteristics, is adhered to.

The sample includes over 24 thousand **random selected dwellings** on the entire territory of the Czech Republic (over 0.6% of all permanently occupied dwellings). All persons usually living in the sampled dwellings, irrespective of the type of their residence, are included in the LFSS. The set of chosen dwellings varies during the survey. Each quarter 20% of newly chosen dwellings are incorporated into the panel and after five quarters being on the panel they are dismissed from.

The decisive criterion for surveyed characteristics of every respondent is the respondent's actual activity on the labour market in the reference week. If a respondent stated that he/she had worked at least one hour in the reference week for wage, salary, or for other remuneration, he/she is strictly classified, according to the ILO methodology, as a person in employment.

All tables give average annual data for respective years.

Reliability of data collected by sample methods declines as the sample size decreases. The annual averages lower than 3 000 persons are considered as low reliability data and annual data for a number less than 500 persons are not published at all as their relative standard deviation is higher than 50% (represented by dots in tables). For all data obtained from the sample survey the 95% confidence interval can be constructed, i.e. the interval, in which the real value of the estimated indicator lies with the 95% probability. The interval size is affected by both frequency of the characteristic surveyed in respective region and the sample size in the region.

Data on the **number of employees** (as headcount) and on **average gross monthly wages in 2015 to 2017** (Tables **9-8.**, **9-9.**, **9-103.**, and **9-104.**) are drawn from results of the processing of annual statistical questionnaires. They cover all economic entities with no regard of their number of employees. The territorial breakdown of the data by region is obtained directly from the reporting units and is carried out depending on the location of actual workplaces of employees, by the so-called **workplace method**. However, a more detailed territorial breakdown, for example, by districts, is impossible. The data breakdown by industry has been **processed according to the national version of the Statistical classification of economic activities in the European Community** (CZ-NACE). Data are classified to industries by principal activity of the whole enterprise.

In 2018 data on numbers of employees and average wages (Table 9-105.) are drawn from the results of the processing of quarterly statistical questionnaires and are published by workplace location. Data are given for all enterprises with the numbers of employees as headcount and also converted to the full-time equivalent persons which reflects the length of worked hours. The data are preliminary.

The data on numbers of employees and on average gross monthly wages do not cover persons at public offices (as, for instance, deputies, senators, full-time members of assemblies at all levels), judges, women on maternity leave, persons on parental leave (unless they simultaneously work in a main (one) job), trainees of voluntary training, persons working for companies on the basis of the agreement on work performed out of the employment contract, employees of businesses, which are not statistically measured.

The data on wages by sex and by classification of occupations (Tables 9-10., 9-106., and 9-107.) were obtained from the wage structure statistics of employees sources of which are the Information System on Average Earnings (ISAE) of the Ministry of Labour and Social Affairs and the Information System on Salaries (ISS) of the Ministry of Finance. Data on wages are calculated by different methodology and are incomparable to results of a common statistical survey (Tables 9-8. and 9-9. or Tables 9-103. to 9-105.). They relate to the sample of employees with the number of paid hours of 1 700 and more, which roughly corresponds to full-time employees who worked in the reporting unit for the most of the year and were not long-term ill, for instance.

Since 2011 the Structural Earnings Survey has cover the whole employee population of the Czech Republic because newly employees of businesses with less than 10 employees and also employees of non-profit organizations and employees of the self-employed have been included (Tables 9-10., 9-106., and 9-107.). This change means the statistical data are more representative. Results for previous years were not grossed up to the whole national economy, namely did not cover businesses with less than 10 employees, and therefore data in the time series are not comparable in full. The breakdown by occupation has been processed according to the national version of the International Standard Classification of Occupations (CZ-ISCO), effective since 1 January 2011.

The **median wage** is the value of the employee's wage in the middle of the wage distribution. This means that one half of wagess lies below the median wage, while the other half is above it.

The data on the number and structure of unemployed **job applicants kept in the labour office register** and on the job vacancies kept in the labour office register are taken from the Information System of the Ministry of Labour and Social Affairs.

Job applicants kept in the labour office register are natural persons, who have asked in person for an arrangement of a suitable job at a regional office of the Labour Office of the CR, in the region where they have residence and while they have complied with conditions established by law and the regional office of the Labour Office of the CR have entered them into the register of job applicants.

Available job applicants kept in the labour office register are registered job applicants (including the EU and EEA citizens), ready to take a job immediately, when an appropriate one is offered, because there is no objective obstacle for them to become employed.

The **partly unemployed** are registered job applicants with additional earnings (coming from an activity based on employment or service relationship, or under contracts for work carried out outside contracts of employment provided that their monthly earnings or remunerations per month do not exceed a half of the minimum wage).

The **share of unemployed persons** expresses the share of available job applicants kept in the labour office register aged 15–64 years in the whole population of the same age.

Since 1 January 2012 there has been effective an amendment to the Act No 435/2004 Sb on employment, which in Section 35 cancels the so far applied obligations of the employers to report **job vacancies**. The employer **may** report **job vacancies** and their characteristics to a regional labour office (Section 37). Job vacancies kept in the labour office register shall mean newly created or vacated jobs, which the employer intends to acquire employees or to occupy them with temporary employees from a **labour agency** (Section 35).

Data on **employed foreigners** are based on two separate registers as follows:

- the register kept by the Ministry of Labour and Social Affairs, exactly by the Administration of Employment Services, which collects data from registers of labour offices as follows:
 - number of valid work permits issued for foreigners;
 - number of pieces of information on citizens of the EU/EEA and Switzerland starting to perform work in employment. These citizens and their family members does not need a work permit, yet their employers are obliged to inform the competent labour office in writing on the day they started to perform work in employment, at the latest;
 - number of granted employee cards, which are issued solely to citizens from non-member countries of the European Union. The employee card is a long-term residence permit for the purpose of employment in the Czech Republic;
 - number of granted blue cards, which constitute a long-term stay permit for the purpose of employment in the Czech Republic for foreigners having higher qualification, which is in demand in the Czech Republic, from non-member countries of the European Union;
 - number of pieces of information on foreigners from other countries having permanent residence in the Czech Republic, who do not need a work permit yet have the duty to inform on.
- the register kept by the **Ministry of Industry and Trade**, which gather data on foreigners having valid trade licence and therefore are able to do business on the territory of the Czech Republic on the conditions that they comply with conditions established in the Act No 455/1991 Sb on trade licences.

The data on the number of foreigners with long-term residence and those with employment may not be directly compared. In certain cases, of certain citizenships, the number of employed foreigners may be higher than the number of foreigners with long-term residence, i.e. those registered by the Alien Police Departments. This holds especially on the number of foreigners from the EU Member States, who, in accordance with valid legislation, do not need to register for residence in the Czech Republic, yet are registered as employees at labour offices.

