

## European Union – Statistics on Income and Living Conditions (EU-SILC)

European Union – Statistics on Income and Living Conditions (EU-SILC) is a household survey that was launched in 2003 on the basis of a gentlemen's agreement between Eurostat and 6 Member States (Austria, Belgium, Denmark, Greece, Ireland, Luxembourg) and Norway. It was formally launched in 2004 in 15 countries and expanded in 2005 to cover all of the EU-25 Member States (incl. the Czech Republic), together with Norway and Iceland. Bulgaria launched the EU-SILC in 2006 while Romania, Switzerland and Turkey introduced the survey in 2007. It has been conducted in Croatia from 2010 as well. Methodology in all countries where the survey is conducted is harmonised and therefore the international comparison of social and living conditions of households is possible to make.

The EU-SILC is an instrument aiming at collecting timely and comparable both cross-sectional and longitudinal data on income, economic activity, poverty, material deprivation, social exclusion and living conditions. Nationally, the data from the survey could serve as a basis for social and family policy – both for its creating and checking its consequences in society.

### Sampling, sampling units

The sampling unit is a dwelling. In the first wave all households and all the persons who have the dwelling as their usual place of residence are surveyed. During the waves 2–4 only those households that include a panel person (the one surveyed in the first wave) are surveyed.

The sample is obtained by applying a two-stage probability sampling scheme on each of the 14 administrative regions (NUTS3 regions) independently. The total number of dwellings selected in each region is proportional to the region's size. At the first sampling stage small geographical areas (CEUs – census enumeration units) are selected by probability sampling. These CEUs serve as a basis for the second-stage selection (a sample of 10 dwellings is drawn from each CEU).

In the survey a four-year rotational panel has been implemented, which means that the households are interviewed for four consecutive years. Every year approximately one fourth of the sample is newly introduced by replacing the households which were surveyed four times by new ones. To keep the sample size more or less the same, the number of new households is chosen to reflect the number of successfully interviewed households in the previous year.

*The household definition is based on a declaration of the persons in a sampled dwelling that they live together and pool their income to cover expenditures catering for their needs.*

### Fieldwork

The survey is conducted face to face. Respondents' answers are entered into the questionnaires right in the household. A part of the selected households is still interviewed using paper questionnaires (PAPI), while the rest is interviewed using an 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 alters from year to year (module):

**Questionnaire A (dwelling 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; 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; 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.

A regular, but varying part of the EU-SILC is called the module. Most of the times, the module elaborates one of the areas of the EU-SILC and gets detailed information on material deprivation, social participation, housing conditions, over-indebtedness or financial exclusion.

**Table 1 A list of annual ad-hoc modules in EU-SILC, 2005–2016**

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

### Grossing up and weighting

When compared with data from other statistics and registers, selected characteristics of the EU-SILC sample show that a phenomenon typical of household surveys occurs – high level of non-response (in a rotational panel influenced by a prior response) biases the proportions in the final data file from which results are obtained. The deformation of demographic characteristics and social structure of the sample does not allow using of simple techniques of grossing up (post-stratification). To reach sufficient level of bias elimination, which is the necessary pre-condition for obtaining good estimates, it is necessary to use more sophisticated methods.

In practice, the iteration method of weight calibration is utilized, which minimizes the difference between the known and the grossed up values of selected characteristics. Although it is a panel survey comprising data of four practically independent samples (waves 1–4), a simple calibration method is utilized which does not distinguish the waves but works with all households together.

At the same time and according to the Eurostat's recommendations the standard system of integrated weights is used in the survey, i.e. a single set of grossing-up coefficients that is subsequently used to produce results for both households and individuals.

The target population of the survey are persons living in private households, therefore the data from demographic statistics are adjusted by subtracting institutionalized population (from social security administrative data and Ministry of Justice) and the persons living outside dwellings as based on the 2011 Census.

As the sampling unit is the dwelling, all weight coefficients are calculated for dwellings and subsequently assigned to all persons and households in them (integrated weights).

## Protection of individual data

At all stages of data processing and analyzing the anonymity of collected data is guaranteed. Any information that could lead to unequivocal identification of individuals or households is excluded. The data obtained are strictly protected in accordance with Act no. 89/1995 concerning the state statistics service and Act no. 101/2000 on individual data protection. All employees of the Czech Statistical Office working on the survey or processing the data are bounded by secrecy and cannot disclose any of the facts investigated in accordance with § 16 of Act no. 89/1995.

