

#### Příběh statistiky

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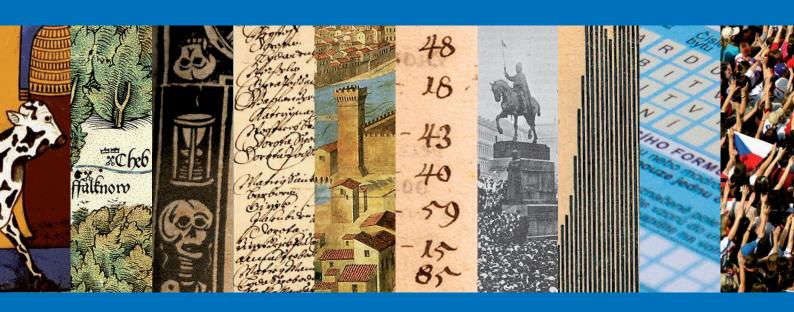
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# A STORY OF STATISTICS







# A STORY OF STATISTICS





# THE HISTORY OF STATISTICS

# THE HISTORY OF POPULATION CENSUSES

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#### **FOREWORD**



#### Dear Readers.

Even though statistics has only recently been considered a scientific discipline, it has been used for practical applications throughout history. For centuries, it has been irreplaceable for evaluating the past and for determining how society would develop in the future. This is what makes statistics such a unique and important discipline.

The availability of statistical data has gradually become such a matter of course that their importance is often understated. Perhaps this is partly responsible for insufficient statistical literacy. Ignorance and misunderstanding of basic statistical terms and principles complicate and often even thwart the proper use of findings and frequently lead to erroneous interpretations. It is becoming more and more obvious that this discipline deserves greater popularization.

The publication you are holding looks to the roots of both international and Czech statistics and helps the reader gain a basic understanding of its history. In my opinion, you may find here one of the best formulated missions of the national statistical service. Quite surely you will be surprised

to learn that there have been times when statistical data have not been available to everyone. The historical context of this publication will help you to discover what and why our predecessors found out with the help of statistics. A part of the publication also deals with the progression of statistical censuses – from the first nationwide listings up to the last census in 2011.

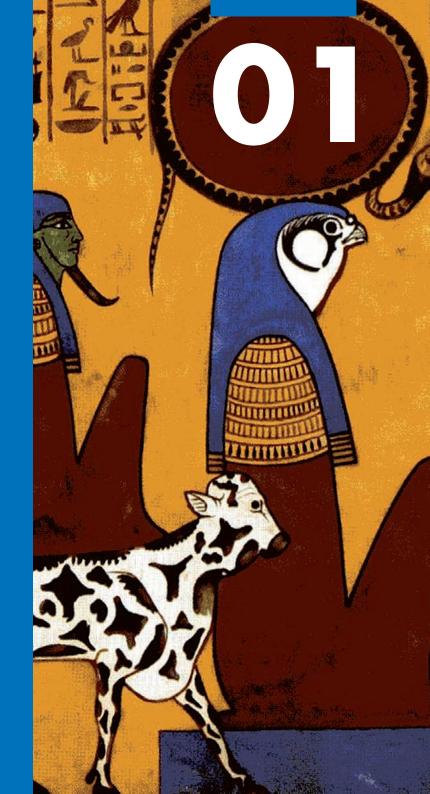
It is not a coincidence that a book entitled A Story of Statistics has been published in 2014. With its publication, the Statistical Office commemorates two important anniversaries. The first is the 45th anniversary of the foundation of the Czech Statistical Office within the Czechoslovak federation. The other is the 95th anniversary of establishment of the State Office of Statistics as the first statistical institution in the newly established Czechoslovak Republic. The present office continues the activities of this former office.

This short historical compendium is therefore a symbolic commemoration of the significant events that have occurred in our state statistical service, and I believe that it will capture your attention.

Iva Ritschelová President of the Czech Statistical Office

Whochelon

THE HISTORY
OF STATISTICS
PREHISTORIC
TIMES AND
ANTIQUITY



# E FRAIZ TONION T

↑ Listings of livestock were taken every other year in ancient Egypt.



One of the oldest pieces of evidence of the use of the tally for numerical records comes from the Palaeolithic Age and it was found in Dolní Věstonice, Moravia in 1937. It is a bone from a young wolf, about 18 cm long, with 55 deep notches. The first 25 notches are in groups of five. Then there is a notch that is double length that ends the row. A new row of 30 notches starts with another double-length notch.

# PREHISTORIC TIMES AND ANTIQUITY

# DID STATISTICS ALREADY EXIST AT THIS TIME?

S tandard statistics did not exist in prehistoric times, however the development of thinking and language in the Neolithic period facilitated the formation and use of abstract terms – numbers. Numeric reports were kept by various means: as notches on bones or sticks (the tally), as knots on ropes, pebbles or even by seashells grouped most often in sets of five.

The first true beginnings of any kind of records, i.e. statistics, may be found in the records describing the economic and social lives of the oldest civilizations. This is supported by various landmarks and sources from Sumer, Mesopotamia, Crete and Greece as well as from old Egypt and China. Ancient rulers wanted to keep track of whom they ruled, how much they collected in taxes, how many soldiers they might have to send to war or how many persons might be able to work for them.

The oldest written documents of a statistical nature come from ancient Sumer. They were records pertaining to population, the harvest and the number of livestock. In ancient Egypt, a listing of livestock was carried out every other year. The introduction of a capitation tax required a listing of the people that was continuously updated. There was also a land tax. Its level was derived not only from the size of the plot of land, but also from the level of floods that fertilized it.



↑ A tally from Věstonice. A wolf's bone with notches is among the oldest evidence of the use of numbers.



↑ Pieter Bruegel the Elder: The Census at Bethlehem (section).

#### **ANCIENT ROME** A SOPHISTICATED CENSUS

In ancient Rome, special officers – censors – were in charge of population censuses. A census was mandatory for all Roman citizens. This obligation was later expanded to all persons living under the governance of Rome. Only persons under paternal power (married women and children – they were registered by the husband or father, as the case may be), widows and orphans who were registered by their guardian were exempted from this obligation. Those who failed to report to the census without stating any serious cause were subject to property confiscation and loss of life. The value of property was reported by the person themselves, but the censor had the final say. The tax was then calculated based on the value of assets.



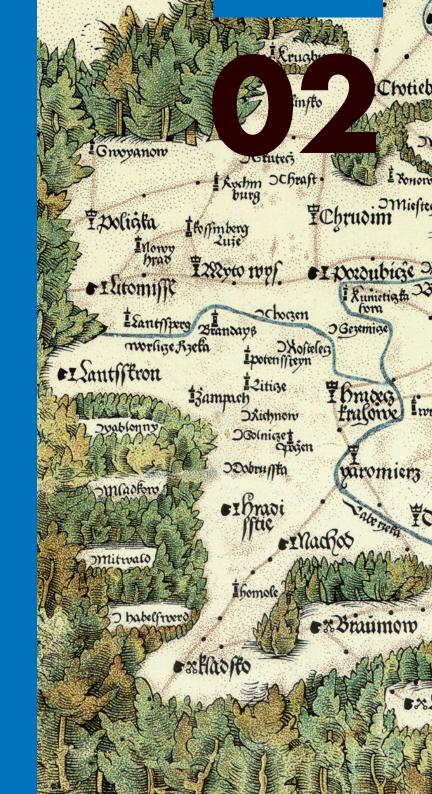
The most famous account of a statistical finding is undoubtedly the report on a population census as described by Luke in his Gospel. "In those days Caesar Augustus issued a decree that a census should be taken of the entire Roman world. This was the first census that took place while Quirinius was governor of Syria. And everyone went to their own town to register. So Joseph also went up from the town of Nazareth in Galilee to Judea, to Bethlehem the town of David, because he belonged to the house and line of David. He went there to register with Mary, who was pledged to be married to him and was expecting a child. While they were there, the time came for the baby to be born, and she gave birth to her firstborn, a son..."



THE HISTORY

OF STATISTICS

MIDDLE AGES





#### MIDDLE AGES FRAGMENTED SOURCES

Medieval statistical sources were not state-wide since rural governments were not centralized. Statistical sources that we can find from that era include various foundation charters, last wills and testaments or records of purchase and/or donations of plots or real estate. There were also various listings and records made for the purposes of tax collection, conscriptions and property surveys. Feudal lords usually also kept records of their vassals, properties and taxes imposed, as well as other duties. Records of occupied houses or prospective conscripts were also preserved.

?

The oldest document that is preserved in our territory that can be conside red a statistical document is the listing of property of St. Stephen's Church in Litoměřice. According to the foundation charter, Spytihněv II, the Duke of Bohemia, "...chose labourers from each of his castles, for each craft, as appropriate for a Duke's service, represented always by a man and a woman with their sons and daughters. He also donated fourteen villages to the guests and six villages to the chosen servants and ploughmen with all their necessities, i.e. forests and hides. He also gave them two vineyards with wine growers in sufficient numbers to cultivate it, thirty young female workers, then one hundred mares with a large field, as well as that many sheep, thirty cows and seventy pigs [...] The names of the villages are: Křešice, Brná, Popovo, Zásada, Travčice, Řepčice, Týnec, Malečov, Březí, Ptačice, Liběšice, Chouč, Bohušovice, Chotěšov."

