Methodological notes

The basis for information on the size and demographic structure of the population are periodic censuses of population, houses and dwellings, held at approximately ten-year intervals. The census data are followed by intercensal statistical population balance and annually processed statistics on marriages, divorces, births, deaths, abortions, and migration. These are currently based on the processing of statistical reports on marriages, births, and deaths provided by registry offices, and on the processing of data taken from other information systems. Since 2007, the information system of the Ministry of Justice of the CR is the source of data on divorces (until 2006, the statistics was based on the processing of reports on divorce). Data on abortions and, since 2013 also on causes of death, are provided to the Czech Statistical Office by the Institute of Health Information and Statistics of the CR (until 2012, causes of death were collected by the CZSO through the registry offices via the statistical reports on death). The CZSO obtains data on migration from information systems of the Directorate of the Foreign Police Service (since 2001) and the Ministry of Interior of the CR (since 2005). Until 2004, the statistics was based on the processing of reports on migration.

The basic sources of data for the Demographic Handbook were the source publications of demographic statistics, results of censuses, and previous editions of the Demographic Handbook.

Data on demographic events always respect the legislation effective in the year of the event, with definitions of individual events changing over the years (see below). Unless otherwise stated, the regional data correspond to the territorial breakdown valid as of 1 January of the reference year.

The data also include events (marriages, births and deaths) of Czech citizens (at least one of the fiancés was a Czech citizen in the case of a marriage, and at least one of the parents of the child was a Czech citizen in the case of a birth) with permanent residence in the Czech Republic that occurred abroad and were registered in the Czech Republic within a period that allowed their inclusion into the statistics.

The **age** of a person is given in completed years, i.e. represents the age at the last birthday. In the case of the age of deceased infant, it is the age in completed days.

In the case of relative indicators per (usually thousand) population, the events are related to the mid-year population (as at 1 July).

Symbols used in the tables:

a hyphen (-) in place of the number indicates that the phenomenon did not occur
a dot (.) in place of the number indicates that the data is not available or is unreliable
a horizontal cross (x) in place of the number indicates that recording is not possible for logical reasons

Methodological notes on the concept of population

In the pre-war periods, the subject of demographic statistics was the **present population**, defined by the simple presence in a given territory. All time series of population statistics up to 1950 (last applied in the 1950 Census) are based on this (present population) concept. The more recent time series are based on the concept of the **resident population**, i.e. they relate to persons with registered residence in the territory and their events. However, the differences in data between the numbers of ‘present’ and ‘resident’ populations were not significant at the time, and data based on the present population concept are comparable to those based on the resident population concept.

In the practice of Czech and the former Czechoslovak demographic statistics, since 1950 not only citizens of the Czech Republic or former Czechoslovakia are considered to be residents, but all persons who were registered for residence in a given territory at reference time, i.e. including foreigners. Until 2000, the data only referred to the population with permanent residence in the Czech Republic. Since 2001, following the 2001 Census of population, houses and dwellings, the data have also newly included foreigners with a visa for a stay over 90 days and foreigners with asylum status. Since 1 May 2004 (in connection with the accession of the CR to the European Union), all data refer to citizens of the Czech Republic and foreigners

with permanent residence in the Czech Republic, third-country nationals with temporary residence in the territory of the Czech Republic based on a long-term visa (over 90 days) or a long-term residence permit, nationals of the EU Member States, Norway, Switzerland, Iceland, Liechtenstein and their family members with notified temporary residence in the territory of the Czech Republic and foreigners with valid asylum status in the Czech Republic (hereinafter referred to as 'with registered residence').

Methodological notes on censuses

A different conception of the population is represented by the data from the 2011 and 2021 Censuses of population, houses and dwellings, which consider the usual residence declared by persons as the determining factor. A person's usual place of residence has been defined as the place where the person usually spends his or her daily rest time (regardless of temporary absence) and where he or she is a member of a particular household; it should therefore better correspond to the person's actual residence, as opposed to registered residence, which may in some cases be more of a registry. All **2011 and 2021 Census data** in this publication are therefore reported for the **usual resident population**. (Other population and demographic data continue to be linked to registered residence of persons after 2011.)