## Publications

Exhaustive results of the EU-SILC survey are contained in a publication issued by the Czech Statistical Office under the rubric PEOPLE AND SOCIETY, subgroup Living conditions, Household Income and Expenditure. The publication entitled Household Income and Living Conditions is published annually and contains both methodological notes and tables on households and individuals, broken down by social group, income, number of children and working members, economic activity, region and other indicators. The publication is available at: <https://www.czso.cz/csu/czso/household-income-and-living-conditions-2014>

## Process and aims of survey

Big disadvantage of sample surveys in general is non-response, which influences results significantly. Non-response is not random, it is characteristic for specific population groups. The highest non-response rate can be seen in the first wave in the EU-SILC. Total response rate is around 85 % in this survey.

**Table 2 Response rate in EU-SILC, 2011–2014**

Year	Response rate (%)				Households in the survey	Response	Response rate (%)
	1. wave	2. wave	3. wave	4. wave			
2011	65,1 %	95,0 %	96,5 %	98,7 %	10 401	8 866	85,2%
2012	60,5 %	94,5 %	96,1 %	98,4 %	10 329	8 773	84,9%
2013	61,1 %	94,4 %	96,5 %	98,2 %	9 784	8 275	84,6%
2014	62,2 %	96,0 %	96,9 %	96,9 %	9 592	8 053	84,0%

The aim of the survey is to collect representative data on social and economic situation of the households in all participating countries. Complex evaluation of the situation of the Czech households, their level of poverty as well as the comparison with the situation in other countries would not be possible without data on income.