1058

the oldest listing preserved in our territory



↑ Foundation charter of St. Stephen's Church in Litoměřice, 1058.



↑ Land and duties register from Broumov. Even old maps could be used as a statistical source.

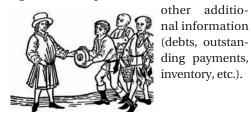
#### LAND AND DUTIES REGISTER A STATISTICAL

#### YEARBOOK FROM THE MIDDLE AGES

A land and duties register contained a total listing of the duties of serfs paid to the manorial lords per village or bailiwick. Alternatively, it was a record by name of all serfs and their duties. In addition to the land and duties register, there were also levy registers that kept records of actually collected fees, levies and performed compulsory labour.

The oldest land and duties registers in our territory are from the 13th century. They were compiled with the help of older records, donation deeds, testimonies or tradition. They also included data we can consider statistical findings. For instance, the land and duties register of the Rosenberg estate in southern Bohemia from 1373 contains evidence of the examination of the forest condition. It mentions the size of the forest, its composition by species and assumed method of exploitation.

Serfs paid their levies mostly twice a year, on the day of St. George (24 April) or St. John (24 June), and then on the day of St. Wenceslaus (28 September) or St. Gall (16 October). They were paid on other dates only very rarely. New land and duties registers had to be drawn up upon every change of conditions. The land and duties registers gradually developed into classic municipal or village land registers with records from the fields of contract law, inheritance law (last wills and testaments), family law (marriage articles, orphan's claims), and various



 $\uparrow$  Collection of taxes in kind in the Middle Ages.



In modern times, land and duties registers were followed by "Urbarial Fassion" that the nobility was obligated to draw up and maintain during the reign of Maria Theresa in order to obtain unified urbarial conditions throughout the entire country. While in Moravia from 1775 to 1776, the Fassions were drawn up in all fiefdoms. In Bohemia, the nobility boycotted such efforts and only a few new registers appeared. After the abolition of servitude in 1848, the land and duties registers lost their justification.

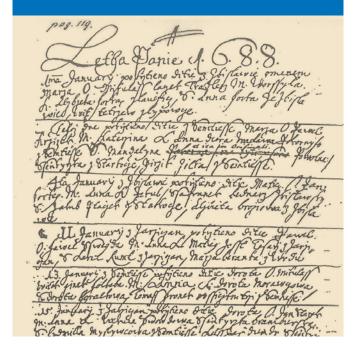
#### THE 13th CENTURY

#### PARISH REGISTERS

The first parish registers in Europe appeared in the 13th century. The oldest preserved register in our territory is the register of births from the municipality of Jáchymov from 1531. Registers contained records of marriages, baptisms and funerals. The records were usually in Czech or German and depended on the language prevailing in the parish or the nationality of the person who kept the register – it could have been not only the parish priest, but also a parish clerk or even a schoolmaster. In 1760, an ordinance was published that ordered the mandatory use of Latin. Until 1784, all records in registers were in sentences with a prescribed form that, however, was not unified and varied according to the writer's style.

For births, the writer stated the year, month and day of baptism of the child, name and surname of the baptizing person, the child's name, the father's name and byname or surname and the mother's name. Then followed the names and surnames of godparents. Information on newlyweds included the date of the wedding, the names and surnames of the betrothed couple, the names of their parents, witnesses, the priest and information about the form of the banns. For death records, the pertinent information included the date of the funeral, the name and surname of the deceased person and his or her approximate age. There was also a note about the administration of last rites and the name of the person responsible for burying the deceased.

In 1781, all registers became public documents, and as of 1784, clerics had to submit their records of the registers to state offices. In 1785, the records in registers were unified and the form of sentences was replaced by filling out pre-printed forms. In 1950, registers came under the supervision of national committees. Today they are maintained by municipal authorities, and they keep track of weddings, births and deaths.



 $\uparrow \quad \lor A$  register of births from the Zbyslav parish.

#### The year of our Lord 1688

On the 1st of January a child of Zbyslav was baptised by the name of Mařa. F. Mikuláš Hájek, a weaver, M. Voršila, G. Alžběta Horká of Loučice, W. Anna Horká of Zbyslav, Vít Tetřev of Lipovec.

On the same day, a child of Semtěš was baptised by the name of Mařa. F. Pavel Křížek, M. Kateřina.

G. Anna, daughter of Václav Pokorný of Semtěš, W. Mandalyna Povolná, a barkeep of Starkoč, Jiřík Jilka of Semtěš.

On the 4th of January a child was baptised by the name of Matěj. F. Jan Horký, M. Anna. G. Jakub Šafránek, a barrel maker of Zbyslav, W. Jakub Ptáček of Starkoč, Alžběta Brožova of Zbyslav.

On the 11th of January a child was baptised in Zaříčany by the name of Pavel. F. Pavel Švejda. M. Anna. G. Matěj Jošt, a bailiff of Zaříčany, W. Havel Ruml of Zaříčany, Mařa Beranka of Vrd.

On the 13th of January a child was baptised in Semtěš by the name of Dorota. F. Mikuláš Vítek otherwise called Holbaba. M. Anna, G. Dorota Moravcová, W. Dorota Horalková, Tomáš Hronek, all three of Semtěš.

*Note: F. – father, M. – mother, G. – godparent, W. – witness.* 

#### MIDDLE AGES

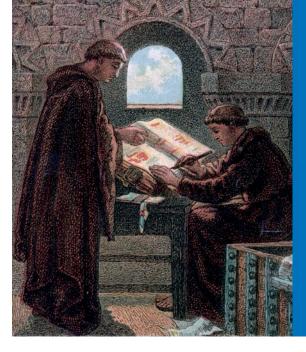
#### MEANWHILE, ELSEWHERE...

#### **1086** ENGLAND: THE DOOMSDAY BOOK

In 1086, William the Conqueror ordered to have drawn up the Doomsday Book that registered all landholders in England. According to this book, there were about 9 300 landholders from the ranks of nobility and clergy, 85 000 freemen, 108 000 subject serfs and 25 000 slaves, who became bondsmen in the next century. One may deduce that at that time there were about 300 000 heads of household, i.e. about 1.5 to 2 million persons living in England.

#### **1381** CHINA

The official population census of China in 1381 ended up with 59 873 305 persons. The following census that occurred ten years later, however, arrived at a number that was lower by 3 million. Years of corrections and adjustments followed until 1393, when the emperor was finally satisfied with the total number of 60 545 812 persons.

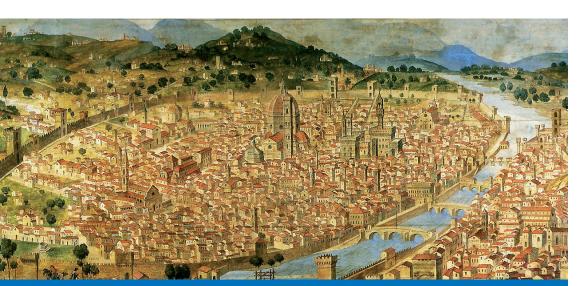


↑Monastic libraries are an inexhaustible source.

#### **1427** THE FLORENTINE CATASTO

The Florentine Catasto contains demographic data of the Florence dominion in Tuscany. It included data on the population census and property listings carried out by the Republic of Florence in 1427–1429. Each household was represented by the name of its head, the number of its members and its property. The head of the household was responsible for proper payment of all levies and taxes. There was a flat tax rate that equalled approximately 0.5% of taxable supplies.

lacksquare Florence in the Middle Ages had more than 100 000 inhabitants.

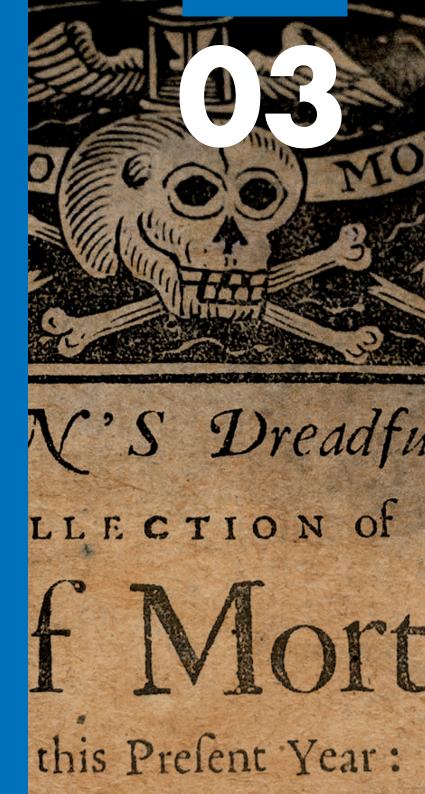


◆ An example of a record in the catasto.

Agnolo Lorenzo Machiavelli, banker, 45 years of age, married, head of a ten-member household. Total property equals 2 013 florins, taxable 1 992 florins. He lives in his own house in the Santo Spirito quarter (a part of Nichio), and does not own any animals. THE HISTORY

OF STATISTICS

MODERN TIMES





↑ William Petty dealt with political arithmetic.



The historical roots of modern statistics can be divided into four areas. They are:

- Official (state, administrative and ecclesiastical) statistics,
- Political arithmetic,
- University statistics/ political science,
- Probability theory.

