

Statistics on Income and Living Conditions (SILC) Survey in the Czech Republic: Methodology and History

Barbora Linhartová Jiříčková¹ | Czech Statistical Office, Prague, Czech Republic

Táňa Dvornáková² | Czech Statistical Office, Prague, Czech Republic

Jiří Vopravil³ | Czech Statistical Office, Prague, Czech Republic

Received 8.9.2023, Accepted (reviewed) 10.10.2023, Published 14.6.2024

Abstract

EU-SILC is a survey focused mainly on mapping income and living conditions of households. In the Czech Republic, the survey has been conducted annually since 2005 under the name “Životní podmínky” (Living Conditions). Each year, approximately 10 thousand households are surveyed – around one quarter of these households for the first time, while the rest repeatedly as part of the four-year rotating panel. As the EU-SILC has a uniform methodology for all participating countries, the results for the Czech Republic can be compared with other European countries or with the EU average. The Living Conditions survey was introduced in the context of the Czech Republic’s integration into the EU. However, similar surveys focused on households and their current living situation have been conducted regularly in the former Czechoslovakia since 1956. This article focuses primarily on methodology of SILC, but also offers a brief overview of the living conditions surveys in former Czechoslovakia and in present-day Czech Republic.

Keywords

EU-SILC, living conditions, household income, household survey, income poverty

DOI

<https://doi.org/10.54694/stat.2023.43>

JEL code

C81, D31, G50, H24

INTRODUCTION

EU-SILC is a household survey, which has been conducted in the Czech Republic annual by the Czech Statistical Office since 2005. A similar survey is launched in all 27 member countries of the European Union, as well as in Great Britain, Norway, Switzerland, Macedonia, Serbia, Turkey and Iceland.

¹ Households Survey Department, Czech Statistical Office, Prague, Na Padesátém 3268/81, 100 82 Prague 10, Czech Republic. E-mail: barbora.linhartova@czso.cz.

² Households Survey Department, Czech Statistical Office, Prague, Na Padesátém 3268/81, 100 82 Prague 10, Czech Republic. E-mail: tana.dvornakova@czso.cz.

³ Households Survey Department, Czech Statistical Office, Prague, Na Padesátém 3268/81, 100 82 Prague 10, Czech Republic. E-mail: jiri.vopravil@czso.cz.

The aim of the survey is to map the current living situation of households in the Czech Republic and to gather representative and comparable data on the income distribution of individual household types, on the type, quality and financial character of housing, on the furnishings of the households, and on the working, material and health conditions of adults living in households.

The living conditions of households and their members reflect the general socio-economic situation of the country. In addition to other important macroeconomic indicators, especially gross domestic product, the survey results form the background for assessing the economic development of the state. At the national level, the findings serve as a basis for setting the social policy of the state and analysing the impact of this policy on the living conditions of households, especially in relation to the level of exposure to income poverty. An equally important goal of the survey is to obtain data that provide useful information for the direction of state policy regarding pensions, benefits and taxation, as well as for the evaluation of the impact of individual measures. Thanks to the aforementioned uniform methodology, it is possible to compare the results of the survey for the Czech Republic with other European countries or with the EU average.

This article presents a summary of EU-SILC's methodology and some of its possible challenges. Secondly, it offers a brief overview of living conditions survey history in Czechia (and former Czechoslovakia), while discussing socio-economic context of each year EU-SILC was carried out. Finally, the article briefly discusses the challenges of conducting a household survey during a world-wide pandemic.

1 LEGAL BASIS OF THE EU-SILC SURVEY

The Czech Republic conducts annual EU-SILC (European Union – Statistics on Income and Living Conditions) surveys as a consequence of Czech membership in the European Union and in order to comply with EU legislation, namely the 1177/2003 framework Regulation and implementing regulations of the Commission. The national version of the survey (*Životní podmínky*) is carried out by the Czech Statistical Office (CZSO) in accordance with Act No. 89/1995 regarding the state statistics service and with Act No. 101/2000 on individual data protection (CZSO, 2023a).

More recently, in October 2019, a new Regulation (EU) No. 2019/1700 was adopted, together with implementing acts (Commission Implementing Regulations (EU) No. 2019/2180, No. 2019/2181 and No. 2019/2242). Starting in 2021, this new legislation brought about several changes in the EU-SILC methodology and data collection. Each national statistical institute (including CZSO) was obligated to implement changes together with other surveys under IESS (Integrated European Social Statistics). Additionally, each year a list of annual modules is announced. For instance, for the 2024 survey, in accordance with Commission Implementing Regulation (EU) No. 2022/2498, a 6-yearly module on access to services is covered, as well as a 3-yearly module on children health, access to health care (for children) and children specific deprivation, under the Commission Implementing Regulation (EU) 2019/2242 (European Commission 2023: 16–17).

2 METHODOLOGY

The fieldwork is conducted annually, usually from February to June, by specially trained interviewers. The survey is carried out in a sample design, on a random sample of about one quarter of one percent of the population living in dwellings, i. e. approximately 11 000 households. The following methodological delineation is based primarily on the methodological chapter which is contained in the annual Publication of the EU-SILC results (CZSO, 2023a).

2.1 Sampling and units of survey

The sampling unit is a dwelling. The sample is obtained by a two-stage probability sampling in each of the 14 administrative regions (NUTS3 regions) independently. In the first stage, census districts

are randomly selected from the Register of Census Districts, which are the smallest existing territorial units in the Czech Republic. In the second stage, 10 flats are randomly selected from each census district so selected, which are uniquely identified by address, number or order of the flat in the house. All regions are included in the sample so that the survey covers the entire territory of the Czech Republic. The size of the sample in each region depends on the population of the region (CZSO, 2023a).