10. ORGANIZATIONAL STATISTICS

Organizational statistics draws data from the **Statistical Business Register** (RES). The Statistical Business Register is a public list, which is made and maintained by the CZSO pursuant to the Act No 89/1995 Sb, on the State Statistical Service, as amended. It serves mainly for preparation and conducting of statistical surveys. It is kept updated with data from statistical surveys and data from the Commercial Register, trade licensing offices, and other administrative sources. After basic registers of public administration were put into operation on 1 July 2012, the **Administrative Business Register** (ROS) became the main source for updates of the Statistical Business Register.

The Statistical Business Register keeps records of **legal persons** including organizational units of the state and **natural persons** with the status of an entrepreneur. **Natural persons** include private entrepreneurs in business under the Trade Act, agricultural entrepreneurs – natural persons, natural persons in business under other acts, and since 2014 foreign natural persons and branches of foreign natural persons. **Business companies and partnerships** include general commercial partnerships, limited liability companies, limited partnerships, joint-stock companies and since 2010 also European Economic Interest Groupings and European Companies (Societas Europaea, SE). **Cooperatives** include also European Cooperative Societies (Societas Cooperativa Europaea, SCE).

On 1 January 2014, in relation to the new Civil Code, there was a huge change in the keeping of records on **civic associations**. Active civic associations were reclassified to new legal forms – most frequently an association (previously a legal form in English also called an association) and a subsidiary association (formerly an organizational unit of an association), which are kept in the Register of Associations.

As at the same date, entities with legal form "foreign entity" (in previous Statistical Yearbooks called "the rest of the world (non-residents)") were reclassified to new forms: a branch of a foreign legal person, an organizational component of a foreign endowment fund, an organizational component of a foreign foundation, and especially a foreign natural person and further a branch of a foreign natural person.

From 1 January 2017, classification of church organizations and religious societies has been refined. Entities with the former legal form of church organizations and religious societies have been classified to one of the three legal forms as follows: churches and religious societies, registered churches (legal entities), and unions of churches and religious societies.

At the turn of the years 2017 and 2018, classification of trade unions, employers' organizations, and their organizational units was refined. Most of the entities with the original legal form of trade unions and employers' organizations (validity of which terminated in January 2018) or with the legal form of organizational units of trade unions and employers' organizations were transferred to one of the two new legal forms as follows: trade unions and employers' organizations.

The breakdown of the Statistical Business Register by **principal** (prevailing) **activity** corresponds to sections of the **Classification of Economic Activities** (CZ-NACE). Businesses are classified to **institutional sectors** in accordance with the **Classification of Institutional Sectors and Subsectors** (according to the ESA 2010). Individual sectors (subsectors) include entities (businesses), which have similar basic activities, functions, and economic behaviour and belong to the same type of producer. The **households** sector includes individuals or groups of individuals as final consumers and small entrepreneurs producing market goods and services (craftsmen, agricultural entrepreneurs — natural persons, private medical doctors, lawyers, tax advisors, etc.), dwelling unit owners associations, and since 2014 also foreign natural persons (previously classified to foreign-controlled private enterprises).

A **business with identified activity** is that, which according to information from statistical surveys or administrative data sources reports economic activity.

11. AGRICULTURE

The data are mostly sample surveyed and respondents are businesses engaged in the agricultural primary production recorded in the statistical **Farm Register**. The **results** found **are grossed-up to the whole agricultural sector** (excluding households outside the agricultural industry). The reporting unit in the agricultural statistics is an entity with agriculture as principal activity complying with at least one of **threshold values** (for instance, 1 hectare of utilised agricultural area, or a minimum of 1 head of cattle reared, etc.).

The **agricultural output** of the region is a total of agricultural products and agricultural services produced by agricultural entities of the region and inseparable non-agricultural secondary activities. The basic methodological tool to measure the output is so-called regional economic accounts for agriculture.

The **utilised agricultural area** shall mean land regularly utilised for cultivation of agricultural crops. It includes arable land, hop gardens, vineyards, gardens, orchards, permanent grasslands, and other permanent crops.

Areas under crops, measured by their surveys taken as at 31 May, shall mean agricultural land areas, which have been sown or planted in spring of the given year, areas of winter crops sown in autumn of the previous year, and areas of multiple-year crops cultivated on lands sown in previous years. Areas under crops do not include fallows.

The **harvest** represents the total quantity of a crop harvested at standard moisture and purity. The total harvest of fodder crops on arable land, of red clover, and of lucerne have been given as hay since 2016. The harvest of green and silage maize is given as green crop. Since 2017 the fodder crops harvest has been given with the determined moisture content, which is 15% for clover, 15% for lucerne, and 65% for green and silage maize. The **per hectare yield** is the ratio of harvest to the harvested area. The **harvested area** is equal to the areas under crops, except for grain maize, green maize, maize for silage, permanent grasslands areas, and also vegetables since 2018. The number of fruit trees and bushes includes fruit trees and bushes of all age categories dedicated for the fruit production.

The **number of livestock** is given according to livestock surveys as at 1 April of the given year. **Cows** and **sows** are breeding dams calved or farrowed, respectively, at least once. **Poultry** includes hens and cocks, geese and ganders, ducks and drakes, turkey hens and cocks (including young ones).

The **production of livestock for slaughter** (cattle, pigs) and poultry shall mean the amount (as live weight) of livestock which was sold to market for to be slaughtered. Includes also livestock, which was in-house slaughtered or slaughtered in own slaughterhouses or in other owner slaughterhouses for reimbursement, or potentially slaughtered outside slaughterhouses. The **milk production** shall mean the amount of milk that have been milked and sucked by sucking calves of milked dairy cows and does not include milk sucked by calves of meat cows. **Laying hens** shall mean hens, which are reared to produce eggs not intended to be hatched.

The **meat production** (except for poultrymeat) is the carcass weight of livestock for slaughter which were slaughtered at registered slaughterhouses no matter if they were reared in the Czech Republic or imported as livestock from abroad. It includes meat, from forced slaughters as well, that was recognised as suitable for human consumption. The **carcass weight** is the weight of carcasses processed in slaughters as defined in regulations of the Council of the European Union. Veal shall mean the meat from cattle slaughtered at the age of up to eight months and lamb shall mean the meat of sheep slaughtered at the age of up to one year. The **live weight** is the weight of livestock for slaughter prior they are slaughtered. The average live weight of pigs for slaughter excludes sows and boars.

The **consumption of fertilizers** is given per 1 hectare of reported utilised agricultural area for reporting units covered by the sample survey. There is no grossing up to the whole agricultural industry, that means it does not cover small farmers. The crop year is the period from 1 July of the previous year to 30 June of the current year.

12. FORESTRY

Forestry includes data for businesses with 20+ employees and having forestry and logging as their principal activity and, furthermore, businesses managing forest land areas of 200+ hectares.