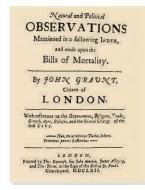
At first, these four areas were rather unrelated and developed more or less independently. Later, however they began to influence each other. However, political arithmetic played the most important role in the emergence of modern statistics. Behind the penetration of numbers and mathematics into statistics was the effort to calculate a probability rate. This effort goes back to the first half of the 15th century and it was related to a gambling game called dice. How probable is that you get two sixes when throwing dice?

#### MODERN TIMES STATISTICS IS BORN

he word "státistico" was first used in the 16th century in what is today Italy. It meant a summary of the knowledge of state affairs. At the same time, however, it marked people who were outstanding experts of important state affairs. During the 17th and 18th centuries, the term "statistics" spread outside the Italian peninsula; in Germany for instance, it was used as a term for political science. Both terms, "statistics" and "political science", at universities stood for a cycle of lectures containing a description of "state peculiarities", including population, territory, state administration, trade, finance, etc. University statistics consisted mainly of oral descriptions, and any application of numbers was initially quite rare. John Graunt (1620–1674) and William Petty (1623–1687) from England were the first who started to investigate social phenomena using numerical records. England at that time was more economically developed that other European countries. They discovered that more boys are born than girls and that more people die in cities than are born. They also examined the regularity of the incomes of people according to their occupation. Their approach was called "political arithmetic" since they used mathematics to examine phenomena that could be influenced and directed politically. Graunt and Petty had many followers in various countries.

In his work called "Natural and Political Observations Made upon the Bills of Mortality", published in 1662, John Graunt used the records of dead inhabitants of London. Such records were also made in the following years as demonstrated by a summary report of 1665 when London was decimated by plague. Records state that 63 596 Londoners succumbed to plague.





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↑ John Graunt: Natural and Political Observations Made upon the Bills of Mortality.

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The physicians' (official

doctors') task was to attend to those who could not afford to pay for such service - the poor and prostitutes. In addition, they performed the various acts of a medical examiner. They examined bodies, took part in capital punishment, presided at court, and last but not least, provided various reports - among other things - on the condition of the population. According to the writs of Viennese authorities from the beginning of the 19th century, regional physicians were to provide regular reports on the condition of healthcare staff and institutions, diseases (namely infectious) in the past period, vaccinations and so on. The reports were also to include summary information on meteorological observations and demographic conditions in the respective regions. One of the physicians was F. A. Stelzig, who published perhaps the first mortality tables in the Czech lands.

#### IN THE BATTLE

#### AGAINST EPIDEMICS

here were, however, other reasons for statistical investigations than just tax collection. For instance, in 1583, during the reign of Rudolph II, a plague epidemic burst outin the Czech lands that killed twenty thousand men. As a consequence of this epidemic, an investigation into the "health of the population" was launched that was to map out the source and development of malignant diseases and to help facilitate the adoption of timely counter--measures. The Czech Diet quite promptly responded to this event - in 1585, it appealed to the crown to appoint four physicians and stipulate their salaries, who as "... royal physicians would look after the origins of general diseases, prevent them from spreading and inform the public about them".

It was a fundamental request demonstrating the necessity of data collection and

adoption of coordinated anti-epidemic measures in the 16th century. We have two concrete names of such physicians from 1610 – Borbonius of Kolínec and Sibyllen of Cheb. In times of increased danger, spe-

cial physicians were appointed in larger towns who as "magistri sanitatis looked after the observance of general rules in case of an epidemic outburst". Because similar institutions were later introduced in other countries of the monarchy, we may assume they proved to be effective.

→ A physician attending to patients infected with plague.



lacklash Statistical records contributed to the improvement of the health condition of the entire population.





#### **1651** A LIST OF VASSALS BY RELIGION

The immediate impulse for creating a List of Vassals by Religion was a decree from the Czech governors from 16 November 1650 issued on 4 February 1651. This decree ordered the nobility to provide a listing of people based on their allegiance to the Catholic denomination and to send the lists within six weeks to the governor's office in Prague through regional governors. An incentive to provide the List of Vassals by Religion was also submitted by the Archdiocese of Prague.

Each list starts with the nobility, i.e. the owner of an estate, whether it was his permanent domicile or his administrator's, including all servants and officers. Next was a list of all inhabitants of the estate classified by towns, townlets and villages. Similarly, all burghers of royal and liege towns, and free men were registered. The clergy and the military were exempt from this obligation.

Prewritten sections served to register the person's name, social status (a vassal or a free man), occupation, age and information pertaining to his or her denomination. For non-Catholics, a little note was made whether or not there was any chance for their conversion to the Catholic Church.

A basic component of the list was a family record of the relationship of its members towards the estate owner. Domestic servants and farm hands were recorded together with their families. Finally, there was a note on the condition of churches, parochial buildings and building funds.

About two-thirds of the estates and towns submitted their lists by the summer of 1651. Four months later, the governor's office issued another decree according to which there was no further need to draw up a detailed list of all persons. It however, ordered the nobility to provide lists of non-Catholics. For this reason, the List of Vassals by Religion was not completed for all Bohemia and it was not started at all in Moravia and Silesia.

All data in the list must be approached critically. Specifically, the data pertaining to age are unreliable since a person's age was most assuredly rounded off. Children, too, may not have been systematically captured by the list. In some estates, all children were registered, whereas in other estates, only children above the age of 1 year, 9 years or 10 years were registered, or from the age that they began to participate in the Sacrament of Penance. The list could thus not provide an answer to the question of how many people lived in Bohemia at that time.

◆ An original record of the List of Vassals by Religion of 1651.





↑ The Tax Roll did not include any information on royal and liege towns or their inhabitants.

#### ?

The cadastral survey of the Stable Land Registry was the first attempt to map the territory of the Austrian state based on exact geodetic foundations?

The mapping effort took 12 years in Bohemia (1826–1830, 1837–1843). 8 967 cadastral municipalities with a total area of 51 963 km² were located on 9 321 064 plots. In Moravia and Silesia, it took 11 years (1824–1830, 1833–1836). 3 724 cadastral municipalities with a total area of 27 375 km² were located on 6 038 454 plots.

#### 1654 THE TAX ROLL

The first complete listing of tax duties in the territory of Bohemia was the Tax Roll. It contained a list of persons liable to pay taxes as well as data about every single homestead. Thus, it applied only to rural plots and homesteads. It originally recorded the following information: an estate or a homestead, its owner, municipality, the landowner's name and surname, the size of the field, sowing periods (spring/autumn), ownership of a team (horses/oxen) and whether the respective person kept cows, heifers, sheep, goats or swine. Among other things, it reported on the quality of the soil, forest size and species of trees, ownership of a mill, cartage and so on. One could also find details about if and when the homestead had been on fire, to what tax group the landowner belonged (a peasant, a small farmer or a gardener) or what type of trade he engaged in.

In Moravia, the Tax Roll was replaced by the "Lánové rejstříky" (listings of plots), which were created with a short delay in 1656–1658. They were, however, immediately reviewed after a decade. The data included in the Tax Roll were also gradually particularized, but the first re-visitation was completed only almost 100 years later when the Land-Registry of Empress Maria Theresa came into effect in 1748. It was followed by the Re-Visitation Registry in 1757. The third Czech land registry, by Emperor Joseph II, was finalized in 1785–1789. The Stable Land Registry created in the first half of the 19th century became the basis of the subsequent cadastral map of the Czech Republic.



↑ An original record in the Tax Roll of 1654.

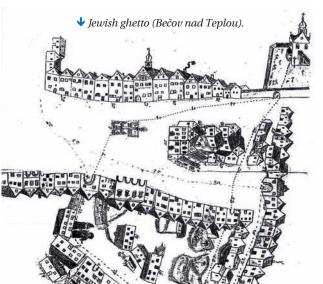
#### 18th CENTURY LISTINGS

#### **1702** A LISTING OF SALT CONSUMERS

At the turn of the 18th century, the Viennese government decided to stop salt smuggling from abroad to Bohemia and demanded that only salt extracted from the Austrian Alps be used in Bohemia. Therefore, it requested a listing of persons (salt consumers) from of all estates who would be forced to buy this salt. The listing also allocated a salt surcharge to regions and estates. Unfortunately, only the resulting sums of the listings were preserved, not the data on individuals. Moreover, many estate owners sabotaged the questionnaire and declared fewer persons. Yet this "salt listing" may be considered the first whole-land population census. According to this listing, there were 1 094 674 persons older than ten years living in the territory of Bohemia.

#### **1702** A LISTING OF JEWISH HOUSES

In 1727, a whole-land listing of Jewish houses and their inhabitants was drawn up. A part of this listing was a unique set of plans of towns and townlets that was marked with Jewish houses and ghettos.





↑ Transporting salt through the Bohemian Forest.

#### 1753 DECREE ON ANNUAL POPULATION CENSUS

A significant milestone in the history of statistical findings in our territory was 13 October 1753, when Maria Theresa's decree on an annual population census was issued. The need for improving population records was directly related to the extensive reform activity that required objective data about the population. The then national economists considered the effort to manage people without having sufficient data about them pointless and unwise. It is only through regular censuses that we are able to obtain a complete picture of the changing trends in the population of the Czech lands. Otherwise, we have to settle for estimates.



The first nationwide population census occurred in Iceland in 1703. The next country where a national population census was conducted was Sweden in 1749.