The survey units are households, which consist of persons usually living in the selected dwelling. The survey is intended as a four-year rotating panel. This means that households partake in the survey for a total of four years. Approximately a quarter of the sample is rotated each year, with households that have completed the four-year follow-up cycle being replaced by households from newly selected dwellings. Longer-term follow-up of the selected households allows to monitor changes and developments in their living situation (CZSO, 2023a).

Private household stands for a person or a group of people who live together who also provide themselves with the essentials for living (European Commission, 2023).

2.2 Fieldwork and survey content

The survey is carried out face to face. Respondents' answers are recorded in the questionnaires right in the household. Some of the selected households are still interviewed using paper questionnaires (PAPI), the rest is interviewed using electronic ones (CAPI).

The content of the survey is divided into four questionnaires with different units of reference. The survey consists of three stable parts (dwelling, household and personal questionnaires) and a part that changes from year to year (a module). The paper questionnaires are colour coded in order to facilitate interviewers' work with PAPI questionnaires when collecting data in the field.

Questionnaire A (dwelling unit questionnaire): contains a list of all persons with usual residence in the selected dwelling, their basic demographic characteristics, information on sharing of expenses to determine household units and relationship of each person to the main user of the dwelling and to the head of household.

Questionnaire B (household questionnaire): is filled in for each household. This questionnaire contains information on housing, consumer durables, financial situation of the household, consumption of the household's own production (i.e. small scale farming and similar activities), inter-household transfers paid and received, family social benefits, rental income, paid regular taxes on wealth (buildings and land) and childcare.

Questionnaire C (personal questionnaire): is filled in by each household member aged 16 years or over as of 31 December of the previous year. This questionnaire contains information on labour status and employment, personal income (from employment, private enterprise and social security schemes), participation in private pension plans, selected biographical information and health.

Module: is a regular, but varying part of the EU-SILC survey. Most of the times, the module elaborates one of the areas of the survey and gets detailed information on material deprivation, social participation, housing conditions, over-indebtedness or financial exclusion (CZSO, 2023a). Table 1 below contains a list of module topics that were included in the previous surveys.

Table 1 A list of annual ad-hoc modules in EU-SILC survey, 2005–2024

2005	Intergenerational transmission of poverty
2006	Social participation
2007	Housing conditions
2008	Over-indebtedness and financial exclusion

2009	Material deprivation
2010	Intra-household sharing of resources
2011	Intergenerational transmission of disadvantages
2012	Housing conditions
2013	Well-being
2014	Material deprivation
2015	Social and cultural participation
2016	Access to services
2017	Health and children's health; Over-indebtedness of households
2018	Well-being
2019	Intergenerational transmission of poverty
2020	Over-indebtedness, consumption and wealth
2021	Health and access to health of the children, Children material deprivation, Living arrangements and conditions of children
2022	Health and quality of life
2023	Labour market and housing; Intergenerational transmission of disadvantages
2024	Health and access to health of the children, Children specific deprivation; Access to services

Source: Czech Statistical Office (CZSO)

Electronical questionnaires for Computer Assisted Personal Interview (CAPI) in notebooks used by interviewers for data collections in the field were developed in software environment Blaise 4.8. Compared to PAPI, CAPI has the advantage of including automatic filtering, logical checks, continuity between topics, contextual help with explanations or methodological instructions, and pre-populated longitudinal data. Since 2023, interviewers for all CZSO household surveys data collection use tablets with CAPI developed in software environment Survey Solutions. Compared to laptops, tablets are lighter, more economical and should make it easier for interviewers to work in the field. The Case Management System (CMS) for all household surveys was developed by the CZSO internal team and is connected to Survey Solutions. The planned Computer Assisted Web Interview (CAWI) for selected household surveys from 2025 is also currently being developed in the Survey Solutions environment. These developments are supported by the EU grants.

2.3 Processing of the questionnaires and collected data

Regional survey coordinators are responsible for collecting the PAPI questionnaires from interviewers and also for entering the data into electronic CAPI questionnaire. Regional coordinators then merge all the CAPI data from interviewers and send the results to the CZSO central database for further processing. All data are transmitted electronically by the regions to the headquarters. Methodologists at CZSO headquarters then perform final super-controls and central processing of the complete questionnaire data files and produce clean data files (CZSO, 2023a).

Household survey data are processed at the CZSO headquarters. Data from the field are exported to database, where microdata are stored and displayed. OUDot application, which was developed internally at the CZSO, is used for processing tables and for calculating derived variables and variables in final microdata files. The main purpose of the OUDot application is to have all definitions and structures of individual output tables, as well as definitions and calculations of derived variables in output tables in one place.

2.4 Response rate

One of the disadvantages of sample surveys is the relatively high non-response rate, which affects the results significantly. This non-response is not random, but is instead characteristic of some population groups. The Living Conditions survey shows the highest proportion of non-responding households during the wave one. The overall response rate is approximately 80% (CZSO, 2023a).