Afforestation/reforestation shall mean the afforestation and forest restoration carried out by man, i.e. planting and sowing of forests while the natural forest regeneration is excluded. This includes, besides areas forested for the first time and repeatedly, also improvements and additions to forest cultures and natural seeding areas converted to the area of fully forested land. Roundwood removals involve logged timber (excluding bark) as volume of large timber and a portion of small-diameter timber (felling residues are not included), counted irrespective of what kind of thinning or felling it has been acquired from and includes salvage felling as well the so-called self-production felling. The salvage felling includes data

on salvage felling and disasters of all types. The overall roundwood removals include also dry trees, windfalls, blowdowns, and all wood used in beetle traps to catch bark beetles, and also tree specimen that serve as a wintering refuge of harmful insects (bark beetles, etc.). The wood volume processed in a given year is counted in.

Cleanings are treatments of young stands, purpose of which is to reduce the stand density and to adjust health and quality of the stand. **Thinnings** refer to intentional silvicultural measures in premature stands. The thinning is carried out by removing from the stand the trees, which are economically inappropriate and undesirable in favour of the crop trees.

The chapter also contains data, spring game numbers and game hunting, on **gamekeeping and wildlife management**. Data published are for reporting units covered by the ministerial statistical surveys of the Ministry of Agriculture and the Ministry of the Environment.

13. INDUSTRY

Data are published for enterprises, which have industry as their principal (prevailing) activity (CZ-NACE B, C, and D sections, i.e. mining and quarrying, manufacturing, and electricity, gas, steam and air conditioning supply) with 100+ employees having their registered office on the relevant territory, including their establishments, plants, and units located in other regions. An exhaustive survey is carried out to obtain data from enterprises with 100+ employees.

Sales of goods and services incidental to industry are at current basic prices, which are invoiced by a producer to a purchaser. They exclude the value added tax (VAT), the excise duty, and the customs duty. They include only sales (revenues) from the sale of products and services according to the CZ-CPA 05–39, i.e. sales adjusted for non-industrial activities of an enterprise. Trade in and transmission, distribution, and supply of energies also belong to services incidental to industry. The difference between the value of the purchased energy and the value of sold (delivered) one is the sales (revenue) for the service.

The average registered number of employees (headcount) includes all permanent, seasonal, and temporary employees who have a contract of employment with an employer and receive wage from the employer for their work done. It is calculated as a sum of the number of natural persons (headcount) in individual days of a reported month (including non-working days / public holidays / rest days and days off), which is divided by the number of all calendar days of the month.

The average gross monthly wage per employee includes all incomes from employment (basic wages and salaries, personal bonuses and other bonuses, company profit sharing, and compensations for wages and salaries) charged to be paid to registered employees in compliance with relevant regulations on wages and salaries. Compensation of wages or salaries for temporary incapacity to work for disease or injury and guarantine paid by the employers are not included.

14. ENERGY

Information on the operation of the Czech electricity and gas grid is published regularly by the Energy Regulatory Office (www.eru.cz/en/). Basic data are published in the Yearly report on the operation of the Czech electricity grid and in the Yearly report on the operation of the Czech gas grid, which are published by the Energy Regulatory Office based on the Section 17, paragraph 7(m) of the Act No 458/2000 Sb, on Business Conditions and Public Administration in the Energy Sectors and amending certain acts (the Energy Act), as amended. Data on the electric power industry come directly from producers of electricity, distribution system and transmission system operators, data on renewable sources from the OTE, a.s. company. Data on the consumption of natural gas are processed by the Energy Regulatory Office from producers, operators of gas storage facilities, the transmission system operator, distribution system operators, natural gas traders, and the market operator OTE, a.s. company. All data are based on source materials from licensed entities.

Installed capacity of electricity sets is a sum of rated outputs of individual electricity sets (blocks) as at the last day of the reference period. It is the highest theoretical active output of a set.

Gross electricity production is the total electricity production at generator terminals. **Net electricity production** is the difference between the total electricity production and own consumption for the production of electricity.

Consumption of electricity is published by the Energy Regulatory Office since 2014 **as the net consumption of electricity**, which is the consumption of electricity at the supply points of regional distribution system operators plus consumption of entities directly connected to the respective generating plant. In the previous years, it published consumption of electricity only **as the gross consumption of electricity** (the sum of the net consumption of electricity, own consumption for the production of electricity, consumption for pumping at pumped storage plants, and network losses).

Consumption of natural gas is the volume of natural gas supplied to end customers. It does not include own consumption of natural gas during distribution, losses, an accumulation change in distribution systems, own consumption of natural gas producers at natural gas mining, and natural gas to drive compressors in compression stations in the transmission system; those values cannot be broken down by region.

The **number of compressed natural gas** (CNG) **filling stations** and consumption of CNG have been measured separately since 2017. In the previous years, the data were included in other consumption categories.

15. CONSTRUCTION, HOUSING CONSTRUCTION

The **construction enterprise** shall mean an enterprise with construction as principal activity (it corresponds with divisions 41, 42, and 43 of the CZ-NACE).

Construction work refers to work done on construction, reconstruction, extension, renovation, repair and maintenance of permanent or temporary buildings and structures. It also includes assembly work on construction structures and the value of built-in material and structures. General construction work represents the volume of construction work performed by the unit workers, which are in its registered number of employees (headcount) plus productive work of apprentices and the volume of construction work carried out to its own tangible fixed assets. Construction work "S" (according to delivery contracts) represents the total value of outputs from construction activity of the reporting unit (including built-in material) performed on the basis of a delivery contract for the final user (developer), including the value of subcontracts for construction work received from other contractors in order to fulfil the delivery contract for the final user. The public ordering party (party placing an order for a public project) shall mean a legal person which, in accordance with valid regulations on financial management, utilises, in full or in part, public resources for funding of public projects (public work).

Building permit shall mean the total number of building permits, including collective ones, building notifications, constructions permitted on the basis of a public contract, and constructions permitted in the shortened building proceedings by an authorised inspector, which have been granted and registered by a competent planning and building control authority according to the Construction Act. The **approximate value of constructions** involves total costs, including technologies (at current prices) incurred for the preparation, implementation, and putting of the construction into operation. **Environmental protection structures** mean constructions for protection of water, soil, and climate, for air pollution control, nature conservation, for environmentally friendly waste management, and to reduce environmental impacts of physical factors.

Data on **housing construction** include construction of new dwellings on the given territory by means of all types of construction activities. The **dwelling** shall mean one room or a set of rooms designed for living by the planning and building control authority decisions and can serve the purpose as independent dwelling units. **Dwellings started** are dwellings in buildings, construction of which was permitted in the reference period. It does not matter whether they were completed in the reference period or not. For purposes of this definition the house shall mean a family house, multi-dwelling building, and extensions to any of the aforementioned types of house, furthermore, boarding house and retirement home, non-residential building and any non-dwelling room, conversion of which a new dwelling is born. **Dwellings completed** are dwellings in new buildings, which have been registered by means of the house register number or new completed dwellings in already existing buildings.