Methodological notes on data on population increase and age structure

Natural increase – the difference between the number of live births and the number of deaths in the reference period. If the number of live births is lower than the number of deaths, the natural increase has a negative value (natural decrease).

Total population increase – the difference between the population at the beginning and the end of the reference year of a given territory. It equals the sum of the natural increase and net migration in the reference period.

The start-year population equals the end-year population of the preceding year, except in years when a census took place[1] or when there were territorial changes.

Methodological notes on data on marriages

The number of marriages includes both civil and (until 1949 and since 1 July 1992) religious marriages. In terms of the territorial breakdown, marriages are by default classified according to the place of residence of the groom (unless stated otherwise). The average age of men/women at first marriage in this publication is based on the distribution of absolute numbers of marriages of single men/women by age.

Since 2008, the education of the groom/bride is collected on a voluntary basis. Since 2015, the surveyed levels of the highest completed education of the groom/bride have been expanded to include a separate category for tertiary technical education.

Age-specific marriage rates of men/women (per total number of men/women) – the number of marriages of men/women of a given age per 1,000 mid-year total population of men/women of that age (i.e. without distinguishing of marital status). The mid-year population of men/women is calculated as the arithmetic average of the two relevant end-year populations.

Age-specific marriage rates of women – the number of marriages of women of a given age per 1,000 mid-year population of single, divorced and widowed women of that age. The mid-year population of unmarried women is calculated as the arithmetic average of the two relevant end-year populations.

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[1] A new population base as at 1 January of the census year following the last census results always causes a break in the time series. Thus, in a census year, the total population increase does not equal the difference between the end-year population of the census year and the end-year population of the year preceding the census year, since each of these population stocks is based on a different census.

Methodological notes on data on divorces

In the years 1919–1949, divorces included only dissolutions of marriage which, according to the valid legislation at the time, corresponded to divorce in its current meaning.

Since 2007, the education of man/woman is collected on a voluntary basis. In terms of territorial breakdown, divorces are classified by the last common place of residence of the man and woman.

Divorce rates by the duration of marriage – the number of divorces of a given duration of marriage (in years) per a hundred marriages that occurred before the relevant number of years. **The mean duration of marriage at divorce** is calculated on the basis of the distribution of divorce rates by the duration of the marriage.

Total divorce rate – the proportion of marriages that would terminate in divorce, provided that the divorce rates by the duration of the marriage of the reference year remained unchanged.

Methodological notes on data on births

The number of births does not include children whose mother has requested to be undisclosed in connection with childbirth (pursuant to the Act No 20/1966 Sb, on Public Health Care, as amended by the Act No 422/2004 Sb), and foundlings (with the unknown identity of mother). In terms of territorial breakdown, births are classified by the place of residence of the mother at the time of childbirth (if the mother had not registered residence in the Czech Republic, by the place of residence of the father at the time of childbirth).

The distinction between **live birth** and **stillbirth** is based on the information provided in the report on birth, compliance with the definitions is assumed.

The definitions of live birth and stillbirth have changed over the years:

- Until 1948, the international definition of live birth was effective in the Czech Republic, according to which the foetus with recognized signs of respiration or heartbeat (regardless of its gestational age) was considered to be a live-born child, and the definition of stillbirth, according to which the stillborn foetus born after the 28th week of pregnancy was considered to be a stillborn child.
- In the years 1949–1952 according to the national definition, a foetus had to weigh at least 400 g to be considered a child. Whether it was a live-born or stillborn child was determined depending on whether the foetus showed an evidence of life at birth or not.
- In the years 1953–1964, a foetus measuring at least 35 cm and weighing at least 1,000 g, and whose gestational age was at least 28 weeks was considered to be a child (all three criteria had to be met). The criterion of life was at least one breath. The live birth was also a foetus which was born alive and did not meet these criteria but survived for 24 hours. In the case of multiple births, at least one foetus had to fulfil all criteria of a child and all foetuses from the pregnancy were considered to be children.
- In the period from 1 January 1965 to 29 February 1988, internationally recommended definitions of a child were effective in the Czech Republic, according to which: a birth of a live foetus (a live-born foetus) was a complete expulsion or extraction of a foetus from its mother (regardless of its gestational age) provided that the foetus after the delivery was breathing or showed other evidence of life such as beating of the heart, pulsation of the umbilical cord, or movement of voluntary muscles, although the umbilical cord had not been cut or the placenta was attached; a birth of a dead foetus (a stillborn foetus) was a birth of a foetus that died prior to the complete expulsion or extraction from its mother (regardless of its gestational age). The death was indicated by the fact that the foetus did not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles (the Decree of the Ministry of Health No 194/1964 Sb). A foetus born after 28 weeks of pregnancy or, when the duration of pregnancy could not be determined a foetus weighing at least 1,000 g, was considered to be a stillborn child.

- In the period from 1 March 1988 to 31 March 2012, live birth was defined by the Decree of the Ministry of Health No 11/1988 Sb, on Mandatory Notifications of Terminated Pregnancies, Death of a Child, and Death of the Mother, as the complete expulsion or extraction of a child from its mother provided that the child showed at least one evidence of life and its birth weight was 500 g or more, or lower than 500 g if it lived the first 24 hours after birth. The evidence of life was breathing or beating of the heart or pulsation of the umbilical cord or movement of voluntary muscles, although the umbilical cord had not been cut or the placenta had not been delivered. A stillbirth was understood as the complete expulsion or extraction from the mother of a foetus that showed no evidence of life and its birth weight was 1,000 g or more.
- As of 1 April 2012, the Decree No 11/1988 Sb was repealed by the Act No 372/2011 Sb, on Health Services which defines a foetus after abortion that is a foetus, which after the complete expulsion or extraction from its mother shows no evidence of life and at the same time its birth weight is lower than 500 g and provided that the weight cannot be measured if the pregnancy lasted less than 22 weeks (which implies that if the foetus weighs 500 g or more, it is stillborn). Definitions of a live birth and a stillbirth (along with definitions of all types of abortion) are provided in the instructions for filling in the Report on examination of the deceased person (in the Decree No 297/2012 Sb, on the Report on Examination of the Deceased Person, as amended), namely for the purpose of filling in this report.

In accordance with the Regulation (EU) No 1260/2013 of the European Parliament and of the Council on European demographic statistics, the methodology for reporting birth order has changed since 2014. Until 2013, the birth order reflected all children born to a woman, i.e. including stillbirths; since 2014 the birth order is determined only from and for live births of a woman.

Since 2007, education is collected on a voluntary basis. Since 2015, the surveyed levels of the highest completed education of the mother/father of the child have been expanded to include a separate category for tertiary technical education. For children born to unmarried women, the data on the father are not always available. Until 2006, data on fathers of all children born to unmarried women were not included in birth statistics at all.

Total fertility rate – the average number of children that would be born alive to a woman provided that age-specific fertility rates of the reference year remained unchanged during her childbearing period (age 15–49 years).

The mean age of women at first childbirth is based on the distribution of age-specific fertility rates of the first birth order.

Gross reproduction rate – the average number of live-born daughters that would be born to a woman provided that the age-specific fertility rates of the reference year remained unchanged during her childbearing period (age 15–49 years).

Net reproduction rate – the average number of live-born daughters that would be born to a woman and live to the age of their mother at the time of the childbirth provided that the age-specific intensities of fertility and mortality of the reference year remained unchanged during her childbearing period (age 15–49 years).

