

The Czech 2021 Population and Housing Census

On Tuesday 11 May, the 2021 Census, the largest statistical project of the decade, finished in the Czech Republic. It was organised by the Czech Statistical Office (CZSO). Extraordinary effort of people and use of technologies, especially in the real operation phase that lasted for 46 days, from 27 March to 11 May, were devoted to it. Throughout the whole period of the Census, it was possible to fill in the census form (questionnaire) online; from 17 April, paper census forms (questionnaires) were also available.

What was highlighted this year most of all was an opportunity to get counted (enumerated) online, which turned out to be a significant advantage during the coronavirus pandemic, which was not taken into account at all, naturally, during most of the time of the project preparation. According to the opinion poll of the Kantar agency carried out this January, 71% of people were considering the online form to get counted; however, it is estimated that in the end 87% of the population filled in electronic census forms (questionnaires) and sent them. The Population Census is thus the largest IT project, in which the biggest number of inhabitants of the Czech Republic participated so far. Not only the epidemic situation but also the easy and fast way to complete the electronic census form (questionnaire) contributed to that.

In average, people spent 20 minutes and 34 seconds by filling in (completing) the electronic census form (questionnaire) for a household and thus they saved 9 minutes compared to the paper census form (questionnaire). They saved some more time because they did not have to wait for the census officer (census enumerator) or bring the paper census form (questionnaire) to the post box or to a Census contact point.

In total, 4 217 261 electronic census forms (questionnaires) and over 683 000 paper census forms (questionnaires) were submitted as at 11 May. However, only during their processing it will be made clear how many dwellings (flats), households, and persons got counted (enumerated) by them. It is because the paper census forms (questionnaires) have to be scanned, digitalised, first of all, quality of filled in data must be checked, and further data from administrative data sources must be matched with all of them, i.e. also with the electronic ones. Only then will personal data be erased from all the forms, i.e. birth certificate numbers ("*rodné číslo*" in Czech), names, surnames, and document numbers (ID card numbers). All these actions require time, i.e. weeks up to months. Only after that starts processing of statistics. Therefore results cannot be published before the turn of the year.

To log in into the electronic census form (questionnaire), 64% of users used a computer and 36% a mobile phone or a tablet. Electronic census forms (questionnaires) had been prepared in 7 language versions so that also foreigners and members of national minorities could get counted (enumerated) without problems.

Intensive preparations for this year's Census project started already in 2014 with the aim to facilitate the situation to all who are getting counted (enumerated) as much as possible. Therefore, since the very beginning, there was an effort to maximally use data stored in various registers and databases and to ask people only for those pieces of information that cannot be obtained in another way in the necessary quality.

For this year's Census, data from nine public registers were successfully obtained and the number of questions was thus reduced approximately by half compared to 2011. A form (questionnaire) to find out information about buildings (houses) was entirely eliminated.

Contrary to the original plan, when the Online Census was to be only made available for the first 14 days, however, the opportunity to get counted (enumerated) online remained open throughout the entire period of the field phase of the Census due to the pandemic situation that was unfavourable. The system was thus continually working for 46 days and except for an outage soon after the start of real operation it reliably worked up until the end of the Census. The total score thus stands at 1096 hours without a failure to the 8-hour outage.

Paper census forms (questionnaires) were distributed to households by 10 000 census officers (census enumerators) of the Czech Post and it was also possible to pick them up and submit them at some of the 800 contact points established at branches of the Czech Post all over the Czech Republic or at 13 contact points of the Czech Statistical Office.

The Czech Statistical Office also organised 5 webinars for persons with hearing impairment in order to provide sufficient assistance to those who, for example, could not call the information line; the CZSO also ensured services of an interpreter on determined days. The census form on the website was naturally tailored for persons with visual impairment, the purblind and the blind.

Web pages scitani.cz were displayed over 33.5 million times and they were visited by over 5 million users. Besides the direct entry to the electronic census form (questionnaire), "Help" was the most visited page.

THE CENSUS CONTACT CENTRE

The Census Contact Centre as well as information services of the Czech Statistical Office played an important role in the Census as people were addressing their questions there. The Census Contact Centre opened on 12 March and people could call or send their questions regarding the Census by e-mail.