The living floor area of the dwelling shall mean the floor area of habitable rooms. The living floor area includes neither areas of ancillary rooms (as an entrance hall, for instance) nor facilities (as a toilet and bathroom, for instance). The useful floor area of the dwelling shall mean the area of all habitable and ancillary rooms, including facilities of the dwelling. It excludes floor area of non-dwelling rooms. Energy use intensity (EUI) of buildings is monitored for newly erected buildings only.

16. TOURISM

Tourism statistics includes data on capacity and outputs of collective tourist accommodation establishments and also data from a sample survey among households on travel behaviour of residents. Besides data by region and district, also data on tourist areas and tourist regions are published. These areas were officially defined by the CzechTourism agency in 2005; in 2010 the definition was revised.

Collective accommodation establishments are establishments with at least five rooms and at the same time ten beds that on a regular (or irregular) basis provide guests (including children) with temporary accommodation for a holiday, a tour, a spa treatment, a business trip, a training, a course, a congress, a symposium, stays of children at schools in nature, and in summer and winter holiday camps. They are divided by category determining the type of accommodation establishment and the class defining requirements for the equipment, level, and range of services connected with the accommodation. The collective accommodation establishments include hotels, boarding houses, hostels, holiday dwellings, campsites, and other accommodation establishments.

Bed places in accommodation establishments include only permanent bed places serving to tourism (excluding extra beds). **Places for tents and caravans** mean the number of places for tents, caravans, and campers. The number of rooms, bed places, and places for tents and caravans includes maximum capacity of each collective accommodation establishment in the given year.

Provided data on the number of guests in collective accommodation establishments are a summary of data from processed questionnaires and estimated non-response. Guests in an accommodation establishment are all persons (including children and excluding operating personnel and owners of the accommodation establishment) who have used services of the accommodation establishment for their temporary accommodation. Persons that use an accommodation establishment for their temporary accommodation for the purpose of employment or full-time studies are not included. The length of the temporary accommodation shall not exceed 1 year for the guest to be considered a tourist.

A person with a permanent residence in the Czech Republic is considered a **resident**. It can therefore be a citizen of the Czech Republic as well as a foreign national permanently living in the Czech Republic. A **non-resident** is a person who permanently lives in other country and on the territory of the Czech Republic stays for a period shorter than 1 year (including citizens of the Czech Republic).

The average length of stay is by one day longer than the average number of overnight stays. The net occupancy rate of bed places is the net occupancy rate of permanent bed places and it is calculated as the number of overnight stays for the reference period divided by the multiplication of the average number of bed places available and the number of operating days. The occupancy rate of rooms means the net occupancy rate of rooms and it is calculated as the number of room-days (i.e. the number of occupied rooms for individual days of the reference period) divided by the multiplication of the average number of rooms available and the number of operating days.

A **conference** is a formal meeting of a higher number of people with some specialization the subject of which are presentations, lectures, discussions, and consultations. It can be a congress of academics, a meeting of diplomatic representatives of individual states, and the like; there is usually an accompanying programme.

Based on the results of the project of the Ministry of Regional Development called "Quality Improvement of Data on Selected Tourism Sectors" and the following update of the Register of Collective Accommodation Establishments of the CZSO, data on capacities and number of guests have been refined since 2012 and therefore cannot be compared to those for previous years.

A tourism sample survey (TSS) is the source of data on outbound and inbound tourism of residents of the Czech Republic. The survey is carried out monthly in a randomly selected sample of households and persons aged 15+ years are enquired. Data on private trips (with the purpose to spend leisure time, to recreate, to improve health, to visit relatives or friends) and on business trips, which took place during the last three months, are surveyed among all members of a household. Using weight coefficients, survey results are grossed up to the population of 15+ years and for that age group they are also published.

A **long trip** is a private trip, at which a person stayed overnight for at least 4 successive nights outside his or her usual environment. A **short trip** is a private trip (including weekend stays), at which a person stayed overnight at least for 1 night and for 3 successive nights as a maximum outside his or her usual environment. A **business trip** is a trip of a business/working character outside the usual environment with at least one overnight stay (it includes: congresses, conferences, fairs and exhibitions, business meetings, company missions, and the like).

17. TRANSPORT

The data on transport are taken from external sources of the Ministry of Transport and Road and Motorway Directorate of the CR.

Motorways are roads dedicated to fast long-distance and international transport by means of road motor vehicles and built without any at-grade crossroad. Depending on their dedication and importance to transport, they are classified to motorways of 1st and 2nd class. **Roads** are surface communications open to the public and dedicated to the use by road and other vehicles and pedestrians. They form a road network. Depending on their dedication and importance to transport, they are classified to roads of 1st, 2nd, and 3rd class, including sections in cities and municipalities which are involved into the road network.

The length of operated **railway lines** is the length of continuous rail tracks. It does not include other transport, marshalling, and handling tracks. The total **length of navigable inland waterways** for regular transport since 2015 includes also inland waterways on reservoirs and lakes 0 class and non-classified serving mostly for transport by means of passenger boats and navigation for sport.

The numbers of road vehicles are taken over from the Central Register of Vehicles updated according to the registers of municipal authorities of municipalities with extended powers. There are road motor vehicles and semi-trailers and trailers having valid license plates as at 31 December.

18. INFORMATION SOCIETY

The term of **information and communication technologies** (hereinafter as ICT) generally refers to technologies, systems, activities, and processes that participate in the imaging, processing, storage, and transmitting of information and data in an electronic form.

Data on the penetration of **selected information technologies in households** and their **use by individuals** come from a separate annual survey carried out as personal interview of a sample of approx. 10 000 individuals aged 16+ years. Results thereof are then grossed up to the whole population of the Czech Republic. The current state is surveyed within data on households, (for the second quarter of the reference year); data on individuals are for the last three months of the survey period. In order to have more representative data sets the data breakdowns by region are published as three-year moving averages.

Households with PC/Internet include all households, which stated that, at least, one member of the household had access to a PC/Internet in time of the survey.

Individuals using a personal computer and/or the Internet are persons, who have used a personal computer and/or the Internet at least once in the last three months, that means used them anywhere (at home, at school, in the library) and for any reason (private or job duty).

Data on **broadband Internet subscriptions** are based on data sources of the Czech Telecommunication Office. Fixed broadband Internet subscriptions in this publication include fixed connections with the nominal transmission speed of

256 kbit/s and higher by means of a DSL technology, connections via cable TV modem (CATV), and fixed wireless connections by means of WiFi technology.

Data on **information technology equipment of schools** in the Czech Republic come from data sources of the Ministry of Education, Youth and Sports, which collects data on available IT infrastructure at basic, secondary, and higher professional schools. Data on **equipment penetration and usage of information technologies in health** come from a survey of the Institute of Health Information and Statistics of the CR.