↑ A record of the population census in Iceland in 1703.



↑ Josef Anton von Riegger partook in emergence of an organized statistical service.

#### **1788** STATISTICAL FORMS

On 30 September 1788, Bohemian gubernium publishes forms for population and agricultural tables as well as a form for listing large-scale industrial plants. Those forms, probably instigated by Josef Anton von Riegger, represent the beginning of a new era in statistical findings.



Statistical documents published in the 18th century were in the form of text commentaries and simple tables. Graphical representation was not used until later.

# **1787** THE BEGINNING OF STATISTICS IN THE CZECH LANDS

he first outstanding statistician in the Czech lands was Josef Anton von Riegger (1742–1795).

In 1787, he started to publish "Materialien zur alten und neuen Statistik von Böhmen". It took seven years (until 1794) to publish twelve voluminous books in Prague and Leipzig. The introductory volume contains a detailed proposal of statistics in Bohemia segmenting it into three basic parts: natural characteristics (countries, population), political conditions and moral conditions. Besides various numerical data the book contains interpretations and text descriptions, copies of cadastral maps and some statistical data of various fields of economic activity (mining, trade and crafts, the flax industry, laundries, manufacturing, the corn harvest, the number of fruit trees, beer, wine and spirits production, salt imports, the price of corn and various other foodstuffs). In addition there were statistical data on poorhouses, spitals, foundations, the number of students at grammar schools or universities, information on various taxes and pensions as well as property confiscations after the battle of White Mountain, and many other materials that no longer had any statistical nature.

Contributions in Riegger's volumes were not signed, however it is obvious that Riegger himself was mostly their author. In the year of his death, Riegger published an unfinished attempt for a systematic statistical description of Bohemia in the spirit of contemporary university statistics – "Skizze einer statistischen Landeskunde Böhmens". In this work he further improved the application of the elementary of political arithmetic, namely in the chapter dedicated to population.

◆ The work entitled Materialien also included statistical data on property confiscation after the battle of White Mountain.





↑ Joseph II ploughing a field in Slavíkovice.

# 1788 ESTABLISHMENT OF THE IMPERIAL AND ROYAL PATRIOTIC-ECONOMIC COMPANY FOR THE KINGDOM OF BOHEMIA

he Agricultural Company founded in 1769 would nine years later be transformed into the Imperial and Royal Patriotic-Economic Company for the Kingdom of Bohemia. In 1797, the Company's secretary, František Fuss, otherwise a clerk at the vice-chamberlain office in Prague, published a large work entitled "Skizze einer ökonomisch-statistischen Landeskunde des Königreichs Böhmen". This work was the first systematic document concerning agricultural statistics in Bohemia. It contains 11 charts providing region-based data pertaining to agricultural production, soil, population, results of plant production as well as the condition of various cattle. It also includes textual descriptions of the main findings with a mutual comparison of various regions.

In 1828-1847, the Imperial and Royal Patriotic-Economic Company published reports called "Neue Schriften der kais. königl. patriotisch-ökonomischen Gesellschaft im Königreiche Böhmen" that mentioned meteorological charts as well as frequent tables of crop yields. Another systematic work on agricultural statistics in Bohemia was "Statistik der landwirtschaftlichen Industrie Böhmens" by the then statistics professor and gubernium councillor Georg Norbert Schnabel. It was a valuable source that influenced many later works. In addition, Schnabel also authored tables entitled "Tafeln zur Statistik von Böhmen" that - among other things - dealt with topography, population and industry.

The age of enlightenment during the reign of Joseph II called for many various administrative and economic--statistical reports that usually were in table form. Statistical findings were mostly carried out on grounds of requirements mandated by the monarchy's central offices. In most cases they were reports on the division of larger homesteads, the transfers of rural plots to the ownership of serfs, on the market prices of corn, beekeeping, the growing of clover and sugar beets, on road conditions, new teachers, the condition of common schools, justice, emigration and immigration, increases or decreases of tolerated non-Catholics etc.

# **1856** THE BEGINNING OF ORGANIZED STATISTICS

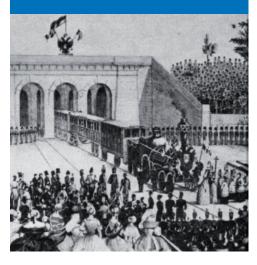
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In addition to provincial statistics, municipal statistics also existed. As of 1870, the royal capital city of Prague also had its own statistical office that placed it among such cities as Bremen, Berlin, Vienna, Rome and New York, which had opened their statistical offices in the 1860s. Later, Pilsen added a statistical office (1890), followed by Brno (1896) and Olomouc (1900). The offices processed mostly the results of population censuses, and regularly published results of the administrative and economic activities of municipalities. They also published statistical yearbooks with data concerning local censuses, as well as social, judicial and

trade statistics.

he last day of November 1856 is considered the beginning of state-organized statistics in the Czech lands. On that day was the first meeting of the Central Committee for Statistics of Husbandry and Forestry of Bohemia. This committee was a special newly-formed body of the Imperial and Royal Patriotic-Economic Company. The very first chair of the committee was Count Albert Nostitz, who was followed by Prince Karel Schwarzenberg. The Statistical Office, led by Eberhard Antonín Jonák, was an executive body of the Central Committee. It produced a draft of the organization and overall authority of the Office. In addition to the statistical data on the condition of agriculture, the Office was to monitor the general situation of the inhabitants and their division by nationality.

The Statistical Office commenced its work by the beginning of 1858, and besides its chair and secretary, it also had an auxiliary clerk. In order to perform local surveys, a network



↑ Statistics in the 19th century managed to capture the rapid development of industry and transport.

of stewards was formed. In each of the 207 political districts, initially one and later two delegates were appointed to work with their sub-delegates assigned to smaller areas.

The entire 19th century was an era of rapid industrial development, which at the same time placed far greater demands on the extent and quality of statistical surveys and the processing of statistical data. One may say that this was the time when the true modern nature of statistics based largely on the identification of economic indicators was born.

▶ The Statistical Office of the Royal capital city of Prague was established only a few years after the statistical office in New York.





#### **1897** ESTABLISHMENT OF THE PROVINCIAL STATISTICAL OFFICE

n 6 March 1897, the Provincial Statistical Office of the Kingdom of Bohemia was established. It was the first true statistical office in the territory of the current Czech Republic. The survey authority of the Provincial Statistical Office applied only to Bohemia. The Office consisted of two bodies: the Statistical Commission, which was a consultative and decision-making body, and the Statistical Office, which served as the executive body. President of the Statistical Office, Karel Kořistka, was appointed the head of the Provincial Statistical Office. He was followed by Dobroslav Krejčí.

In 1909 and 1913, the Statistical Office published "Statistické příručky království Českého" (Statistical Handbooks of the Kingdom of Bohemia) that offered data covering several years, including a comparison with data obtained from Moravia, Silesia and the entire monarchy. Obtaining quality data was not always easy since reporting was voluntary and the duty to report was not stipulated by law.

In 1898, the Provincial Statistical Office for Silesia was founded. The most important outcome of its activity was ten volumes of "Statistická příručka Slezské samosprávy" (The Statistical Handbook of Autonomous Territory of Silesia), and two publications reporting on the population censuses held in 1910 and 1921. A year later, the Provincial Statistical Office of the Mar-

graviate of Moravia was established. In 1902, it published "Zprávy Statistického zemského úřadu Markrabství moravského" (Reports of the Provincial Statistical Office of the Margraviate of Moravia) that dealt with all credit institutes in the country.

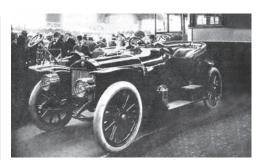
D. Auton Data o poštovním spojení autor					tab. XIV.	20.			
(IV. 18. Automobily a motorová kola v tuzemském soukro- ném majetku dle stavu ze dne l. března 1910 a 30. června 1911. (Pramer: Öster: Katistische Hadbuch)									
, , ,	Čechy	Morava	Slezsko	Dolni Rakousy	Horní Rakousy	Ührn pro veške- rá království a země na říšaké radé zasteupená			
1	2	3	4	5	6	7			
Stav dne 1. března 1910: Počet automobilů	1.067 2.802	219 501	62 255 88	2.819 2.564	97 307	5.238 8.007			
motorových kol	2,940	644	229	2.933	279	8.819			



By the end of 1914, a law was adopted that first defined the duty to provide information to the statistical office. This duty to report, however, applied only to municipalities and district road committees in the territory of Moravia.



In 1909, the first "Statistická příručka království Českého" (Statistical Handbook of the Kingdom of Bohemia) was published. The next one followed in 1913. The Provincial Statistical Office used it to inform the public about the most relevant statistical data on Bohemia. The data contained were often published in a time axis so that one could follow their development. For the purposes of comparison, the authors used similar data from Moravia, Silesia and the entire monarchy.



In 1910, private businessmen in Czech lands owned 1 348 automobiles. One year and three months later, this number swelled to 2 065 automobiles. During the same period, the number of motorcycles increased from 3 558 to 3 813. As of 30 June 2013, there were 4 755 644 personal vehicles registered in the Czech Republic with an average age of 14.06 years.

?