Total pregnancies rate – the average number of terminated pregnancies that a woman would have provided that age-specific rates of fertility, stillbirth rate and abortion of the reference year remained unchanged during her childbearing period (age 15–49 years).

Methodological notes on data on abortions

Abortion statistics has been kept in Czechoslovakia since 1953[2], and detailed statistics (broken down by all types of abortions: legally induced, spontaneous and other) have been kept since 1958 in connection with

[2] *The penal code No 86/1950 Sb (§218, subsection 4) allowed to perform 'a killing of a human foetus by a physician in a medical facility with the consent of the pregnant woman' under given conditions (health of the pregnant woman or her foetus was in danger). In the period from 1953 to 1958 the statistics covered only abortions performed according to this law.*

the entry into force of the Act No 68/1957 Sb, on Induced Termination of Pregnancy. Over the years, the definition of abortion has changed:

- Until 1964 all foetuses which could not be considered to be children according to the national definition effective at the time were considered to be abortions.
- In the period from 1 January 1965 to 29 February 1988, according to the internationally recommended definitions of a child, an abortion was every stillborn foetus born before the 28th week of pregnancy, or when the duration of pregnancy could not be determined a foetus weighed less than 1,000 g.
- From 1 March 1988 to 31 March 2012, the definitions of abortion were defined by the Decree of the Ministry of Health No 11/1988 Sb, on Mandatory Notifications of Terminated Pregnancies, Death of a Child, and Death of the Mother. An abortion was understood as the termination of a pregnancy of a woman, at which: a) the foetus showed no evidence of life and its birth weight was below 1,000 g, and in the case the weight could not be measured if the pregnancy lasted less than 28 weeks; b) the foetus showed at least one evidence of life and its birth weight was below 500 g, but it did not survive the first 24 hours after birth; c) the foetal egg without a foetus or decidua was removed out of the mother's uterus.
- As of 1 April 2012, the Decree No 11/1988 Sb was repealed by the Act No 372/2011 Sb, on Health Services. This current legislation defines a foetus after abortion that is a foetus, which after the complete expulsion or extraction from its mother shows no evidence of life and at the same time its birth weight is lower than 500 g and provided that the weight cannot be measured if the pregnancy lasted less than 22 weeks.

Abortion also means the termination of an ectopic pregnancy or a legally induced abortion performed in accordance with special regulations. In the period from 1958 to 1986, ectopic pregnancies were not registered. Since 1987 ectopic pregnancies have been registered, from 1988 to 1991 they were included in the category (and the number) of legally induced abortions, since 1992 they have been included in the category of other abortions.

Until 2023, the Chapter 7 contained data on abortions which were provided to the Czech Statistical Office by the Institute of Health Information and Statistics of the Czech Republic (IHIS CR). From 2024, the CZSO no longer collects data on abortions. To maintain continuity with previous Czech Demographic Handbooks, the chapter headings remained unchanged and Chapter 7 was left blank.

Total abortion rate – the average number of abortions that a woman would have provided that age-specific abortion rates of the reference year remained unchanged during her childbearing period (age 15–49 years). Similarly, **total legally induced abortion rate** and **total spontaneous abortion rate** are defined as the average number of abortions of a given type per a woman.

Methodological notes on data on deaths and mortality

Infant mortality rate – the ratio of the number of deaths aged under 1 year to the number of live births in the reference period (here per 1,000 total births).

Neonatal mortality rate – the ratio of the number of deaths of infants aged under 28 days to the number of live births in the reference period (here per 1,000 live births).

The stillbirth rate – the proportion of stillbirths of total births in the reference period (here per 100 births).

The perinatal mortality rate – the ratio of the number of stillbirths and deaths of infants aged under 7 days to the number of total births in the reference period (here per 1,000 births).