Table 2 Response rates in Czech SILC survey, 2018–2022

Year	Response rate (%)				Households in survey	Response count	Response rate (%)
	1 st wave	2 nd wave	3 rd wave	4 th wave			
2018	54.8	92.0	93.5	98.1	10 943	8 634	78.9
2019	56.2	94.5	94.6	97.4	10 892	8 707	79.9
2020	55.7	94.5	95.9	97.6	10 767	8 618	80.0
2021	57.0	95.6	95.5	98.4	10 750	8 677	80.7
2022	54.9	92.1	95.9	98.1	10 860	8 605	79.2

Source: CZSO

Participation in the sample survey is voluntary; unlike the census, households are not obliged to provide any information. A selected household must be informed about the content and purpose of the survey. Whether or not a household responds is left to its own consideration. The main reasons for refusal are privacy (objections to providing personal information and fear of misuse of personal data), fear of contact with strangers or inability to participate in the survey (due to health reasons, old age, language barrier etc.). There is a significant group of persons who refuse to give any information as a matter of principle (CZSO, 2023a).

2.4.1 How to increase response rate? Optimising household panel surveys

The proportion of successfully surveyed households varies across waves, with response rate being lowest in the first wave. In the second year, approximately 20% of households drop out of the panel and this number (non-response) decreases with each subsequent wave.

Table 3 Successfully interviewed households and non-response (2022)

	Households			Response rate (%)		
	Total	1 st wave	2 nd –4 th wave	Total	1 st wave	2 nd –4 th wave
Response, total	8 605	2 358	6 247	79.2	54.9	95.2
Non-response, total	2 257	1 940	317	20.8	45.1	4.8
Refusals (unwillingness to give out information)	1 851	1 602	249	82.0	82.6	78.5
Household contacted, temporarily absent	199	185	14	8.8	9.5	4.4
Household unable to respond (health limitation)	114	78	36	5.1	4.0	11.4
Other reasons (linguistic etc.)	93	75	18	4.1	3.9	5.7

Source: CZSO

The main task of the *interviewer* is to retain all members of the household being surveyed throughout all waves of the survey. *Household tracing* is one of the problems that the interviewer has to deal with. This can occur when a household or its panel member (the person interviewed in the wave 1) moves during the course of the survey. It is necessary for the interviewer to obtain information on the location of the household and to trace it at its new address.

Another relevant aspect in terms of increasing response rate may be the relationship between the interviewer's demographic characteristics and their response rate. For instance, are interviewers of a certain age or education more likely to successfully complete the entire questionnaire? The response rate could also be affected by who the interviewer is and who the respondent is. Should the interviewer network then correspond with population characteristics? However, there could be a completely different non-quantifiable dependency, for example, the interviewer's personality or their current frame of mind. Can the dependencies be used to obtain information on what an optimal interviewing network should look like?

A co-operative *respondent* is another important aspect of obtaining data in household surveys. For the purpose of increasing response rate, it might be beneficial to determine the ideal day or time to visit the respondent, as well as to identify the ideal number of visits to the household in a survey period.

Another issue is the question of the optimal panel length for a respondent to be willing to voluntarily remain on the panel. Shortening the panel would probably bring the sample population closer to the structure of the base population, yet it could have negative consequences, too. In order to maintain the accuracy of the resulting data, a certain sample size must be maintained (currently set by Eurostat). If the number of waves were reduced, the sample size in wave 1 would have to be increased, which would probably result in an increase in survey costs. On the other hand, lengthening the panel could result in a reduction of the wave 1 sample, but keeping households in the panel for a longer period of time could imply a deterioration of the cross-sectional data and a separation of the sample frame from the population frame.

2.5 Results accuracy

When interpreting and analysing the results of the Living Conditions survey, it is important to bear in mind that the results are based on sample survey data and only then applied to the whole population. This means that all published data are statistical estimates based on a survey sample and therefore include possible sampling and non-sampling errors.

The non-sampling error occurs in all surveys and censuses. It can occur due to many reasons, most commonly of inaccurate methodological instructions, failure of interviewers to follow them, poor wording of questions, processing errors, reluctance to participate in the survey or giving deliberately biased answers. By carefulness in all phases of data collection and processing this component of bias can be significantly reduced. However, it is difficult, if not impossible to assess its impact on the results. Assuming well-defined auxiliary variables, their distribution in the sample can be compared with the known distribution in the whole population (census) (CSZO, 2023a).

The sampling error is a consequence of processing the results of not all units of the population, but of the sample data only. From the survey results obtained, it is necessary to derive data for the whole population. It can be evaluated using sampling theory. This type of error can be reduced by selecting a sufficiently large and representative sample. Sampling error can also be affected by other factors, namely the sampling design, the occurrence of the measured variable and its natural variance.

Relatively low willingness of households to participate in the survey has been a persistent problem. In the case of repeated visits in the panel, this can result in narrowing the range of household types in the data collected and processed. This bias is then corrected by calibration techniques described below (CZSO, 2023a).

2.6 Grossing up and weighting

In comparison with data from other statistics and registers, selected characteristics of the EU-SILC sample show that there is a phenomenon typical for household surveys – high non-response rates (in a rotating panel influenced by previous response) distort the proportions in the final dataset from which the results are acquired. The distortion of demographic characteristics and social structure of the sample does not allow the use of simple techniques of grossing up (post-stratification). To achieve a sufficient level of bias elimination, which is a prerequisite for obtaining good estimates, more sophisticated methods must be used.

In practice, the iteration method of weight calibration is used to minimize the difference between the known and the grossed up values of selected characteristics. Although it is a panel survey including data of four virtually independent samples (waves 1–4), a simple calibration method is used that does not distinguish between the waves but works with all households together. At the same time, in line with Eurostat's recommendations, the survey uses a standard system of integrated weights, i.e. a single set of grossing-up coefficients, which is then used to obtain results for both households and individuals (CZSO, 2023a).