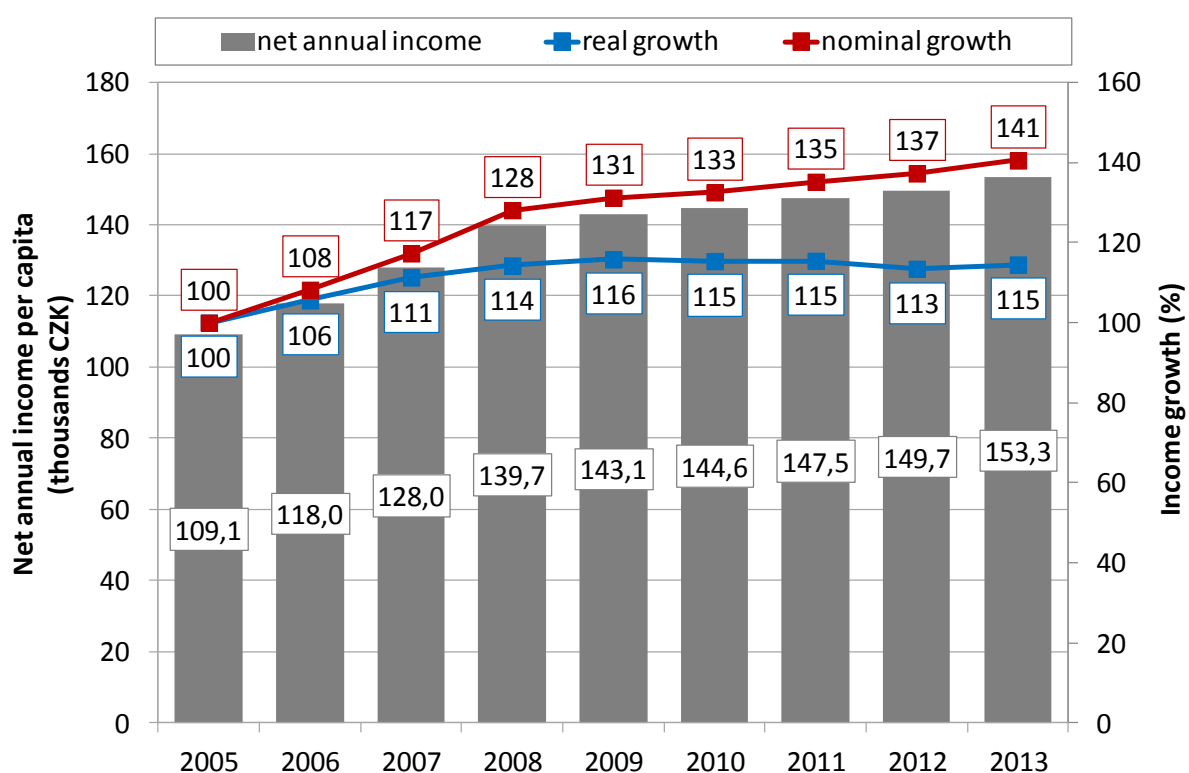
## Results

Results of the EU-SILC 2014 characterize the living conditions of households at the time of interview, namely in the spring of that year. The reference year for income is the previous year, in the case of EU-SILC 2014 it was the year 2013. The average net household income per capita was 12 775 CZK/month in 2013, while median income reached the value of 12 083 CZK/month. Both nominal and real income, which reflects the development of social situation of households better than the nominal one, because it is adjusted for the price development, increased in comparison to 2012.

Household income increased in households of employees, the highest growth was recorded in households of self-employed, and the lowest rise was in households of retired people without economically active household members.

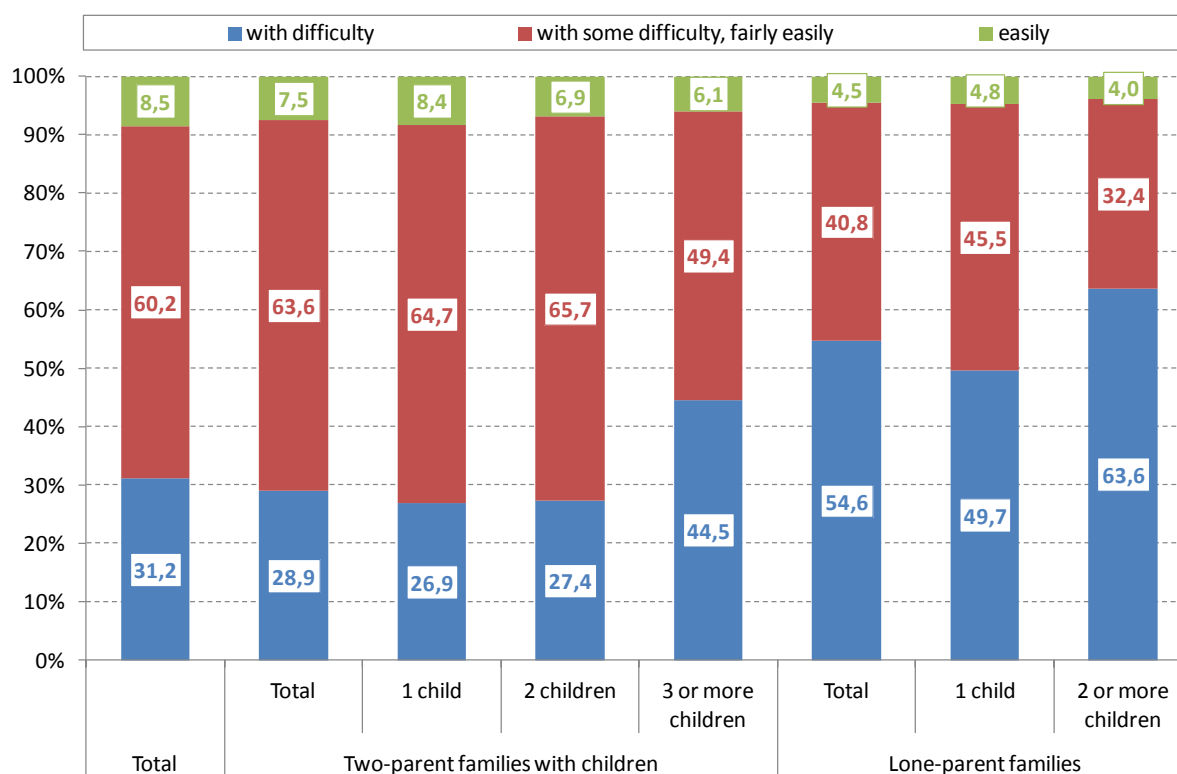
Figure 1 shows the nominal and real development of net annual household income per capita since 2005. The average net income per capita was 153.3 thousand CZK per year in 2013.