In "Československá statistika v prvním desetiletí republiky" (Czechoslovak Statistics in the First Decade of the Republic) of 1928, the function of state statistics was characterized by the following text: "The purpose of a statistical service is to provide a picture of the condition and development of situations within the state with the final objective of achieving economic prosperity, virtuousness, fitness and health of all inhabitants. Such efforts, however, cannot be governed by coincidence or traditionalism and mere instinct, but consciously according to a plan, precisely and constantly, i.e. scientifically. This, however, assumes knowledge of all circumstances and conditions within the state. It is the task of the statistical service to find out such facts, capture what is so typical about them, and what relationships and mutual causalities govern their development."

# 1919 ESTABLISHMENT OF THE STATE OFFICE OF STATISTICS

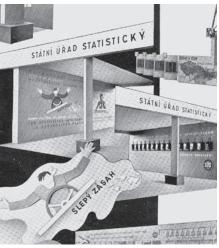
n 28 January 1919, i.e. three months after the formation of an independent Czechoslovakia, the Revolutionary National Assembly passed Act No. 49 on the organization of a statistical service. The principles of this law corresponded with the principles that form the basis of the current state statistical service of the Czech Republic. In 1919, the State Office of Statistics (SOS) was established as the new body authorized to conduct national statistical surveys. Act No. 49/1919 Sb. introduced a general duty to report, and stipulated sanctions for failure to meet this obligation. It also set duties of other offices towards the SOS, prohibited the arbitrariness of statistical surveys and secured the confidentiality of individual data. All those who – pursuant to hitherto valid regulations - were obligated to provide statistical data to various offices were now obligated to provide them to the statistical office.

The growth and development of the SOS during the first years of its existence was not easy. It was necessary to build up a new organizational structure, recruit experts, find suitable facilities and equipment, and last but not least, begin active statistical activity. In the first year of its existence, the SOS managed to process statistical material for the Czechoslovak peace delegation. In some fields, they were able to pick up the threads of previous findings and elsewhere it was necessary to develop modern statistics basically from scratch (for instance, in industry, foreign trade, price statistics, etc.). The overall organization of the SOS was essentially completed by 1921.

The existing head of the Provincial Statistical Institute, Dobroslav Krejčí, became the first President of the SOS. He, however, resigned at the beginning of 1920, and František Weyr was appointed to this post. He led the office until 1929 when the post was taken over by Jan Auerhan.

◆ The State Office of Statistics was established three months after the formation of the independent Czechoslovak Republic.

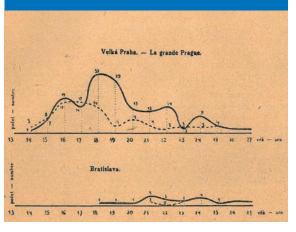




↑ Examples of statistical expositions at economic exhibitions in Prague in 1934–1936.



Clerks in charge of document administration were also required and expected to publish their own works in the field of statistics or related disciplines. A portion of the statistical office was also dedicated to scientific and theoretical activities.



↑ Statistics during the First Czechoslovak Republic offered detailed data on the number, age and origin of prostitutes.



↑ Most frequently, women began to prostitute themselves at the age of 16.

Particular thematic statistics at the SOS developed as independent units. It was quite understandable that the Office excelled in such areas where statisticians could apply their previous experience. Demographic statistics, including population censuses, was the most common area. Previous experience also proved useful in the statistics of public finance and agricultural statistics. Among economic statistics were templates for foreign trade statistics and price statistics. The system of statistical findings was quickly supplemented, but the statistics of industry and domestic trade lagged behind.

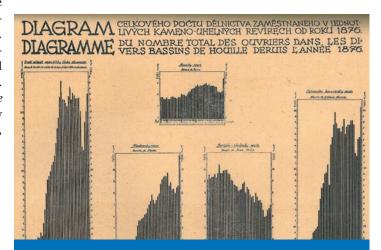
The publication system of the SOS was based on the principle of the wide publicity of discovered data. The basic mechanism was "Statistická příručka republiky Československé" (The Statistical Handbook of the Czechoslovak Republic). The first one was published in 1920, and others followed in 1925, 1928 and 1932. In 1934, statistical handbooks were replaced by regular "Statistická ročenka republiky Československé" (Statistical Yearbook of the Czechoslovak Republic). The last one contained data for 1937. The work entitled "Československá statistika" (Czechoslovak Statistics) included aggregate results of listings and annual results of surveys. "Zprávy Státního úřadu statistického" (Reports of the State Office of Statistics) regularly informed people about newly discovered data. They were initially polythematic, however, they were later divided into 12 thematic series.

→ All pictures and illustrations had to be drawn by hand at that time.



At the beginning of the 1920s, there were no Czech textbooks on statistical methods. Beginning in 1920, the State Office of Statics issued "Československý statistický věstník" (The Czechoslovak Statistical Journal) where it – among other things – published voluminous essays by mathematicians Václav Láska and Josef Mráz. In 1926, the statistical office financed

a Czech translation and edition of the famous G. U. Yule textbook entitled "Introduction to the Theory of Statistics". This work significantly contributed to the creation of Czech statistical terminology. The author of the first textbook of statistics written in Czech and called "Základy teorie statistické metody" (Basics of the Theory of Statistical Methods) was Stanislav Kohn. The textbook was published in 1929 by the SOS.





#### 1939-1945 THE CENTRAL STATISTICAL OFFICE

uring the Protectorate, the State Office of Statistics continued its activities under the name of the Central Statistical Office. The SOS President, Jan Auerhan, retired on 1 April 1939, yet he kept on working in the Office. On 6 June 1942, he was arrested by the Gestapo, and executed three days later. Many other employees of the Office were also persecuted. Some of them were executed, others died in Nazi prisons or concentration camps. The Office was led by its Vice-President, Antonín Boháč, who was forced to retire in 1941, and the Office passed under German management.

Statistical activities in Bohemia and Moravia were reduced during the Second World War, and corresponded with the war conditions as well as the situation in our territory. A state-controlled economy was introduced. Economic and market unions appeared, as did many other bodies that needed statistical data in order to manage their businesses. However, the statistical office could not always provide such information and thus the businesses were flooded with various statistical questionnaires. Willingness to provide requested data diminished even towards the actual statistical office.

Records of demographic events, however, were maintained.

#### PROTEKTORAT BOHMEN UND MÄHREN PROTEKTORÁT ČECHY A MORAVA



#### **GEBURTS- UND TAUI** RODNÝ A KŘESTNÍ L

GEBURTSMATRIK: MATRIKA NAROZENÝCH:



BUCH:

BLATT: LIST:



↑ Price statistics was disrupted during the Protectorate.



The publishing capacity of the statistical data during the Protectorate was greatly reduced. In 1941-1944, four volumes of "Statistická ročenka protektorátu Čechy a Morava" (The Statistical Yearbook of the Protectorate of Bohemia and Moravia) were published, but by its second volume, the title page included the following triple warning "Confidential! For official use only! Publishing and distribution forbidden!" And the back side of the title page included an addendum: "This book must be kept as confidential material!".



In 1942, the Ministry of Foreign Affairs of the exile government in London published "Statistická příručka Československé republiky" (The Statistical Handbook of the Czechoslovak Republic) with all data from the pre-Munich Agreement republic.



↑ One of the statisticians' tasks in the post-war era was to compile a list of war damage.

#### 1945-1948 STATISTICS DURING THE PERIOD OF POST-WAR RECONSTRUCTION

mmediately upon the end of the Second World War, the State Office of Statistics was re-opened with state-wide authority. Its objective was to reintroduce the high pre-war level of Czechoslovak statistics. The statistical service's organization in the Czech lands and in Slovakia, however, was not unified. Methods and procedures of collecting data for other branches of statistics varied in both parts of the republic. There were few data on a state-wide level and their reliability was low. At the very beginning, only foreign trade statistics existed at the state level.

The post-war era of statistics was characterized by intensive activity leading both to the reconstruction of pre-war circles of regular statistical surveys and the creation of new ones. Wide-ranging

statistical activities were conducted including the population census in Slovakia on 4 October 1946. A similar population census in the Czech lands was carried out on 22 May 1947. Results of those censuses proved that the Second World War meant a huge change to the national structure, namely as a consequence of the post-war resettlement of German inhabitants. As early as September 1945, the statistical office compiled a list of war damage. Results of such listings were published in "Statistická ročenka ČSR 1948" (The Statistical Yearbook of the Czechoslovak Republic). Methodical materials and analytical and survey files of various thematic areas were published in "Statistický zpravodaj" (The Statistical Journal).



findings carried out in 1946-1947. The first

post-war statistical yearbook was published by the end of 1948. Other

yearbooks did not come out on a yearly basis

until 1957.

↑The number and structure of inhabitants changed significantly after the Second World War.



for any other than statistical purposes with the

individual's consent."



#### 1948-1989 PLAN CONTROL

Statistics during this period was heavily influenced by the era of centrally planned economics as well as by the social and (mainly) political climate of that era. The publication system of state statistics was virtually cancelled at the beginning of the 1950s, and the public obtained information mainly on the level of plan performance. Nevertheless, much of the data in absolute values were purposefully suppressed.

A new form of statistical findings in the late 1940s and early 1950s was record keeping. All data of business and companies (reporting units) were simply withdrawn from their regular records. Heading towards a centralized model of control over the national economy paradoxically necessitated a transition to an utterly decentralized system of submitting and processing statistical data.