The below-listed calibration variables are used as the foundation for calculations:

- Number of inhabited dwellings in each NUTS3 region, divided into family houses (detached and semidetached houses) and apartments is based on the 2011 Census results and the increases and decreases in the number of dwellings over the period 2011–2021 and the number of dwellings recorded in the 2021 Census.
- Population characteristics:
 - Population totals in each NUTS3 region (according to demographic statistics).
 - Economic activity characteristics in each NUTS3 region.
 - Number of employees – derived from the number of employees in the economy based on the findings of Labour Force Survey (LFS) and company reports.
 - Economic activity characteristics in NUTS3 regions:
 - Number of employees – estimate based on the Labour Force Survey and on the number of employees in the National Economy,
 - Number of pensioners (excluding orphans' pensions) – based on administrative data of the Ministry of Labour, Social Affairs and the Czech Social Security Administration (CSSA), and reduced by the pensioners living out of the dwellings (based on the 2021 Census),
 - Number of unemployed – registered unemployment from the Ministry of Labour and Social Affairs, adjusted for unregistered unemployment using the LFS data,
 - Number of self-employed – estimate based on the LFS and on the administrative data from the CSSA,
 - Number of children aged 0–15 – from demographic statistics.
 - Demographic characteristics in each NUTS3 region (based on the demographic statistics):
 - Age groups (0–15, 16–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75+); Sex.
 - Municipality size (less than 2 000 inhabitants, 2 000–9 999, 10 000–49 999, 50 000 or more inhabitants) (CZSO, 2023a).

The target population of the survey are persons living in *private households*, thus the data from demographic statistics are adjusted by subtracting residents in residential institutions (from Social Security administrative data and Ministry of Justice) and persons living outside dwellings, based on the 2021 Census. Since the sampling unit is the dwelling, all weights are calculated for dwellings and then assigned to all persons and households in them (integrated weights).

The method described above successfully deals with non-response, i.e. it corrects for the bias caused by the specific composition of non-responding households. It improves demographic and social structure but also eliminates the distortions of income indicators that are related to these structures.

Another source of bias that needs to be addressed arises from the method of interviewing. Data on income and housing costs obtained in face-to-face interviews with household members tend to be underestimated or overestimated, while some sources of income or data on some components of income may be completely missing (item non-response). In order not to reduce the size of the processed dataset the missing income is imputed using correct statistical methods (CZSO, 2023a).

Underestimation of income is a natural consequence of the practice when respondents either tend to underreport or simply do not recall having certain irregular or small incomes. This is more or less a non-sampling error that is substantially influenced by the income itself and by its source. The options for eliminating this underestimation are limited. Before the survey results are processed, adjustments are made at the individual level only for those types of income for which it was possible to rely on other reliable statistical data, on tax or on other legislation.

When a respondent reports employment income as net, the net income often shows a significant bias (either under- or overestimation) and the non-sampling error increases. This can occur if the employer deducts a certain amount from the employee's wage/salary (e.g. alimonies or pension contributions). When calculating gross income, this bias is usually sufficiently compensated for by using additional information from the survey. Some respondents mistakenly report gross income as net (or vice versa) which can lead to significant year-to-year differences. In such cases, top/bottom coding is used or the data are adjusted (CZSO, 2023a).

Under the challenging conditions of the covid pandemic, the negative impact of survey errors was more pronounced than before. This became apparent when comparing the data obtained on gross earnings from employment with the corresponding data from labour statistics (annual wage growth) by sector. On this basis, appropriate adjustments were made to the data on employment incomes in several sectors.

Concerning social benefits, to which there is legal entitlement (parental leave, child birth benefit, death grant for families of the deceased, maternity leave), a check on their receipt by eligible households is applied and granted amounts are adjusted in accordance with the amounts set by the legislation.

Comparing aggregated income from this survey with the household sector aggregates of the national accounts (even after subtracting items not included in household income surveys) is problematic. In terms of its aggregated value the income obtained by direct households interviewing will always be lower. More important fact for assessing their credibility is that the trend in household income development follows the trends in the national accounts (CZSO, 2023a).

3 SURVEY OUTCOMES

The results of the Living Conditions survey are annually published in a publication (which is issued by the CZSO) and are available at the official website of the CZSO. A short brochure is also published every year, covering the main findings of the previous year's survey, which serves primarily as a feedback for the interviewed households. The findings of the survey show how the overall socio-economic situation of the country is reflected in the lives of specific types of households and appropriately complement the frequently cited macroeconomic indicators, which primarily include gross domestic product. At the national level, the results are used as a basis for setting the social policy of the state and for analysing its impact on the living conditions of Czech households, especially in relation to the level of income poverty (Pekárek and Kalmus, 2021).

The data are also used for specific analyses and for simulations of the impact of some basic government policies (tax, insurance and benefit systems). They are important not only from a macroeconomic point of view, but especially at the micro level of individual households or persons who depend on social transfers (old-age pensioners, families with children, low-income households).

Among the most important end-users of the survey outputs are (apart from Eurostat, to which the CZSO supplies data on a mandatory basis) the Ministry of Labour and Social Affairs, the Ministry of Regional Development and the Czech National Bank. The data are also widely used by academic institutions engaged in socio-economic or sociological research. These include, for example, the Research Institute of Labour and Social Affairs, CERGE-EI, the Institute of Sociology of the Czech Academy of Sciences, as well as colleges and universities, both Czech and foreign (Pekárek and Kalmus, 2021).