The Census Contact Centre, operated by the Conectart company, was in operation for almost ten weeks, daily until late evening hours, including Saturdays, Sundays, and holidays. Over 180 operators were answering the phone calls.

The Census Contact Centre, which provided information support and help with filling in the census forms (questionnaires) to the public during the whole 2021 Census received almost 270 thousand phone calls, of which 53% were processed by an automatic machine without the necessity to be assisted by a human operator. Preparatory works on an intelligent/smart and dynamic reply system for the Census were highly intensive and lasted for over two months. For the voice automatic machine, a combination of texts read by a professional speaker and a voice synthesis were used so that it was impossible to recognise that it is not a human answering the phone. Staff of the Contact Centre also answered 22 686 questions sent by e-mail.

The staff of the Contact Centre comprised 182 operators, 4 heads of project, 8 heads of teams, 10 instructors, and 5 internal auditors of quality – and satisfaction with that staff reached 92%. It thus highly surpassed the expectations as the original threshold was set at 80%. Operators were answering various questions – e.g. regarding the obligation to get counted (enumerated), specific queries about individual questions in the census form (questionnaire) up to phone calls with lonely people or people who are not satisfied with their life that lasted for many minutes.

Further 264 845 questions were answered by a chatbot – it is a unique solution and the Czech Statistical Office was among the first ones globally to use it for the needs of the Census. People could communicate with the chatbot (in Czech only) on the website *scitani.cz* and also directly in the electronic census form (questionnaire) or in the mobile application.

Operators of the Census Contact Centre and staff of the CZSO information services were successfully solving even more complicated cases when, for example, a respondent could not tell whether he/she is also obliged to get counted (enumerated) or when he/she tried to use a type of papers (ID) not suitable for logging in. Such cases were solved case by case. It also applied to cases of expired IDs without machine readable data, which were added to the system after it had been consulted with the Ministry of the Interior. Operators also helped fill in the forms over the phone while they went through the form with the caller step by step and advised to him/her what shall be entered into which place.

People were most frequently asking the centre about how to enumerate several private households that do not have common budget but live together. Frequent were also questions about how to enumerate household members working abroad, questions about confirmation that the census form (questionnaire) has been sent or whether it is possible to correct wrong data in an already sent form (questionnaire). Many people also needed help with filling in information about commuting to work and to school during the pandemic.

Besides usual questions about how to fill in the census forms (questionnaires) properly, inquirers also asked, for example, how to enumerate prisoners abroad or inhabitants of a convent. Operators of the centre often learned a lot about lives of the callers while handling the phone calls.

It was important for many respondents to know what purpose data from the Census will serve to. Some needed to receive information as to where the nearest contact point of the Census is, i.e. where it was possible to pick up census forms (questionnaires) or to submit the completed ones.

DATA FROM THE CENSUS

The 2021 Census is organised by the CZSO and its results will influence life in the Czech Republic during the next decade. The Census not only measures the population size; it is mainly indispensable for the CZSO – for it to be able to release information every year about the population change (an increase or a decrease) and about distribution of the population. On that, for example, allocation of taxes from the budget is based every year.

Mainly municipalities are interested in that because data from the Census can significantly influence life of their population. It is because the Ministry of Finance distributes tax revenues namely according to the data from the CZSO. When inhabitants do not participate in the Census, municipalities (and therefore also their citizens) can lose a big amount of money designated for their development every year.

The CZSO is also obliged to make population forecasts every five years – in order to set the pension system or due to a pension reform, in order to plan services such as construction of kindergartens or community care homes (retirement homes). That would also be impossible without data from the Census. Moreover, it is necessary to know, for example, what type of people live in a given locality – what their education is, their profession, and how far they commute to work. From that, one can tell whether there is potential labour force in some region for a certain type of enterprises, to which people would not have to commute two hours, and therefore direct investments towards there. Besides that, commutation also shows spatial territorial relationships – it means that people may belong to some Region in terms of administration, however, in reality it is obvious that they commute to work somewhere else. Therefore, the benefit of the Census for the next decade is enormous and without it we would not have essential information about ourselves. The first results will be available at the turn of this year and the next one.