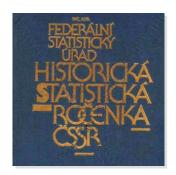
In 1952, a gradual summation was introduced. Lower units filled out the statements and submitted them to their supervising bodies, who used the submitted form to create a single summary statement. This statement was sent to their organizational supervisory bodies,

which again used the statements to draw up a single summary report for all its subordinate units, until the final summary report reached a ministry or some other administrative body. Only then were the data provided to the statistical office, which by this time had no individual data available with which it could process information from various points of view.

In the second half of the 1950s, the requirements on statistics changed. The system of gradual summation was abandoned and replaced again by the central collection and processing of statistical data.



↑ Statistics informed the public mainly about plan performance.





In 1985, the statistical office published "Historická statistická ročenka" (A Historical Statistical Yearbook). Only a few statistical offices, f. e. the USA, France, Canada and the USSR, were then able to draw up and publish such a yearbook.

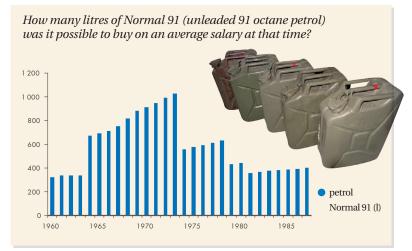
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In 1972, the FSO published "Jednotný číselník obcí v ČSSR (geografickou klasifikaci obcí)" (A Unified Code System of Municipalities in the Czechoslovak Socialist Republic – a geographical classification of municipalities) containing all settlements within the Czechoslovak Socialist Republic and their numerical marking.

By the middle of 1961, a significant organizational change occurred in the sphere of statistics. The State Office of Statistics was fused with the then Ministry of State Control, and renamed the Central Office of State Control and Statistics (COSCS). Soon it was obvious that it was a merger of two institutions that had little in common. Statisticians kept losing the trust of reporting units, which in their fulfilment of their duty to report, simultaneously feared state intervention. Through a legal provision of 12 January 1967, control and statistics were again divided, and the State Statistical Office (SSO) was established.

As of 1 January 1969, the unitary Czechoslovak Socialist Republic became a federation. This was also reflected in the arrangement of the central bodies of state statistics. The Federal Statistical Office (FSO), the Czech Statistical Office (CZSO) and the Slovak Statistical Office were established. The major task of the FSO was to secure unity in the system of statistical information throughout the entire state, the unity of methods and unity in the system of statistical surveys. The task of the republican offices was to actually perform statistical activity, i.e. the collection and processing of information, and to provide necessary information to the FSO and all other relevant regulating bodies on the republican level. The organization of the federal and republican statistical offices remained the same until the dissolution of the federation on 31 December 1992.





▼ The statistical office had its seat in Prague-Karlín from 1948–2002.



#### 1990-1993

#### THE TRANSFORMATION STAGE

The social changes in 1989 restored the prerequisites for developing an objective, impartial and apolitical state statistical service. The statistical office had to respond to the new requirements and claims related to the transition to a democratic society and to a market-based economy. Examples of such a change were the liberalization of price levels and dissolution of the trade system of the Comecon, as well as of the Council itself. Another great turn was represented by the change in ownership structures related to privatization and greater orientation on markets in Western Europe and countries with a market economy.



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The boundary demarcation commission effectuated 18 changes to the original administrative boundaries between the Czech and Slovak Republics.

In total, 452.02 hectares were exchanged. Through these changes, the length of the boundary decreased from 285 km to 252 km. All changes were mutually compensated by land and thus the total area of the Czech Republic did not change.

The efforts of statisticians also focused on building up trust in statistical data. They taught the public to use and apply statistical data in their decision-making processes, and last but not least, they desperately needed to obtain respondents willing to cooperate with the Office. Statisticians themselves had to learn a lot with regard to an open economy and expansion of foreign contacts. To this end, it was necessary to start using standardized procedures that were common in other countries with a market economy. The state statistical service responded to the newly-emerging phenomena by new indicators and surveys. In 1992, a new act on the state statistical service was adopted. This act defined bodies that became parts of the service, and stipulated their mission and duties. A portion of the act also dealt with the protection of personal data.

At the beginning of 1993, the Czechoslovak Federative Republic broke apart into two independent states. The Czech Statistical Office (CZSO) took over all competencies of the national statistical office from the former Federal Statistical Office (FSO).



"Official statistics represents an essential element in the information system of a democratic society because it provides data on the economic, demographic and social situation and environment to the government, national economy bodies and the general public. Official statistical bodies, therefore, are obligated to draw up and publish impartial statistics that meet all the requirements on its practical application, and thus fulfil its obligation towards the citizens who are entitled to receive public information." (The Fundamental Principles of Official Statistics per the United Nations Economic Commission for Europe as adopted at its 47th 15 April 1992.)



#### PRESIDENTS OF THE STATISTICAL OFFICE



DOBROSLAV KREJČÍ SOS 1919–1920



FRANTIŠEK WEYR SOS 1920–1929



JAN AUERHAN SOS 1929–1939



FRANTIŠEK FAJFR SOS 1945–1961



PAVOL MAJLING COSCS 1961–1966



JAN KAZIMOUR SSO (FSO) 1967–1981



VLADIMÍR MIČKA FSO 1981–1990



IVAN ŠUJAN FSO 1990–1992



JIŘÍ ANTOŠ CZSO 1969–1987



LADISLAV ŘÍHA CZSO 1987–1990



EDUARD SOUČEK CZSO 1990–1993



EDVARD OUTRATA CZSO 1993–1999



MARIE BOHATÁ CZSO 1999–2003



JAN FISCHER CZSO 2003–2010



IVA RITSCHELOVÁ CZSO 2010–present

SOS – The State Office of Statistics COSCS – The Central Office of State Control and Statistics SSO – The State Statistical Office FSO – The Federal Statistical Office CZSO - The Czech Statistical Office

POPULATION
CENSUS
THROUGH
HISTORY







↑The best-known reform of Empress Maria Theresa was the introduction of compulsory school attendance ...



The results of the 1754 census were long considered a state secret, and the data were kept confidential for more than 100 years.

# **1754** THE BEGINNING OF REGULAR REGISTERS

Regular population censuses began to be carried out in the middle of the 18th century. Sometimes, they were taken every three years, while other times it was annually. They were taken by the nobility and the clergy (in 1754–1769) or the nobility and the military (in 1770–1851) for fiscal or military purposes. The initial ones recorded all present inhabitants, whereas later ones recorded only native inhabitants, who would eventually be defined by their right of settlement in a municipality.

An important milestone in the history of population censuses was 13 October 1753, when Maria Theresa's decree on annual population censuses came into force. The first

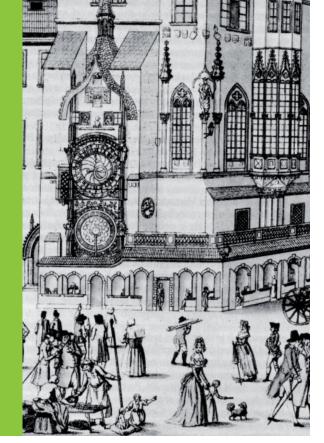
population census taken on grounds of this decree was carried out in 1754, and marked the beginning of a new chapter in population registers. It was the first time that a census was held simultaneously and uniformly throughout the monarchy. Originally, it was to be taken by the clergy in each parish. However, it was eventually decided that another census taken by the nobility would run concurrently and that its contents would be expanded to include a listing of houses and the economic characteristics of the owners of the houses. The nobility listings and listings performed by the clergy did not match, though, as the listings made by the clergy showed higher numbers.



It was stipulated that a serf who intentionally did not meet his duty to report, hid himself or even escaped, would, upon his capture, be arrested and punished by being sentenced to two years of labour in a fortification. If he hid his cattle from the listings, any found cattle would be confirented

→ "Census takers" were both members of the clergy and nobility clerks.





↑Listings captured native inhabitants who were divided into those who were present and those who were absent.

?

For the needs of listing accuracy in 1770, all houses were ordered to be numbered, and it was forbidden to change surnames after registration.



Beginning in 1828, results of the population censuses were regularly published in the official "Tafeln zur Statistik der Österreichischen Monarchie" (1828–1865)

# 1777 A NEW CONSCRIPTION DECREE

n 1777, a new listing decree was issued that – with slight modifications and variations – became the basis of listings until 1851. Up to 1828, the annual listings were performed simultaneously by military and political offices. Then the census interval changed to a three-year period, and censuses were taken in 1830, 1834, 1837, 1840, 1843 and 1846. Data obtained in the three-year periods were, however, revi-

sions of already discovered facts, not entirely new findings. The subject of records were native inhabitants (i.e. persons appropriate to the respective municipality) who were divided into those who were present and those who were absent. Data on the male population were more detailed due to military reasons. Only the decree of 25 October 1805 stipulated that women had to be registered with as many details as men, and that the registers also include children from birth. Beginning in 1807, the results of the military and political surveys were identical.

Starting in the 1780s, population books were maintained at estates and later also in cities (and subsequently even in municipalities) that separately recorded each family with all the members of the household. The head of the household was obligated to immediately report all changes within the family (deaths, births, etc.).



↑ The title page of Maria Theresa's decree of 10 March 1770.



↑ A labour listing dated 1777.