The Labour Force Sample Survey (LFSS) of the CZSO is used as the data source for the **statistics on ICT professionals**. Tables always give average data for the given year. If the figure is smaller than 3 000 persons, data are considered to be of low reliability. Since 2011 ICT professionals have been defined on the basis of the national version of the classification of occupations of CZ-ISCO-08 and are subdivided into two major groups as follows:

- Managers, engineers, and other professionals in ICT abbreviated as ICT professionals (CZ-ISCO sub-major groups 25, 133, 2434, 2152 and 2153); and
- Technicians, installers and servicers in ICT abbreviated as ICT technicians (CZ-ISCO sub-major groups 35 and 7422).

Data on wages of ICT professionals come from results of the structural statistics on wages of employees, which is published by the Czech Statistical Office in cooperation with the Ministry of Labour and Social Affairs.

University students specialised in fields of information and communication technologies are defined according to the ISCED Fields of Education and Training 2013 (ISCED-F 2013), a manual to accompany the International Standard Classification of Education 2011, in the broad field 6. Data were acquired from data sources of Ministry of Education, Youth and Sports, being concrete from the database SIMS.

The ISCED-F classifies students to respective fields of education. Yet the amended Act No 111/1998 Sb on higher education cancelled the system of fields of education and replaced it with a system of study programmes in the Czech Republic. All data on numbers of students and graduates are published classified solely by the system of study programmes and were adjusted retroactively for previous years as well. Therefore data published here may not coincide with data published in past years.

19. SCIENCE AND RESEARCH

The terms **research and development** (R&D) in the Czech Republic are defined in the Act on the Support of Research and Development from Public Funds. **R&D** is defined as systematic creative work conducted for the purpose of broadening of existing knowledge (including knowledge of humans, culture, and society), obtaining new pieces of knowledge or application of pieces of knowledge in practice using methods allowing their confirmation, addition, or refutation.

Reporting units in the R&D statistical survey are all legal and natural persons conducting R&D on the territory of the Czech Republic as their principal activity (CZ-NACE 72) or a secondary economic activity, irrespective of the number of their personnel, sector, or CZ-NACE activity they are active in. The **breakdown of data by region** has been available since 2001 and is processed by the location of R&D workplaces of respective reporting units. In the case of the higher education sector it applies mainly to respective faculties of public universities. Data for districts were made according to addresses of R&D workplaces.

R&D personnel by occupation are:

- researchers: professionals engaged in or managing projects that include the concept or generation of new pieces of knowledge, products, processes, methods, and systems;
- technicians and associate professionals (hereinafter referred to as technicians) who participate in R&D activities by performing scientific and technical tasks, applying concepts and operating methods (usually under the supervision of researchers);
- o other supporting staff participating or involved in R&D activities (e.g. craftsmen, secretaries, and clerks).

The average registered number of employees converted to full-time equivalent (FTE) devoted to research and development activities brings information about real time devoted to research and development activities. One FTE is equal to one year of full-time work of an employee fully dedicated to R&D activities. This indicator is important especially at R&D personnel whose job content consists also of other activities than R&D (e.g. academics), because it counts only that part of their hours worked, which is devoted to R&D.

R&D expenditure represents total expenditure (current and capital expenditure) designated to own research and development carried out within the reporting unit or the economic sector irrespective of the source of funds. Expenditure incurred outside the reporting unit (external expenditure on R&D) is included in the total R&D expenditure only on condition that it directly serves to support own R&D (e.g. purchase of supplies for R&D).

Data on the **direct government support of R&D** result from information contained in the R&D Information System (Office of the Government of the CR) and from the State Final Account of the CR for the area of the science, research, and innovations (Ministry of Finance).

Data on the indirect government support of R&D (tax relief) result from data stated in tax returns of legal persons.

Patent data were processed on the basis of data sources of the Industrial Property Office of the Czech Republic (IPO CR), which is responsible for the patent protection on the territory of the Czech Republic. Tables contain only data on patent

activity of entities doing their business on the territory of the Czech Republic. Patent data are classified using the so-called fractional method.

The Labour Force Sample Survey (LFSS), in which individuals and households are basic reporting units, is the data source for the **numbers of professionals** and **technicians and associate professionals**. Data in tables are annual averages. If the figure is smaller than 3 000 persons, data are considered to be of low reliability. Since 2011, professionals and technicians and associate professionals are defined based on the CZ-ISCO-08 classification (CZ-ISCO major groups 2 and 3). Under the major group of professionals, there is a more detailed group of science and engineering professionals (CZ-ISCO 21); under the major group of technicians and associate professionals there is a group of science and engineering associate professionals (CZ-ISCO 31).

Data on wages of professionals are from results of the structural statistics on wages of employees published by the Czech Statistical Office in cooperation with the Ministry of Labour and Social Affairs.

Data on **students in universities** refer to students of bachelor, master, follow-up master, and doctoral study programmes in public and private universities (they do not include students of two state universities, which make different reporting). Master study programmes denote a group of master and follow-up master study programmes. Tables show students of two fields of education (according to the International Standard Classification of Education: Fields of Education and Training 2013 (ISCED-F 2013)). Science fields of education correspond to the broad field 05 (natural sciences, mathematics and statistics), engineering fields of education correspond to the broad field 07 (engineering, manufacturing and construction). Data are taken from the SIMS database (i.e. Union Information from Students' Registers) and refer to the database status as at 20 January 2018. Since a field of education with the same code may have various contents at different universities and thus it is problematic to classify students to relevant groups of fields of education according to the ISCED-F 2013, expert estimates are given for the breakdown by field of education, which were made for the Czech Statistical Office by experts of the Ministry of Education, Youth, and Sports.

Data on the number of students have been newly processed according to study programmes instead of previously used fields of education and also revised back as for the previous years. Data breakdown by territory is made based on the permanent residence of students.

The population size and numbers of females with tertiary education are calculated from data collected by the Labour Force Sample Survey. Data are allocated to regions according to the place of residence of respondents at the time of data collection.

20. EDUCATION

Data on **education** are received from sources of a workplace of the State Statistical Service of the Ministry of Education, Youth, and Sports.

Data on all the below mentioned types of schools (except for universities) include all schools included in the Register of Schools and School Facilities regardless their founder and are published for the school year and reported according to the status as at 30 September of the reference year. Data are allocated to regions (districts) according to headquarters of the relevant schools. The totals include also data on schools for children/pupils/students with special education needs. They are children/pupils/students with disabilities or with a health or a social handicap who need to be taken a special care of. They can attend schools founded separately for them or, eventually, can be integrated within common classes in regular schools, or included in special classes in regular schools.

Children/pupils/students in nursery schools up to higher professional schools are given as the number of studies. New entrants to the 1st grade include all pupils admitted to the 1st grade excluding pupils who repeat the 1st grade and excluding pupils who resume their studies after having them interrupted.

The numbers of **teachers** (including headmasters, their deputies, guidance counsellors, and vocational trainers) are converted to full-time equivalent persons.

Nursery schools provide early childhood education, which is organized for children usually from three to six years of age. Besides nursery schools, early childhood education is provided by preparatory classes at basic schools and a preparatory stage at special basic schools, both founded at basic schools (these children/pupils, however, are not included in the number of children in nursery schools nor in the number of pupils in basic schools).