**Figure 1 Development of net yearly income per capita and income growth, CR, 2005–2013**



The level of income in the EU-SILC is not evaluated only by looking at its actual height, but also subjectively by asking respondents on their ability to make ends meet. The question asked during the interview is following: *Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?* There are several answers respondent can choose from: *with great difficulty* – *with difficulty* – *with some difficulty* – *fairly easily* – *easily* – *very easily*. Answer categories are joined into broader ones so that each broader category contains two original categories. Figure 2 illustrates how Czech households perceived their income situation in 2014. The figure focuses on families with children by number of children and families completeness.

**Figure 2 Ability to make ends meet, CR, 2014**

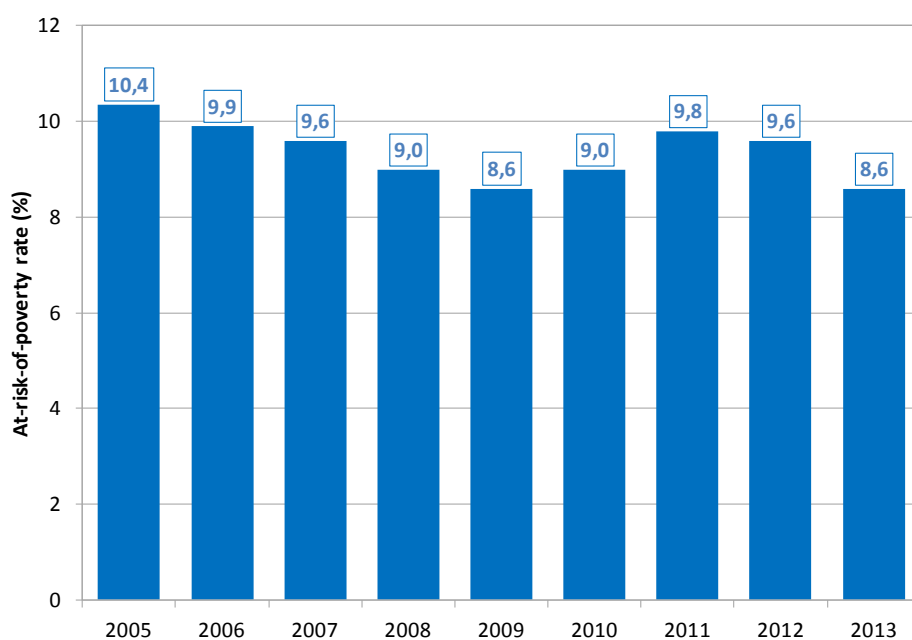


More than half of lone-parent families were able to make ends meet with difficulty, especially families with two or more children. The graph shows that almost half of two-parent families with three or more children makes ends meet with difficulty. As a two-parent family with children is considered a couple with dependent child/children or other household members (e.g. grandparents, siblings of parents, or children who are not dependent). Dependent child is defined as person 26 years or younger who is currently studying. Lone-parent family is mother or father with dependent child/children, eventually with other household members.

Level of income and its distribution is important indicator of social and economic situation in society. One of the main indicators resulting from the EU-SILC is at-risk-of-poverty rate based on income and its distribution. The computation of at-risk-of-poverty rate follows Eurostat's methodology. It is a share of people living in households whose income is below poverty threshold. In the long term this indicator in the Czech Republic is in the range of 9–10 %, in 2014 reached the value 9.7 %. The development of at-risk-of-poverty rate in the Czech Republic since 2005 is evident in Figure 3.

At-risk-of-poverty rate in the Czech Republic belongs to the lowest rates in the European Union. The average value of this indicator fluctuates in the EU between 16 % and 17%. International comparison of at-risk-of-poverty rate depends more on income distribution than on its level. This indicator does not say much about actual social and economic situation of households or real well-being of people. At-risk-of-poverty rate in the Czech Republic is very low when comparing to the other European countries. However, there are many Czech households having lower income than average European income.