4 LIVING CONDITIONS SURVEYS IN THE CZECH REPUBLIC – A BRIEF OVERVIEW

In 2005, the Czech Republic joined the EU-SILC survey, which is conducted annually as a national module under the title Living Conditions. However, regular surveys aimed at determining the current living situation of households have been carried out in the Czech Republic since 1956. Some elements of the socio-demographic composition of the population have historically been covered by the Census, but this is usually carried out once every ten years, which is too long for certain data. Therefore, in the Czechoslovakia of that time, sample surveys were organised in the periods between censuses under the name of Mikrocensus, which were additionally aimed at determining the income differentiation of households (Pekárek and Kalmus, 2021).

4.1 Microcensus

The Microcensus was a regular sample survey that was carried out over a time-varying period of 2 to 6 years, on a total of 14 occasions. The first one took place in 1956 with a sample of about 32 thousands households, the last one in spring 2003 with the participation of about 11 500 households. The purpose of the survey was to provide representative data on socio-economic structure, household income levels and their differentiation in order to monitor the social impact of the country's economic situation (Pekárek and Kalmus, 2021).

The survey made it possible to obtain demographic and social characteristics of households and individuals, data on cash and in-kind income, and possibly other supplementary information (furnishings, housing costs, etc.). Similarly to EU-SILC later, these data were collected through direct personal contact with households. For instance, 70 499 dwellings were included in Microcensus of 1988 (which took place in 1989), of which 67 552 dwellings were successfully surveyed, with the response rate reaching 95.8%.

Until the early 1990s, micro-census data were processed centrally in the Federal Statistical Office on large mainframe computers and only later on personal computers allowing interactive work. When the database of individual data for the household survey was created at the turn of 1992 and 1993 after the establishment of the independent CZSO, the micro-census data became an integral part of it. The earliest data available are for year 1988, for which it was possible to retrospectively obtain detailed data for individual households and some selected persons, as well as to convert them into a usable form (CZSO, 2004).

In the context of the integration of the CZSO into the European statistical system, as well as the overall integration of the Czech Republic into the EU, the classic income micro-census survey was to some extent replaced by a broader survey, the EU-SILC, specifically focused on other important aspects of household living conditions in addition to income.

4.2 Annual Životní Podmínky (EU-SILC) survey and its nation-state context

Although the EU-SILC is an integrated survey with uniform methodology for all of the participating states, it is important to take into account specific social and economic context at the national level. Table 4 below offers an in-depth overview of the most profound changes in the area of Czech social policy, social security or other socio-economic factors that might have contributed to the results of the survey in each year.

Table 4 Timeline of EU-SILC surveys in the Czech Republic and their socio-economic context

2003 – The last Czech Microcensus.

2004 – SILC pilot testing.

2005 – First year of the SILC survey in the Czech republic. When compared with data from Microcensus 2002, the average household income per capita has increased in all social groups, except for unemployed households. Self-employed households had the highest per capita income. At the same time, income differentiation has further deepened (CZSO, 2006).

2006 – Economic development, decrease in unemployment rates and rise in wages have been positively reflected in the *growth of total household income*. The highest per capita income was earned by households of employees with higher education. Although household incomes were rising, around 9% of households reported that they *were struggling to make ends meet*. The trend in recent years – the preference for owning one's own home – is reflected in the structure of dwellings by legal reason for occupancy. While in 1999 almost 32% of households lived in rented flats, in 2006 only 23% did so. In relation to the privatisation of municipal flats and the transfer of cooperative flats to private ownership, the *share of privately owned flats has increased* (CZSO, 2007).

2007 – Income growth has been faster than in the previous year and was mainly supported by a *favourable economic development* and a continuing *decrease in unemployment* rates. The increase in social income was mainly driven by pensions, which grew at a higher rate than state social assistance benefits. Of these benefits, *parental allowance grew most dynamically*, mainly as a result of higher fertility rates in recent years. The previous trend of a deepening differentiation of households' net cash income has stopped, which was partly a result of the changes in the taxation of personal income (CZSO, 2008).

2008 – The economy was developing favourably, with *unemployment continuing to fall* and average *nominal wages rising at their fastest pace* since 2003. New legislation on subsistence wage and living wage came into force, together with the law on assistance in material distress and the law on social services. Benefits for parental allowance have increased significantly under the State Social Assistance Act. All of this has had an impact on household incomes and to some extent has also affected longer-term trends. The average amount of state social support *benefits increased by 37,2%*, following a more than doubling of the parental allowance, while pensions, after *valorisation* of both the fixed and percentage parts, have increased, too. At the same time, however, following the change in the subsistence wage level, a smaller group of households has reached the child benefit. Similarly to previous year, the income differentiation did not intensify, due to a whole complex of influences - changes in the taxation of personal income (lower rate of taxation of income up to 18 200 CZK), the possibility of earning extra income for unemployed persons, the possibility of unlimited earnings for persons receiving parental allowance and persons with partial disability pension, and finally, the more than doubling of parental allowance. *Qualitative aspects of housing* were improving, the share of households in dwellings with a larger number of living rooms (and therefore a larger living area) has grown (CZSO, 2009).