Basic schools provide primary education, which is part of the compulsory school education. Children start their compulsory school education in the age of 6 years (or 8 years as a maximum in cases of children with postponed compulsory school education). The compulsory school education usually lasts for nine years: five years at the first stage and four years at the second stage of basic schools. Primary education in a special basic school has ten grades; the first stage consists of the first to the sixth grade and the second stage of the seventh to the tenth grade. Pupils may leave the basic school earlier and complete their compulsory school education in lower grades of several-year grammar schools or in an eight-year specialism of dance in conservatoires.

Secondary schools are designated for obtaining secondary education. It can be attained in schools teaching programmes of grammar schools, i.e. providing general education with an A-level examination and programmes of technical education in secondary schools, i.e. providing (lower) secondary education, secondary vocational education with an apprenticeship certificate, including shortened studies, secondary technical education with an A-level examination, including shortened studies, and follow-up courses. Technical education within the follow-up courses is given separately in tables.

Characteristics of individual types of education in secondary schools:

- o secondary education (in full-time studies) two-year education programmes finished by a closing examination;
- secondary education with an apprenticeship certificate (in full-time studies) two-year or three-year education programmes, by successful finishing of which a graduate acquires an apprenticeship certificate;
- secondary education with an A-level examination education programmes with an A-level examination, graduates from which acquire an A-level certificate. There are two basic types of the programmes:
 - general education a non-professional (non-specialised) type of education dedicated mainly to preparation for further studies. These programmes are usually provided by grammar schools, which have two types of education programmes four-year grammar schools joined by basic school leavers after a successful completion of the ninth grade of basic schools and several-year grammar schools (eight-year or six-year grammar schools) for pupils of lower grades of basic schools (from the fifth and the seventh grade, respectively);
 - technical education focuses on the professional side of education, lasts for four years;
- o follow-up courses in full-time studies they last for two years and are finished by an A-level examination. They are designed for graduates who earned secondary education with an apprenticeship certificate from three-year full-time studies in a field, which is related to that from which they want to pass their A-level examination;
- shortened studies to earn secondary education with an apprenticeship certificate one to two year long as fulltime studies for graduates who earned secondary education with an A-level examination or secondary education with an apprenticeship certificate from a different field of education;
- shortened studies to earn secondary education with an A-level examination one to two year long as full-time studies, designed for graduates who earned secondary education with an A-level examination in a different field of education.

Another type of schools are **conservatoires**, in which pupils can earn secondary education with an A-level examination, namely no sooner than after four years in full-time studies of a six-year education programme (for basic school leavers) or after eight years in full-time studies of an eight-year education programme in the specialism of dance (in the first four grades pupils admitted after the fifth grade of basic schools fulfil their compulsory school education). By passing the final (graduate) examination called "absolutorium" at a conservatoire a pupil receives higher professional education in a conservatoire.

Higher professional schools offer education in three-year up to three-and-half year fields (distance studies are lasting for up to four years) to graduates with an A-level examination. This type of education is completed by passing the final (graduate) examination called "absolutorium".

All types of secondary education and higher professional education may be arranged as full-time studies or in other types of education (evening, extramural, distance, and combined studies). Groups of fields of education are stated according to the Classification of Basic Branches of Education.

The system of schools providing higher education comprises public, private, and state **universities**. Information on public and private universities is drawn from the SIMS database (i.e. Union Information from Students' Registers). Numbers of schools and students are reported according to the status as at 31 December and numbers of graduates for the entire school year. The central SIMS database is continually completed and updated; the data presented in this Statistical Yearbook refer to the database status as at 21 January 2019. Two state universities founded by the Ministry of Defence (University of Defence, which is in the City of Brno) and by the Ministry of the Interior (Police Academy of the Czech Republic in Prague) do not have the duty to send information on their students to the central SIMS database and therefore they are not included in the tables.

Students and graduates from public and private universities are published as headcount, i.e. each student is counted only once, including students studying concurrently in more universities or faculties. The total number of students and graduates from universities thus may differ from the sums for individual universities, types of education, or types of study programmes.

Universities offer bachelor, master, follow-up master, and doctoral study programmes. Studies can be delivered in full-time, distance, or a combined type of education. Fields of education correspond to the International Standard Classification of Education: Fields of Education and Training 2013 (ISCED-F 2013).

21. HEALTH

Selected data on health are taken over from source materials of the Institute of Health Information and Statistics of the Czech Republic (IHIS CR), which is the administrator of the National Health Information System (NHIS) authorised by the Ministry of Health. The data published are **for health establishments of all ministries**, i.e. including health establishments of the Ministry of Defence, Ministry of the interior, and Ministry of Justice.

Data on the **number of physicians** (full-time equivalent working persons) are calculated as the sum of all full-time and part-time jobs of individual physicians of health establishments converted according to the full number of working hours per week laid down for a given establishment or workplace. Since 2007 the numbers of physicians, including dentists, have been given involving contractual workers, who perform the work on the basis of a contract for work, agreement on work activities, and agreement on work, as well.

Data for the **statistics of temporary incapacity for work due disease or injury** are provided by the Czech Statistical Office by processing of data from the administrative data source of the Information System of the Czech Social Security Administration. Numbers of fatal occupational injuries are taken from the State Labour Inspection Office.

The average percentage of incapacity for work per year = the number of calendar days of incapacity for work due to disease or injury \times 100 / (the average number of the sickness-insured persons \times the number of calendar days in a reference period).

Tables 21-2., 21-5., and 21-105. show data on congenital malformations in children born in the given year, notified in the year of birth, or in the next year up to one year of the child age. The source is data from the National Register of Congenital Malformations, administered by the IHIS CR.

Tables 21-3., 21-6., and 21-106. contains numbers of newly found neoplasms, the incidence of malignant neoplasms. The main data source on neoplasms is the Czech National Cancer Registry, administered by the IHIS CR.

Data in Tables 21-11. and 21-110. were obtained from the a further national round of the EU-SILC (Statistics on Income and Living Conditions) sample survey in households called Living Conditions 2018 and describe how is the population self-perceived their own health status.

A **long-term disease** or **health problem** shall mean a disease or problem, which lasted or it is assumed to last for six months, at least. The **indicator of long-term limitations in common activities** presents a share of persons who stated they were limited in activities they usually carry out for health related reasons for the period of previous six months, at least.

22. SOCIAL SECURITY

Data on social security are taken mostly from administrative sources of the Ministry of Labour and Social Affairs, for certain selected indicators also from the information system of the Czech Social Security Administration.