# **1857** FROM LISTINGS TO CENSUSES



The first statistical congress was held in Brussels in 1853. One of its conclusions included a recommendation of having the census taken by a single body in the state and on a single day. Another recommendation dealt with having a regular census taken at 10-year intervals.

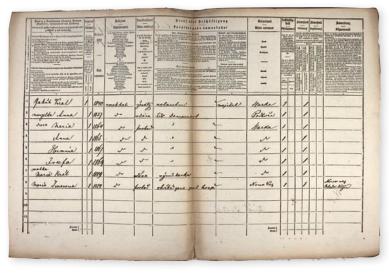
The population census of 1857 is marked as a transition between population listings and modern population censuses. For the first time, it was counted as of a single date, 31 October 1857. The clerks had only seven months to prepare because the imperial order was issued on 23 March 1857. Contrary to the population listings that provided only basic data on the number of inhabitants and their structure, population censuses carried out from the middle of the 19th century were a fundamental source of statistical data not only of the inhabitants, their number and composition, but also of the country's entire economy. Also, military offices ceased to take part in population censuses in 1857.

# **1869** The first modern census

# IN OUR COUNTRY



Teplice. According to the data of the population census in 1869, there were 15 469 inhabitants; in 2011, it was 49 640 persons.



↑ Recorded values of the census in 1869.

The next significant milestone in the modern history of population censuses in our territory was because of the act that was passed in 1869. Pursuant to this new act, a population census was carried out at the beginning of 1870 that captured the condition of the population as of 31 December 1869. The act further stipulated that subsequent statistical surveys were to capture the population condition at ten-year intervals on the last day of December of any year ending in zero. The actual surveys were taken by municipalities and a household became a census unit. Questionnaires were either completed by owners of houses or by "census takers" based on reports of registered persons. It was basically the first population census in modern terms that created conditions for comparing basic demographic data from this point forward.

# 1880-1910

# POPULATION CENSUSES EVERY 10 YEARS

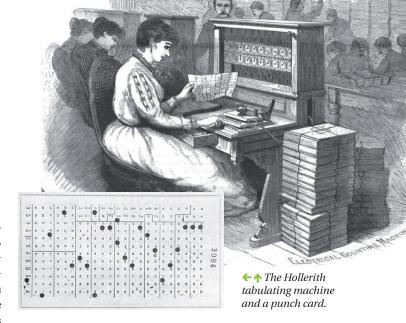
Prior to the break-up of the Austro-Hungarian Empire, population censuses in Cisleithania were taken in 1880, 1890, 1900 and 1910. Results of these censuses were published in "Österreichische Statistik". Among the major reasons for taking censuses in the Austro-Hungarian Empire in the 2nd half of the 19th century and at the beginning of the 20th century, was finding the number of present inhabitants and capturing the rapid and significant structural changes that society was experiencing. Gradually, the scope of requested data expanded.

The population census in 1880 for the first time contained a question regarding spoken language with which the statisticians indirectly investigated the nationality structure of individual regions. This information proved to be every important because various legal regulations applied to the ratio of nationalities. The results of the census also helped to determine directions of population migration.

The 1890 census is considered a milestone. During this time, occupation statistics had been consolidated and gained its modern basis. Classification of branches was already quite detailed, and classification of social groups survived with only minor changes until 1950.



A competent body was authorized to impose a sentence of imprisonment not exceeding four days or a financial penalty in the amount of 1-20 guldens for purposefully evading the census or providing false data. The sums of the penalties were then used for a poor people's fund in each given municipality.





The data of population censuses in 1869 and 1880 were sorted out and summarized manually. 1890 was the first time that part of the census results could be processed by machines.



In the 1869

census, deafness and blindness were investigated, as were mental disorders in the following years.

**♦** Recorded values from the 1890 population census.



# 1921 THE FIRST CZECHOSLOVAK CENSUS

The first Czechoslovak population and housing census was held on 15 February 1921 pursuant to Act No. 256/1920 Sb. of 8 April 1920 on population censuses. The contents of this census substantially differed from pre-war censuses, however, present inhabitants were recorded and not those who were residing there but were absent.

The most politically important information was investigating the nationality structure of the inhabitants. It was to confirm the rightful establishment of an independent Czechoslovak Republic. Contrary to the pre-war nationality surveys on grounds of spoken language, a new definition of nationality was adopted according to which "nationality means an affiliation whose external characteristic is usually the mother tongue". The purpose of it was to remove the definition of a nationality according to spoken language, which was disadvantageous for the Czechs and Slovaks and helped the Germans. Moreover, the reference to a declaration of one's nationality pursuant to affiliation enabled Jews and the Romany to claim allegiance to their nationality even if they did not use or did not know the language common to such nationalities. Long discussions were held over the question and definition of a nationality. Even though a "Czechoslovak nationality" was officially introduced and surveyed, it was possible to separately determine the number of inhabitants with either a Czech or Slovak nationality.

Another important characteristic was the data of occupation. The statisticians compared current occupations with occupations as of 16 July 1914. It enabled them to find out social and occupational changes that occurred during the war.



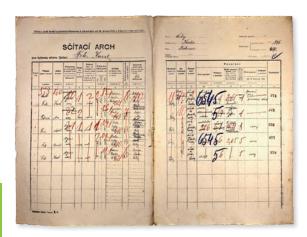
↑ A domicile collection sheet used in the 1921 population and housing census.

# 1930 THE SECOND CZECHOSLOVAK CENSUS

nother census was held on 1 December 1930. This time, the contents of the census expanded in many directions. Of the newly introduced characteristics of the census, one of the most important wasthe investigation of past domiciles of registered persons if such persons were not registered in his or her place of birth. Subjects of the survey included places from which the persons moved to places where they were registered. The most significant, however, was the survey of women's fertility. Nevertheless, only the marital fertility rate was registered, i.e. the fertility of women in their current or previous marriage.



The census was processed on Powers' punch-card machines. Hollerith machines were used in previous censuses from 1890.



↑ A census sheet from 1921.

# 1950 THE NATIONAL CENSUS

The first population census after 1945 occurred on 1 March 1950. As there was also a housing census and listings of agricultural, industrial and trade plants, the entire event was called "The national census of 1950".

For a long time, this census was the last one that would process present inhabitants. In addition, for a long time this was also the last listing where allegiance to a specific denomination was surveyed (the question of religious denomination reappeared only in the 1991 population census).

One of the fundamental goals with the 1950 census was to capture the changes within the Czechoslovak society that occurred as a consequence of the Second World War: the post-war resettlement of the Germans, re-emigration, resettlement to frontier areas of the Czech lands, changes in the social composition of the population. The census also offered data on the housing fund and its structure and a lot of other data with which the statisticians could describe several other war and post-war changes in the national economy.

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A census that was planned for 1940 did not occur. Data investigated in the first post-war population listings from 1946 (in Slovakia) and 1947 (in the Czech lands) offered only rudimentary information. In Slovakia, only the present civil inhabitants were registered, whereas in the Czech lands, all present inhabitants were subject to the census.

A substantial change compared to the 1930 census was a new definition of nationality according to which a nationality was "a person's allegiance to a nation with whose cultural and work environment he or she was internally connected and to which he or she professed to belong."

The 1950 national census strictly distinguished the professional and branch-based point of view in surveying occupations. Thus, two new classifications emerged: branch-based classification and occupational classification.



Results of the 1950 national census were published as non-public and with a limited circulation. The data were made available to the public only after their declassification in 1962.



↑ A promotional ad for the population census in 1950 starring actor Jan Werich.





↑ All obtained data had to be coded. © ČTK (photo), 2013.



A census household is the smallest group of people connected through a joint domicile, joint housekeeping and mostly through family relationships. It is divided into compete family households, incomplete family households, multimember non-family households and households of private individuals. The concept of census households was introduced by the State Office of Statistics and was the first of its kind in the world. Registered households were processed for the last time during the 2001 census.



The data of the 1961 PHC facilitated the establishment and subsequent maintenance of annual reviews of the population based on permanent domiciles and other criteria.





During the 1961 PHC, there were 2 869 370 apartments and 3 214 263 census households recorded. It means that 327 106 apartments consisted of more than one census household.

# 1961 POPULATION AND HOUSING CENSUS

Another census in our country was taken on 1 March 1961, and for the first time it was known as the "population and housing census" (PHC). This census dealt with permanently domiciled inhabitants in accordance with the concept of "census households". The census data on residing inhabitants enabled researchers to subsequently open and maintain annual reviews of the population according to various criteria, for instance, marital status. This detailed processing of data of census households substantially broadened information on the structure and sizes of families and households. It also enabled the quantification of the scale of multigenerational cohabitation, the number and composition of incomplete families with dependent children, and helped to describe housing conditions.

As opposed to the previous census, the current list also processed the first data on people who commuted to work between districts or to larger cities. Similarly, it offered the first look at cooperative farmers, who were a new social group. The 1961 PHC also provided data on the level of education by age group and sex.