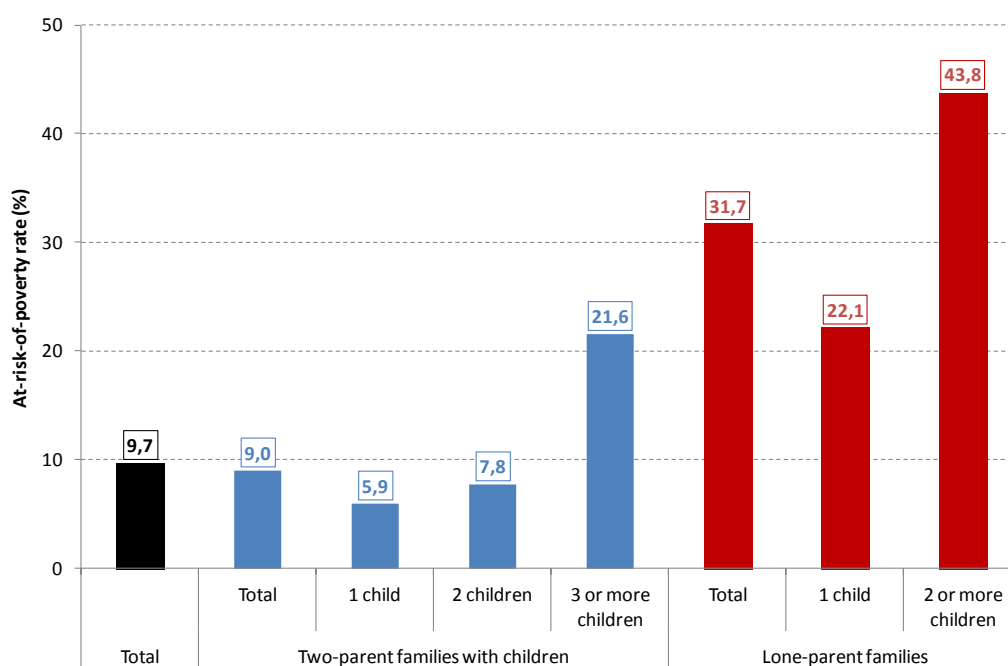
**Figure 3 Development of at-risk-of-poverty rate, CR, 2005–2014**



At-risk-of-poverty rate highly depends on the social status of the person in society. Unemployed are those who are at risk of poverty the most in the long term. At-risk-of-poverty rate of unemployed people was 47.8 % in 2014. At-risk-of-poverty rates vary greatly with age. Almost 15 % of persons under 18 years was at risk of income poverty in 2014. Every tenth person at the age of 18 to 24 years is at risk of income poverty and the share of people at the age of 25 years or older at risk of income poverty was lower than the average for the entire population of the Czech Republic.

The value of the at-risk-of-poverty rate depends also on the type of household in which the individual lives. Chart 4 shows higher rate in two-parent families with 3 or more children. The risk of poverty is three times higher in lone-parent families with children in comparison with the average population.