Life tables are used to characterize the survivorship of a population and provide the most accurate expression of the mortality intensity of a given population. The result of the calculation of the life tables is, besides other indicators, an indicator of life expectancy. In 2018, the Czech Statistical Office modified the methodology for constructing life tables, with the main change being the use of the Kannisto function

(instead of Gompertz-Makeham) for modelling mortality at the highest ages. All data in this publication (time series since 1920) are based on life tables that have been (re)calculated using the new methodology.

The life expectancy – the average number of years an x-year-old individual can expect to live provided that age-specific mortality conditions of the reference period remained unchanged. Due to the different mortality level by sex, the life expectancy is calculated separately for men and women.

Methodological notes on data on cause of death

Since 1919, causes of death have been coded according to the decennial revisions of the International Statistical Classification of Diseases and Related Health Problems (ICD) effective in the Czech Republic. Since 2009, updates of the 10th revision issued by the World Health Organization (WHO) have been implemented in the Czech Republic. The IHIS CR is responsible for the translation of the ICD-10 and its updates to Czech, and their implementation in the CR.

In statistical outputs, the data are tabulated according to the underlying cause of death, which is defined by the WHO as the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury. Since 2011, the CZSO has used the programme for automated coding (IRIS) for the selection of the underlying cause of death.

The comparability of individual decennial revisions is limited.

Period of validity of individual revisions of the International Classification of Diseases in the Czech Republic:

Revision	***WHO approved in***	***Effective in the CR***
*ICD-3**	*1920***	*1919–1930*
ICD-4	*1929***	*1931–1940*
ICD-5	*1938***	*1941–1948*
ICD-6	*1948*	*1949–1957*
ICD-7	*1955*	*1958–1967*
ICD-8	*1965*	*1968–1978*
ICD-9	*1975*	*1979–1993*
ICD-10	*1990*	*1994–*

**) International Classification of Causes of Deaths*

***) Approved by International Statistical Institute, resp. by Health Organisation of League of Nations.*

Titles of chapters of ICD presented in Demographic Handbook:

Chapter	***ICD-6***	***ICD-7***
I	*Infective and parasitic diseases*	*Infectious and parasitic diseases*
II	*Neoplasms*	*Neoplasms*
III	*Allergic, endocrine, metabolic and nutritional diseases*	*Allergic, endocrine, metabolic and nutritional diseases*
IV	*Diseases of the blood and blood-forming organs*	*Diseases of the blood and blood-forming organs*
V	*Mental disorders, psychoneuroses and personality*	*Mental disorders, psychoneuroses and personality*
VI	*Diseases of the nervous system and sense organs*	*Diseases of the nervous system and sense organs*
VII	*Diseases of the circulatory system*	*Diseases of the circulatory system*
VIII	*Diseases of the respiratory system*	*Diseases of the respiratory system*
IX	*Diseases of the digestive system*	*Diseases of the digestive system*
X	*Diseases of the genitourinary system*	*Diseases of the genitourinary system*
XI	*Deliveries, complications of pregnancy, childbirth, and the puerperium*	*Deliveries, complications of pregnancy, childbirth, and the puerperium*
XII	*Diseases of the skin*	*Diseases of the skin*
XIII	*Diseases of the bones and musculoskeletal system*	*Diseases of the bones and musculoskeletal system*
XIV	*Congenital malformations*	*Congenital malformations*
XV	*Certain diseases of early infancy*	*Certain diseases of early infancy*
XVI	*Symptoms, senility, and ill-defined conditions*	*Symptoms, senility, and ill-defined conditions*
XVII	*Accidents and poisonings*	*Accidents and poisonings, and violence*
Class/Chapte	***ICD-8***	***ICD-9***
I	*Infectious and parasitic diseases*	*Infectious and parasitic diseases*