Contrary to the previous censuses, much of the current published data and the analytical application of the census results were more extensive. The main results of the 1961 census were published in four volumes in 1965–1967 under a common title "Sčítání lidu, domů a bytů v ČSSR k 1. březnu 1961" (Population and Housing Census in the Czechoslovak Socialist Republic as of 1 March 1961). In 1963–1965, separate regional publications came out that contained large amounts of detailed information and they were supplemented by an analysis of the results for the entire region and its districts. Also, in 1965, a nationwide publication called "Vývoj společnosti ČSSR v číslech" (Societal Trends of the Czechoslovak Socialist Republic in Numbers) was published and a year later it was followed by "Statistický lexikon obcí ČSSR 1965" (A Statistical Lexicon of Municipalities in the Czechoslovak Socialist Republic in 1965).

# **1970 PHC**

ew survey characteristics of the population and housing census that were included in the 1 December 1970 edition included birth certificate number, mother tongue, citizenship, and the length of commute to work, schools and education (frequency, distance, duration and method of transport). Other important factors were monitoring the willing or unwilling cohabitation of registered households in a single apartment and the existence of certain durable consumer goods in households.

Computer-assisted processing of results with the help of a high-capacity mainframe enabled the wide publication of data. For the first time, the results of the census were processed for basic settlement units (i.e. localities in rural settlements and urban districts in selected towns and cities).

# 1980 PHC

The fourth post-war census was held on 1 November 1980. With regards to its contents, it was to a large degree similar to the 1970 census. The few new features included the concretization of data about women's fertility, a classification of basic settlement units according to their type and size as well as direction-based data processing of commutes (it was previously only a balancing evaluation). Another important feature of the census was the unified method of processing information regarding the lack of apartments down to the level of individual towns.

The census results were processed on a new Cyber 180 mainframe and with the application of experience gained during the last census. Data in the form of numerical codes were transferred to a magnetic tape through the Videoplex 3 system in the facilities of Podnik výpočetní techniky (Computing Enterprise). Subsequently, all logical checks and corrections were made. The mainframe processed nearly all data in a very short period (roughly in a year and a half).

♦ The length of commute to work and schools was also a survey subject of the 1970 census.







The 1970 population and housing census included a Microcensus - a 2% selective survey of households whose basic objective was to discover the differences in income levels of various groups of households, and to capture some other features pertaining to the standard of living.

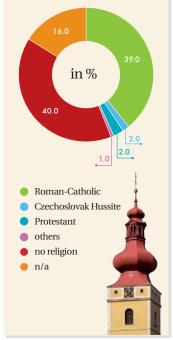




As a part of promoting the population and housing census, the Ministry of Transportation issued a CSK 1.00 postage stamp on 24 September 1980 with a total circulation of 23 605 000 stamps.

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#### The 2011 Census, for the first time since 1950, included the question on the religious affiliation of respondents.





↑ A period advertisement of Fatra TV sets.

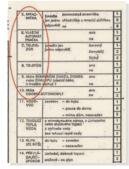
# 1991 PHC

The last Czechoslovak population and housing census was held on 3 March 1991. Based on international recommendations adopted by the United Nations Economic Commission for Europe, questions pertaining to a registered person's mother tongue and permanent residency at the time of birth were reintroduced into the censuses. The census again processed data on all inhabitants with permanent residency. The rapidly changing social-political situation after 1989 was reflected in the final stage of the census preparations, specifically in its content and methodical changes. As opposed to the 1980 census, there were some modifications to the method of surveying and processing data of economic activities and social groups. After more than 40 years, the census forms again included questions on the religious affiliation of registered persons.

Particularly significant changes occurred with respect to the classification of nationalities, namely in connection to the constitutional law introducing the Charter of Fundamental Rights and Freedoms. In accordance with this constitutional law, the question of nationality in the census form was accompanied by the following explanation: "Nationality means affiliation to a nation. It is left to everyone's own discretion to freely express their national affiliation." The nationality of children under 15 matched the nationality of their parents. If the parents claimed allegiance to different nationalities, then the child's nationality was stipulated as one of its parent's. From the beginning, the census sheet facilitated records of nationality without any restrictions. It unprecedentedly diversified the range of nationalities and results that had to be processed. For the first time, statisticians came across Moravian and Silesian nationalities. The data of nationalities, however, did not have to correspond with the records that were contained on people's identity cards or other personal documents.



The results of the 1991 census were gradually published in 1 172 titles (of which 848 were published in the Czech Republic). In addition to basic publications, a lot of data and analytical works came out that were based on the 1991 census.





According to the results of the 1991 PHC, 49.9% of the persons had their permanent domicile in the same municipality where they were born. Men slightly prevailed among such natives (52.1%). The highest proportion of natives was recorded in South-Moravian districts (up to 60%), whereas the lowest share of them was recorded in the West- and North-Bohemian frontier area (the Tachov district 31.6%).



↑Not even bad weather could stop census takers. © ČTK (photo), 2013

# **2001** PHC

The 2001 census was again an integrated population and housing census. The record date was 12:00 AM on 1 March.

This census was complicated by some new circumstances, including the relatively large number of persons and households that took the advantage of submitting census forms at their local municipal authority, or who delivered it directly to the Czech Statistical Office – there were about 250 000 of them. Another complication was the unusually high number of those who were recorded outside their permanent domicile (nearly 750 000). Because results were published by permanent domicile, it was necessary to classify such persons manually.

Other serious complications of processing and publishing the results were caused by the floods in August 2002. Luckily, no data files were lost, and the processing of census results could go on, though under rather provisional conditions.



This was the first time when an audit of duplicately registered persons was conducted using birth certificate numbers. Birth certificate numbers were used purely for this purpose, and it was not a part of any input data of a person nor was it processed together with other data.

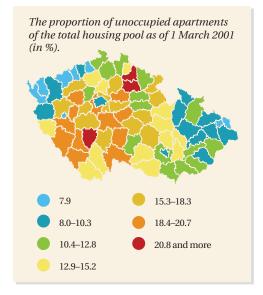




Census forms completed by inhabitants were printed in 10 different languages: English, Arabic, Chinese, French, German Polish, Romany, Russian, Ukrainian and Vietnamese.



During the 2001 PHC, optical scanning of census sheets was first used to obtain input data, and special software was developed to create printed publications. Results of the census were published both in print and electronically.





↑The basic results were presented at a press conference by President of the CZSO Mrs Iva Ritschelová and by Vice-President of the CZSO Mr Stanislav Drápal.

THE NUMBER OF INHABITANTS OF THE CZECH REPUBLIC AS OF 26 MARCH 2011:

10 436 560





↑ The campaign for the 2011 PHC did not forget about national minorities.



# **2011** PHC

The record date of the most recent population and housing census is 12:00 AM on 26 March 2011. With this census, the Czech Statistical Office first abandoned the traditional method of listings and moved to a combined method with the use of registers. The census sheets were thus pre-completed by data available at administrative sources.

95% of the census takers were employees of Česká pošta, s. p. (Czech Post, a state-owned enterprise). The Czech Statistical Office also cooperated with other institutions. In collaboration with Asociace poskytovatelů sociálních služeb (The Association of Social Service Providers) and with Sdružení azylových domů (The Association of Safe Houses) it, for the very first time, strived to also register homeless people. Legal persons that showed an interest received housing sheets via e-mail. It was also possible to complete and submit the census sheets electronically via the Internet.



Envelopes with census sheets delivered to the CZSO P. O. BOX included hundreds of documents inserted by mistake by registered persons. There were identity cards, passports, birth certificates, health insurance cards, school reports, lease contracts, marriage and death certificates and announcements, purchase and insurance contracts and even photographs of new-borns and children's drawings.



In autumn 2010, a Minicensus was held in some schools throughout the Czech Republic. Through various entertaining activities, pupils could try working with statistical data and discover how they are useful and interestina.

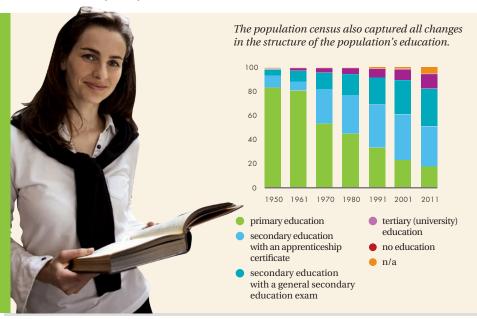
For the first time in the history of censuses, statisticians also monitored actual domiciles, i.e. the places where persons actually live. Forms reflected the development of society and all related legislative measures, and thus a new question appeared dealing with registered partnerships of persons.

This census no longer monitored household equipment. Also, the census sheet did not contain any questions on the ownership of personal vehicles, holiday homes, phones or other objects. From the point of view of household equipment, the statisticians only needed to know whether a household had the ability to use a personal computer and have an Internet connection.

Replies to the question of nationality and religious denomination were again optional. The question of religious belief was supplemented with an option for those who do not claim allegiance to any church or religious society and yet tend to consider themselves believers.



↑ All outputs of the 2011 PHC are available in electronic form (CDs) or online.



According to results of the 2011 Census there were almost 11 500 homeless people, out of which there were almost 400 persons younger than 15 years.

♦ 95% of census takers were employees of Česká pošta (Czech Post).



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The most electronic forms were received on the very first day of collection on 26 March 2011. It totalled 510 300 census forms, which approximated almost one-eighth of all electronically submitted forms.

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The results of the 2011 PHC are available online at www.scitani.cz. They are presented as statistical tables from where the data can also be exported in XLM format suitable for subsequent machine processing. The data are thus applicable in other information systems.

 → For the first time, it was also possible to complete the census forms online.





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