2009 – During this period (2008 and spring 2009), the emerging *global financial crisis* gradually began to manifest itself. The worsening of the economic situation was signalled by a *decline in GDP growth* and household final consumption, as well as a *rise in inflation*, which reached its highest rate in a decade. On the labour market, the positive development of previous years – a decrease in unemployment – was persisting, but this stopped at the end of the year and the number of job vacancies began to fall. Average gross monthly wages continued to rise, but, given inflation, *real wage growth was the lowest* in the last 8 years. The Czech Republic underwent a *public finance reform*, resulting mainly in changes in the tax system. The biggest impact was the introduction of a uniform 15% tax rate applied to the so-called super gross wage (superhrubá mzda) and related adjustments – an increase in *tax rebates* and the introduction of a ceiling for social and health insurance. Low-income households, especially those with dependent children, benefited most from the increase in tax rebates. In some cases, these households had a higher net income than gross income. Working pensioners also benefited, as they could now deduct the taxpayer rebate from their tax base. The *significant increase in tax rebates thus compensated* to some extent for the effects of the reform in the area of social spending, the increase in the lower VAT rate and the environmental tax. The conditions for the payment of certain social benefits have been tightened. The most affected were child allowances and funeral allowances, where the changes resulted in a narrowing of the circle of beneficiaries, and childbirth allowances, with the introduction of a single amount of benefit for each child. *Social income was higher* in volume than in the previous year, but to a large extent due to pensions rising after the valorisation in 2008. State social assistance benefits decreased by around 17% year-on-year, with changes in child benefits being particularly significant. The reduction in the household's subsistence minimum for eligibility and the introduction of benefits according to the age of the child significantly reduced the number of recipients and the volume of paid benefits (CZSO, 2010).

2010 – The year 2009 was marked by the *impact of the global financial crisis*, which was somewhat delayed in the Czech Republic. Although the worsening of the economic situation was already visible in the development of macroeconomic indicators in 2008, it was only in 2009 that it took on *more significant dimensions*. It particularly affected the *self-employed households* and gradually affected other household groups, too. The development had a significant impact on the labour market, mainly leading to significant *increase in unemployment rate*. There was a growth in the volume of social income, which was mainly due to an increase in unemployment benefits, which roughly doubled compared to 2008, also housing allowances, which increased by about half, and an increase in pensions due to their valorisation. The share of income from employment or business has decreased slightly. The self-employed had worse sales rate for their products or services compared to previous years, thus reducing their average earnings, while in the employment sector, people with lower incomes were laid off, which increased average earnings. There has been a reversal in the long-standing trend of reducing the level of *vulnerability to income poverty*. A total of 936.4 thousand persons were at risk of income poverty, i.e. 50 thousand more than a year ago (CZSO, 2011).

Table 4

(continuation)

2011 – *The impact of the economic crisis on the situation of households was even more prominent.* Most of the households were more likely to be unable to afford the surveyed expenses and to perceive housing costs as a greater burden for their budget. Household incomes increased only slightly on average, while the share of those whose incomes decreased has grown. The annual amount of *child allowance* was increased, resulting in more households receiving a tax bonus, which was on average higher than in the previous year. The only dynamic increase was in the *housing allowance*, for which the Ministry of Labour and Social Affairs budget spent half as much as in 2009. Significant changes occurred in the area of *rental housing*: rent levels were deregulated in all municipalities except Prague, regional cities (except Ostrava and Ústí nad Labem) and cities in the Central Bohemian Region with more than 10 000 inhabitants. This measure resulted in a swap between the share of households paying market rent and the share of households paying regulated rent (CZSO, 2012).

2012 – There have been changes in the social and tax systems that have affected the income distribution of households and, as a consequence, the evolution of the income poverty rate. First of all, *pensions were valorised* – these increases have moved pensioner households closer to the median in the income distribution, and the overall level of exposure to income poverty has fallen slightly. The second change was the application of the so-called “*flood tax*” (povodňová daň) in the form of a reduction in the tax credit per taxpayer, which increased the tax burden on wage earners. The so-called *middle class* was affected by this change the most, because it resulted in an increase in the proportion of people below the poverty line. Incomes rose for all groups except for *self-employed households*. Their situation was negatively affected by the *worse economic situation* in the country, coupled with overall lower sales of goods and services. During this economically unfavourable period, some of the previously unemployed started new businesses and their income was initially limited. The amount of additional social allowances paid has been significantly reduced. The additional social allowance (sociální příspěvek) is a benefit that was limited to families with disabled children during 2011 and was abolished completely as of 31 December 2011. The proportion of households perceiving housing costs as a major burden has increased. The generally more difficult financial situation is also reflected in *households' greater concern about going further into debt* – fewer households than in the previous year had any loan. More households could not afford to pay for an unexpected expense or at least a week's holiday for all household members (CZSO, 2013).

2013 – Although nominal household incomes rose slightly in 2012, they experienced a slight decline in real terms the following year. In the context of changes in the tax system, which have favourably affected workers' incomes, *income differentiation has fallen*, resulting in a reduction in the vulnerability to income poverty. This was primarily due to the *abolition of the 'flood tax'*. At the same time, tax benefits for dependent children have increased. As a consequence, the *tax burden on working people has been reduced*. The income of self-employed households rose year-on-year for the first time since 2008. In the context of the increase in tax credits, incomes also rose for household groups most at risk of poverty, which, combined with the reduction in income differentiation, meant that the *number of people at risk of poverty fell* both in these household groups and in the population as a whole. While the poverty rate declined, the share of households with incomes below the subsistence level increased slightly compared to the previous year. This increase is mainly related to an increase in the subsistence levels (CZSO, 2014).

2014 – Nominal household incomes had risen, and for the first time since 2009 real incomes had also increased year-on-year, bringing their real value to the 2008 level. The *improvement in households' financial situation* was also reflected in the declining share of households that could not afford to pay for holidays for all household members, eat meat at least every other day, heat their home sufficiently or pay for unexpected expenses due to financial reasons (CZSO, 2015).