II	*Neoplasms*	*Neoplasms*
III	*Endocrine, metabolic and nutritional diseases*	*Endocrine, nutritional and metabolic diseases, and immunity disorders*
IV	*Diseases of the blood and blood-forming organs*	*Diseases of the blood and blood-forming organs*
V	*Mental disorders*	*Mental disorders*
VI	*Diseases of the nervous system and sense organs*	*Diseases of the nervous system and sense organs*
VII	*Diseases of the circulatory system*	*Diseases of the circulatory system*
VIII	*Diseases of the respiratory system*	*Diseases of the respiratory system*
IX	*Diseases of the digestive system*	*Diseases of the digestive system*
X	*Diseases of the genitourinary system*	*Diseases of the genitourinary system*
XI	*Deliveries, complications of pregnancy, childbirth, and*	*Complications of pregnancy, childbirth and the*
XII	*Diseases of the skin and subcutaneous tissue*	*Diseases of the skin and subcutaneous tissue*
XIII	*Diseases of the bones and musculoskeletal system*	*Diseases of the musculoskeletal system and*
XIV	*Congenital malformations*	*Congenital malformations*
XV	*Certain causes of perinatal morbidity and mortality*	*Certain conditions originating in the perinatal period*
XVI	*Symptoms and conditions etiologically not defined*	*Symptoms, signs, and ill-defined conditions*
XVII	*Injury, poisoning and violence*	*Injury and poisoning*

Chapter	***ICD-10***
I	*Certain infectious and parasitic diseases*
II	*Neoplasms*
III	*Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism*
IV	*Endocrine, nutritional and metabolic diseases*
V	*Mental and behavioural disorders*
VI	*Diseases of the nervous system*
VII	*Diseases of the eye and adnexa*
VIII	*Diseases of the ear and mastoid process*
IX	*Diseases of the circulatory system*
X	*Diseases of the respiratory system*
XI	*Diseases of the digestive system*
XII	*Diseases of the skin and subcutaneous tissue*
XIII	*Diseases of the musculoskeletal system and connective tissue*
XIV	*Diseases of the genitourinary system*
XV	*Pregnancy, childbirth and the puerperium*
XVI	*Certain conditions originating in the perinatal period*
XVII	*Congenital malformations, deformations and chromosomal abnormalities*
XVIII	*Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified*
XIX	*Injury, poisoning and certain other consequences of external causes*
XX	*External causes of morbidity and mortality*
XXII	*Codes for special purposes*

Methodological notes on data on migration

In demographic statistics, migration is defined as a change in the municipality of registered residence of a person within the territory of the Czech Republic or across the borders of the Czech Republic. Migration statistics are processed separately for internal (within the territory of the Czech Republic) and international migration.

The comparability of data on internal migration over the years is partly limited by changes in the extent of migration statistics within the capital city of Prague (see explanatory notes below Table 9-1 for details) and reorganizations of the territorial division of the Czech Republic. In the case of international migration, the comparability of data in the time series is affected by the inclusion of foreigners with temporary residence (over 90 days) since 2001 and partly also by changes in data sources:

- Until 2000, migration statistics was based on data collection via statistical reports (Report on migration).

- In 2001–2004, the statistical Report on migration was the source for migration statistics of Czech citizens (with residence registration offices as reporting units), data on migration of foreigners were provided by the Directorate of the Foreign Police Service from its information system.
- Since 2005, all reports on migration have been replaced by administrative data from the Ministry of the Interior of the Czech Republic. The Information System of Inhabitants Records is the source of data on the migration of Czech citizens and in the period from 2008 to June 2012 was the source of data for all migration statistics (i.e. including migration of foreigners).
  The Foreigners Information System is the data source for the migration of foreigners (both across state borders and within the country), except for the aforementioned period from the beginning of 2008 to mid-2012.

Net migration – the difference between the number of immigrants and the number of emigrants to/from a given territorial unit in the reference period.

Volume of internal migration – the number of all registered changes of place of residence within a given territorial unit in the reference period. The volume of internal migration of a higher territorial unit is defined as the sum of the volumes of internal migration of relevant lower territorial units and volumes of internal migration among these lower territorial units.

Volume of international migration – the sum of immigrants from abroad and emigrants abroad in the reference period.