The **social security scheme** includes pension insurance, sickness insurance, state social support benefits, foster care benefits, material need benefits, providing of social services (including the care benefit), and other systems of benefits and allowances. The pension insurance scheme provides old-age, disability, widows', widowers', and orphans' pensions. Before 2010 disability pensions were provided as full and partial ones. Effective since 1 January 2010 full disability pensions were partly transformed into disability pensions, third level and partly were subdivided into disability pensions of first level and second level depending on percentage of the working ability reduction of the insured person due to long-term adverse condition. Data starting from 2010 show, on the contrary to the previous years, the numbers of recipients, average monthly amount of old-age pensions, partial old-age pensions (after a determined shorter insurance period has been reached) from other standpoint. They are newly based on the Ministry methodology, in which partial pensions granted pursuant to Section 29 2) of the Act No 155/1995 Sb on pension insurance, are strictly classified as partial old-age pensions. In the approach applied to that time they were classified as a part of the old-age pensions. Furthermore, since 2010 disability pensions, paid on the day when 65 years of age is reached, are converted into old-age pensions on that day. Average old-age and disability pensions are given as a single pension, that is not combined with widow's or widower's pension.

The **sickness insurance** system of benefits comprises six types of benefits as follows: sickness benefit, carer's allowance (till 2008 as a support benefit for family member care taking), statutory maternity pay, pregnancy and maternity compensation benefit, and then paternity leave for fathers and long-term carer's allowance which became effective in the course of 2018. Sickness insurance benefits are provided per calendar day of a given period of time. The sickness insurance of the self-employed without employees, own-account workers, is voluntary. The self-employed without employees are entitled to four of the benefits only – the sickness benefit, statutory maternity pay, paternity leave for fathers and long-term carer's allowance. Tables relating to sickness insurance and pension insurance do not include data concerning the armed forces of the Ministry of Defence, the Ministry of the Interior, and the Ministry of Justice.

The **state social support system** provides for targeted assistance, first of all, to families with dependent children in determined social conditions, which the families are not able to cope with using their own resources and strength. Some of the **state social support benefits** are paid as applicant and jointly assessed persons income tested benefits, i.e. child allowance, housing allowance, and birth grant. Other are provided as non-income-tested benefits as parental allowance and funeral grant. **Foster care benefits** have been regulated by a separate legal regulation since the beginning of 2013 and have not been included into state social benefits. They are used to contribute to needs related to care of a child, whose parents may not or does not want to care of and who is in foster care; since 2013 these benefits have included new established allowance at the foster care termination.

Data on **holders of the ID of disabled person** cannot be compared in full with the data published previously, last available for 2011. A person aged 1+ year with a physical, sensory, or mental disability which has nature of a long-term adverse health status that substantially limits the person's ability to move or to get oriented, including the persons having an autism spectrum disorder. Since the beginning of 2014 the disabled person ID can be acquired only on the basis of a separate proceedings and an evaluation of heath status carried out by a consultative physician of the district administration of the Czech Social Security Administration. Depending on the level of disability of mobility and cognitive functions the type of the ID can be marked either with the code of TP – for a person with medium disability, ZTP – for a person with heavy disability, or ZTP/P – for a person with especially heavy disability of functions, or a person with completely disabled mobility or cognitive functions that requires the person to be accompanied with a guide. The system of **benefits for people with disabilities** also includes mobility allowance and grant for special aid.

Material need benefits serve as an aid to natural persons, who have insufficient income, providing for their basic living conditions. The benefits meaning is to motivate persons to make active efforts to acquire finances to satisfy their basic living needs and to prevent their social exclusion. The system of material need benefits involves living allowance,

supplementary housing allowance, and extraordinary immediate assistance. **Care benefit** is for persons old 1+ years who for reasons of long-term adverse health conditions are in need for assistance of other natural person when managing their basic life needs in the extent as determined by law. The persons may, upon their own free will, reimburse professional social services or use it to cover inevitable expenses while providing the care needed within the family.

In context of the adoption of the Act No 108/2006 Sb on social services, as amended, in 2007 a change was carried out to classification of **social services provided** and the Register of Social Service Providers was established. Before 2007 the data were collected for respective social service establishments when the establishment reported detailed figures solely on the prevailing type of the social service provided and merely additional information on other provided social services. Since 2008 a **different methodology approach has been applied** consisting in the observation of data on each registered social service in a separate statistical report. This approach has enabled to obtain more detailed and precise data on the registered social services provided. For this reason, some data for the years from 2007 to 2009 are not comparable with the data for the previous years and, moreover, the data for 2007 cannot be compared to those for the following years. Data on capacity of social service establishments are based on actual allocation of the services provided. Data on social care establishments in table for regions and districts (Table **22-7**.) may not correspond to regional data given elsewhere (Tables **22-1**. and **22-101**.) due to the source data were generated on different dates.

23. CULTURE, SPORT

Data on **culture** were received from external sources – the National Information and Consulting Centre for Culture (NIPOS) established by the Ministry of Culture; data on the number and structure of cinemas from the Film Distributors Union.

Public libraries are: the National Library of the Czech Republic and Moravian Library in Brno, which are directly managed by the Ministry of Culture, regional scientific libraries established by regional authorities, and furthermore libraries established by municipalities and towns. A branch is a separated part of a library (as for its location); it is an organizational unit managed directly by the library. **Loans** refer to all library items and other documents used in-house and outside the library. A **library item** is each separate volume of a document i.e. every printed volume or a part of multi-volume piece, a complete volume or several issues of a periodical bound or inserted into a folder, each separate map, a graphic sheet, a carrier of special-type documents (a magnetic tape cassette, a CD, etc.), which is registered as a separate item in the item register.

Museums, monuments, and galleries include all establishments that were in operation, irrespective of their founder. A detached section, which is out of the museum or gallery headquarters, yet forms an organisational unit of a reporting unit, is considered a branch. A monument is a room or premises, in which an exposition or an exhibition is installed. In the case of galleries the statistical survey covers those, which own collections, so-called museums of fine art, not sale galleries. The most important form of activities of museums is exhibitions — either short-term, occasional, exhibitions or long-term (permanent) expositions.

Historical and other monuments used for cultural purposes include castles, chateaux, churches, monasteries, cloisters, ruins, mills, towers, and other historical monuments made accessible to visitors for an admission fee and not managed by a museum or a gallery. The data given refer to all the facilities, irrespective of their founder.

A **cinema** is a cultural establishment the main activity of which is film screenings. The numbers of cinemas do not include touring cinema initiatives. A multiplex cinema is a cinema, which operates three or more cinema auditoriums.

Published data from the area of **sport** are obtained from the registry of membership of the Czech Union of Sports (CUS) as at 31 December of the given year. The data collection was organised according to instructions of the Chairman of the Czech Union of Sports in all entities associated in the CUS.

24. CRIME AND ACCIDENTS

Data on crime and on traffic accidents were compiled from sources of the Police Presidium of the Czech Republic.

The data on registered and solved **criminal offences** (non-indictable offences, indictable offences, and crimes) include also criminal offences at railway and criminal offences registered by the Alien Police Service. Solved criminal offences include criminal offences committed and solved in the reported year.

General crime includes crimes of violence, sexual crimes, property crimes, frauds, embezzlements, other property crimes, and other criminal offences. Economic crime includes mainly criminal offences in business and financial relations.