2015 – In terms of head of household status, *incomes increased for all household groups*, the slowest growth of the average net annual income being in the households of the self-employed. The improvement in the financial situation of households was also reflected in the way they managed their incomes. While 31.2% of households were struggling or finding it very difficult to make ends meet in 2014, only 27.3% of households were doing so in 2015 (CZSO, 2016).

2016 – The *highest increase in income was among self-employed* households, with an average increase of 13 thousand CZK per person (7.8%) to 185.8 thousand CZK, which is the result of minimal growth in the previous year. The overall level of material deprivation decreased compared to the previous year (CZSO, 2017).

2017 – There were no significant legislative changes in the area of social security and social benefits compared to the previous year. There was newly only a *slight advantage for families with more children* in the form of a tax credit for the second and additional child in the household, which may have slightly improved the income situation of households with children, but in general these did not have a major impact on the overall income level of the Czech households. The overall level of material deprivation decreased compared to the previous year and thus continued to maintain a downward trend (CZSO, 2018).

2018 – Self-employed households had the absolute highest average annual income. The income of households of *non-working pensioners* increased to 156.1 thousand CZK per person and thus *grew again* at a slightly higher rate than in the previous year. The *minimum wage increased* and *pensions rose*. Mainly households of the unemployed and pensioners were significantly more likely than in the previous year to say that they were managing their income easily or very easily. Practically one tenth of Czech households (440 thousand) spent more than 40% of their disposable income on housing and energy (CZSO, 2019).

2019 – *Tax benefits for children were increased* and the possibility of *faster drawing of parental allowance* was introduced. This edition of the Publication captured a *new indicator "Level of material and social deprivation"*. In addition to some of the original material deprivation items, it expands the range of items to include objects for personal use (2 pairs of shoes, new clothes), contact with friends or relatives, paid leisure activities, spending a certain amount of money for personal use or internet access. There are 13 items in total and a person is considered materially and socially deprived if they cannot afford 5 or more items for financial reasons. In 2019, this indicator reached 5.3%, which is 0.7% lower than in 2018 (CZSO, 2020).

Table 4

(continuation)

2020 – The year 2020 was exceptional due to the *pandemic situation*. The country's state of emergency and the limited possibility of personal contacts *complicated the fieldwork*. Average household net cash income increased year-on-year. There was a larger *increase in pensions* than has been usual in recent years. The basic rate was increased from 9% of the average wage in the country to 10%, i.e. the percentage of pensions increased by 3.4%. *People over 85 years of age started to receive an extra 1 000 CZK* on top of their pension. The statutory minimum wage increased, as well as the care allowance for persons in stages III and IV of dependency on the assistance of another person (CZSO, 2021).

2021 – An unfavourable epidemic situation persisted in the Czech Republic. Quarantines and limited possibility of personal contacts continued to complicate the conduct of the survey in households. Since January, there has been a further *increase in pensions* (boosted by a one-off benefit, the so-called "rouškovné", of 5 thousand CZK), the minimum wage and all levels of the guaranteed wage. After 12 years, the *total amount of parental allowance has increased* from the original 220 000 CZK to 300 000 CZK. People in financial need due to the coronavirus could apply for a *one-off emergency assistance benefit* (MOP COVID-19). The Government has offered a number of programmes to support sectors of the economy, entrepreneurs, tradesmen and employees affected by the pandemic. The at-risk-of-poverty indicator has fallen below 9% after 8 years (CZSO, 2022).

2022 – Net cash income grew fastest for the households of employees, mainly due to lower taxation of their labour income as a result of the *abolition of the super-gross wage* (superhrubá mzda). All pensions in payment were *valorised* (the basic rate increased by 60 CZK and the percentage rate by 7,1%) and, for the first time in history, based on, among other things, consumer price indexes for pensioner households. The *basic rates of child benefits were increased*, making families with income up to 3.4 times the Living Wage now eligible for this benefit. However, the objective increase in households' income did not correspond to how households perceived their income subjectively. The proportion of income that households spent on housing has been declining over recent years, with household incomes rising faster on average than housing costs, but this trend did not continue in 2022. *As housing costs have risen*, so has worsened the perception of these costs as a burden on family budgets. The indicator of the *level of exposure to income poverty increased*, reaching the highest level since the beginning of monitoring this indicator in the Czech Republic. The exposure to income poverty affected 1 046.4 thousand people in the Czech Republic, which is approximately 100 thousand more than in the previous year (CZSO, 2023a).

Source: Authors

5 LIVING CONDITIONS SURVEY IN HOUSEHOLDS DURING THE COVID-19 PANDEMIC

Obtaining sufficient quality information on the living conditions of Czech households is essential in all circumstances. The EU-SILC survey was therefore not stopped even when the epidemic situation first occurred in the country. The situation in the Czech Republic in the spring of 2020 was anything but conducive to social contacts between people and visits to households. However, face-to-face contact is the basis for the survey. Despite the unfavourable epidemic circumstances, in a period of a state of emergency and strict government restrictions, the survey has been managed very well during the pandemic years.

During the first pandemic year (2020), the rate of the number of surveyed households did not decrease compared to previous years. There was a slight deterioration in the newly selected households in the first wave (a decrease of 0.9 percentage points compared to the previous year). For repeat visits, the examination rate has further increased. All of this has taken place at the cost of only slight concessions to the usual situation. The main organisational measure was to postpone the fieldwork until the end of July. Even with this time handicap for data processing, it was possible to meet Eurostat's requirements to have preliminary results available as usual by the end of the calendar year (Pekárek, 2021).

The main principle of the SILC survey remains the face-to-face meeting. It cannot be changed if a unique set of information and data unbiased by any form of mediation is to be maintained. However, all those involved in the survey are aware that this is not easy, especially in the pandemic times. Surveying conditions directly in households can place a burden on both interviewers and respondents. Even though the immediate contact is irreplaceable, in some cases (but with exceptions only for repeat visits) telephone contact was used instead of face-to-face contact.

Prior to the 2020 survey, a methodological training of new interviewers was held every year. This time it was conducted remotely by means of an audio presentation, which was then made available to the individual regions. The situation surrounding the pandemic, coupled with the long-term ban on free movement of people, did not allow for personal visits until Easter. The interviewers tried

to contact the selected households at least remotely to arrange the specific form of the survey. Most interviews were conducted by telephone. In the case of personal delivery of questionnaires or other printed materials, interviewers strictly respected all security guidelines. In accordance with all hygiene measures, interviewers were only allowed to return to the field after the end of the state of emergency, i.e. from 12 April 2021, to recruit contacts and arrange the survey modalities (Pekárek, 2021).

In 2022, the survey realisation has been significantly complicated not only by another strong wave of the covid-19 pandemic, but also by the beginning of the war in Ukraine and the emerging energy crisis in the country. Despite these complications and the limited possibility of personal contacts, CZSO interviewers managed to obtain representative data (CZSO, 2023b).

CONCLUSION

EU-SILC survey and its Czech national version Životní podmínky is a sample design survey, aimed at mapping income and living conditions of households. The article discussed the main methodological principles of the survey, as well as the legal basis for its execution, which is partly based on the IESS and European Commission regulations. Secondly, the article focused on the contemporary history of household living conditions and income surveys that have been conducted regularly before the introduction of EU-SILC in the Czech Republic.

The results of the EU-SILC survey can serve as a basis for social policy in nation states, but can be also used for comparison between countries involved in the survey. The household surveys micro-data that are obtained through direct contact of interviewers with the members of households can complement other macro-economic data on income and other spheres. What is more, the findings contribute to the determination of the material and social deprivation rates, as well as the income differentiation. They can also help identify which types of households are at risk of income poverty and set more optimal social policy measures.

References

- CZSO. (2004). *Mikrocensus – příjmy hospodářických domácností – 2002* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/mikrocensus-2002-prijmy-hospodaricich-domacnosti-n-my0dvpub3l>>.
- CZSO. (2006). *Income and living conditions of households in CR – 2005* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/income-and-living-conditions-of-households-in-cr-year-2006-irmm9fm8xq>>.
- CZSO. (2007). *Income and living conditions of households in CR – 2006* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/-2005-lhms1lmm6o>>.
- CZSO. (2008). *Household Income and Living Conditions in the Czech Republic – 2007* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-in-the-czech-republic-2007-f73vbtlnf6>>.
- CZSO. (2009). *Household Income and Living Conditions – 2008* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2008-k9j6mtcimn>>.
- CZSO. (2010). *Household Income and Living Conditions – 2009* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2009-poavr2foen>>.
- CZSO. (2011). *Household Income and Living Conditions – 2010* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2010-9q2aq0crd>>.
- CZSO. (2012). *Household Income and Living Conditions – 2011* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2011-lrxacwecz>>.
- CZSO. (2013). *Household Income and Living Conditions – 2012* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2012-7t6tr9jse>>.
- CZSO. (2014). *Household Income and Living Conditions – 2013* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2013-ia0fwqxyxa>>.
- CZSO. (2015). *Household Income and Living Conditions – 2014* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2014>>.

- CZSO. (2016). *Household Income and Living Conditions – 2015* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions>>.
- CZSO. (2017). *Household Income and Living Conditions – 2016* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2016>>.
- CZSO. (2018). *Household Income and Living Conditions – 2017* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-8up5xmeg71>>.
- CZSO. (2019). *Household Income and Living Conditions – 2018* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-wqg6poffyz>>.
- CZSO. (2020). *Household Income and Living Conditions – 2019* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-2019>>.
- CZSO. (2021). *Household Income and Living Conditions – 2020* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-i1978f6132>>.
- CZSO. (2022). *Household Income and Living Conditions – 2021* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-6yp06pfzwa>>.
- CZSO. (2023a). *Household Income and Living Conditions – 2022* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/household-income-and-living-conditions-5qh0ztby3b>>.
- CZSO. (2023b). *Životní podmínky 2022* [online]. Prague: Czech Statistical Office. [cit. 7.9.2023]. <<https://www.czso.cz/csu/czso/rust-prijmu-domacnosti-po-zpomaleni-v-roce-2020-opet-nabral-na-rychlosti>>.
- EUROPEAN COMMISSION. (2023). *Methodological Guidelines and Description of EU-SILC Target Variables. 2024 operation (Version 2)* [online]. European Commission, Eurostat. [cit. 7.9.2023]. <<https://circabc.europa.eu/ui/group/853b48e6-a00f-4d22-87db-c40bafd0161d/library/eddcefd4-f481-4c1d-aea5-663d6e799a8b/details>>.
- PEKÁREK, J. (2021). Šetření v domácnostech za časů pandemie. *Statistika&My*, 6: 28–29.
- PEKÁREK, J., KALMUS, J. (2021). Příjmová šetření v domácnostech provádí ČSÚ již 65 let. *Statistika&My*, 6: 22–23.