Traffic accidents encompass all accidents reported to the Police of the Czech Republic; in 2009 rules for their reporting changed. Numbers of the killed, seriously injured, and slightly injured persons refer to the status within 24 hours of the accident. Property damage includes damage to vehicles, their cargos, or to roads and their equipment.

Drivers who received penalty points are drivers who committed a traffic offence (criminal offence) counted within the penalty point system and therefore accumulated penalty points in their driving licence record. Such a driver thus has at least one point.

Data on **fires** and **interventions of fire units** were received from source materials of the Fire and Rescue Service of the CR. A **fire** is any undesirable combustion, at which people or animals were killed or injured, or at which property or the environment were damaged. A fire is also any undesirable combustion, which poses an imminent threat to human or animal life, property, or the environment.

A **natural disaster** is a large-scale emergency caused by adversely acting forces and phenomena in a global or a local manner that jeopardise lives, health, property, or the environment, such as floods, spates, heavy rains, influence of snow and icing (ice accretion), windstorms, landslides, and earthquakes. It applies mainly to events connected with the declaration of a state of emergency, level of flood control activities, etc.

Technical emergencies are interventions in emergencies resulting in removals of dangers or hazardous conditions. The interventions comprise:

- a technical emergency removals of dangers or hazardous conditions of a large scale or of huge consequences on health of persons or animals or on property (e.g. an imminent building collapse);
- a technical assistance (e.g. an extrication of persons or objects, emergency opening, unlocking of locked premises, a rescue of persons and animals; drawing, closing, and delivering of water, temporary or other repairs, and the like);
- o a technological assistance (e.g. an emergency supply of air, water, electricity; fire assistance, support of efforts to extinguish centres of a forest fire, and the like);
- other assistance (e.g. taking down, carrying away, or transporting of a patient or a physician, searching for missing persons, monitoring of watercourses, placing of containment booms (scum baffles, scum boards), road capacity (traffic flow) controls, and the like).

Killed persons, total are all killed persons found at the site of fire. The piece of data includes also persons the death of whom provably did not occur in direct connection with fire, e.g. as a result of a heart attack, murder, and the like.

Persons killed in direct connection with fires are persons who died as a result of burns, combustion gas intoxication, and the like as well as persons regarding whom it was impossible to find out whether they have provably died in direct connection with a fire.

25. ELECTIONS

The **elections to the European Parliament** were held in all Member States of the European Union between 23 and 26 May 2019. In the Czech Republic, based on the Decision of the Council of the European Union, the elections were declared based upon a Decision of the President of the Czech Republic published under No 9/2019 Sb to be held on 24 and 25 May 2019. 21 Members of the European Parliament were being elected. Execution of the elections was governed by the Act No 62/2003 Sb, on Elections to the European Parliament, as amended.

Complete results of voting in the election to the European Parliament are available at www.volby.cz/index_en.htm and in publications issued according to the Catalogue of Products of the CZSO.

Registered voters – the number of persons registered in the electoral rolls (lists of persons who meet statutory conditions for execution of their active right to vote). The number of issued official envelopes is equal to the number of voters who came to vote and were given an official envelope in the polling station to put their ballot paper in. The number of returned official envelopes is the number of official envelopes cast by the voting voters to ballot boxes. A turnout is calculated as the share of the number of voting voters (persons who were issued an official envelope in a polling station) in registered voters (persons included in electoral rolls). The number of candidates is the number of candidates that can be voted for (except for the removed, those who have withdrawn, or those, who were deprived of their right to be elected). Names of election parties, which are too long, may be shortened in the tables. Data on the percentage of valid votes are not rounded off and are provided to two decimal places.

26. CAPITAL CITY OF PRAGUE

According to Act No. 131/2000 Coll., of 13 April 2000, on the Capital City of Prague, Prague is the capital of the Czech Republic, region and municipality.

Generally binding Decree No. 55/2000 Coll., of the Capital City of Prague, by which the Statute of the Capital City of Prague is issued, splits the city into 57 city sections. City sections are administered by their councils headed by boards and mayors. Their decisions are carried out by offices of city sections. At the same time, the Statute commits carrying out of the delegated competences to 22 city sections with effect from 1 July 2001.

This chapter includes data from the previous chapters broken down further into 57 city sections, governed by the same methodology.

In the tables, city sections are ranked according to their belonging to the 22 administrative districts. Since 1. 11. 2007 city section Prague-Čakovice belongs to city section Prague 18 that carries out public administration for it instead of Prague 19 in previous years.

This chapter also shows:

Key data on the financial performance of the Capital City of Prague for 2018. Prague City Hall is the source of data.

27. TERRITORIAL COMPARISONS

Based on the Constitutional Act No 347/1997 Sb, on the Establishment of Higher Territorial Self-Governing Units of 3 December 1997, the Czech Republic was divided into 14 regions on 1 January 2000. The Czech Statistical Office introduced the Classification of Territorial Statistical Units (CZ-NUTS) according to the Act and to the Resolution of the

Government of the Czech Republic No 707/1998, and Section 19, paragraph 1 of the Act No 89/1995 Sb on the State Statistical Service, and following an agreement with the Statistical Office of the European Communities (Eurostat).

The NUTS classification (from the French version Nomenclature des Unités Territoriales Statistiques) is a fundamental systematic tool for the needs of statistics, analyses, and needs of providing of statistical information to the European Union. It is used for the statistical monitoring and analyses of social and economic conditions in regions, as well as for the preparation, implementation, and evaluation of regional policies. At the NUTS 2 level it is used mainly for drawing of funds from Structural Funds of the EU.

The Classification of Territorial Statistical Units (CZ-NUTS) was updated by the Communication of the CZSO No 201/2007 Sb effective from 1 January 2008. At present, the Classification has four NUTS levels, which are characterized by their population size and area. At lower levels, so-called local administrative units (LAUs) have been introduced. Prague is not divided into LAU levels. The LAU system, however, has not been introduced by legal instruments of the EU.

NUTS 0 ... refers to the state of the Czech Republic

NUTS 1 ... refers to the territory of the Czech Republic

NUTS 2 ... refers to cohesion regions, i.e. to 8 groupings of regions

NUTS 3 ... refers to regions, i.e. to 14 higher territorial self-governing units

LAUrefers to municipalities, i.e. to 6 258 municipalities (as at 1 January 2018)

Overview of NUTS 2 cohesion regions and NUTS 3 regions:

Praha – Hl. m. Praha Region Střední Čechy – Středočeský Region

Jihozápad – Jihočeský Region and Plzeňský Region Severozápad – Karlovarský Region and Ústecký Region

Severovýchod – Liberecký Region, Královéhradecký Region, and Pardubický Region

Jihovýchod – Vysočina Region and Jihomoravský Region Střední Morava – Olomoucký Region and Zlínský Region

Moravskoslezsko – Moravskoslezský Region