**Figure 4 At-risk-of-poverty rates by type of families with children, CR, 2014**

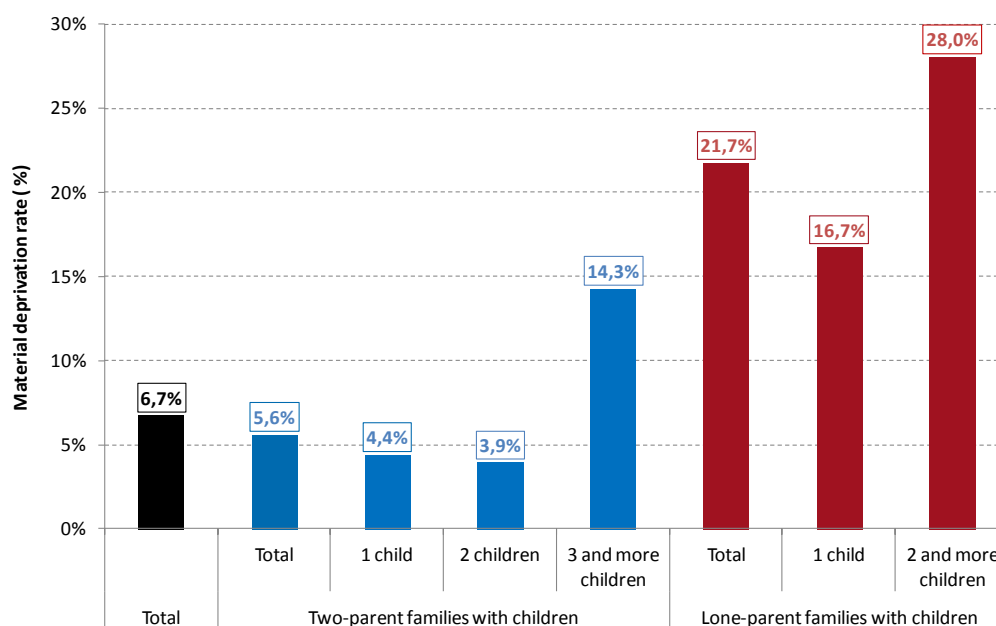


Another important indicator resulting from the EU-SILC measuring social situation of households is material deprivation rate. There are 9 items their presence in the household is monitored to obtain this indicator. The questions on having 1) a washing machine, 2) a colour TV, 3) a telephone, 4) a car and on capacity 5) to face unexpected financial expenses (9 600 CZK in 2014), 6) to afford to pay for one week annual holiday away from home, 7) to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day and 8) ability to keep home adequately warm are asked and furthermore, 9) the problems with paying housing costs (e.g. rent, utility bills, mortgage repayments) are investigated. Persons that are considered to be severely materially deprived live in households that from financial reasons lack at least four from nine above listed items.

The material deprivation rate was 6.7 % in the Czech Republic in 2014, while the average value in the EU varied around 9 % and 10 %. The average number of missing items (intensity of deprivation) was 4.5. Materially deprived people lacked just four of the nine items in 63 % of cases. Almost all materially deprived persons were unable to pay unexpected expenses, and a week's holiday to all members of the household. They often cannot afford to eat meat every second day and getting a car. Conversely, possession of television, washing machine or telephone could not afford only minimum of materially deprived households.

Unemployed, people living in single-person households, lone-parent families and two-parent families with 3 or more children belong to the people with the highest material deprivation rate. Material deprivation rates in various types of families with children can be found in Figure 5.

**Figure 5 Material deprivation rates by type of family with children, CR, 2014**

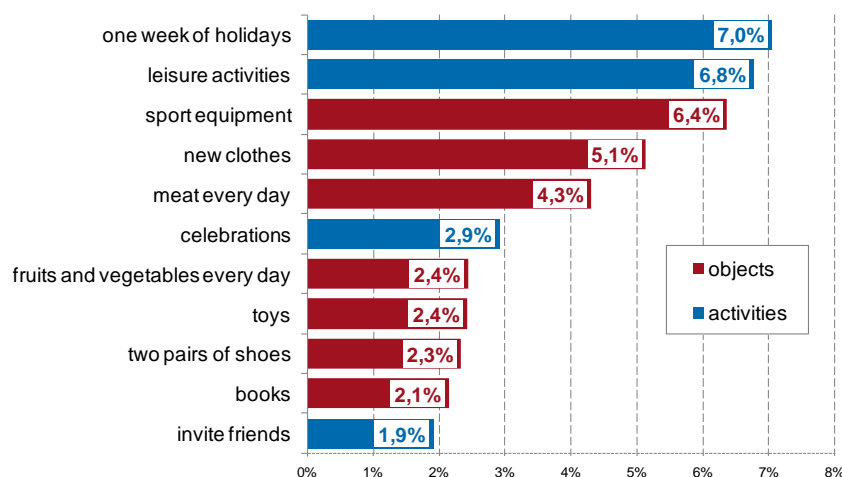


Ad hoc module in the EU-SILC 2014 was focused on material and social conditions of children under the age of 16 years. Its results allowed us to precisely study the situation of families with children.

Figure 6 shows that outdoor leisure equipment (bicycles, roller skates, scooters etc.) was the object households could not afford the most often. Every twentieth household cannot buy some new clothes for their children. Inclusion of meat or its vegetarian substitute into the daily diet could not afford 4.3 % families with children, while inclusion of fruits or vegetables was not feasible for 2.4 % of them. Only two out of hundred families with children could not afford to buy toys, books and two pairs of properly fitting shoes.

Every fourteenth family had not enough money on at least one-week holidays away from home for their children, as well as on regular leisure activities. To celebrate a special occasion (e. g. birthday) and to invite friends round to play and eat from time to time could afford nearly 98 % of families with children.

**Figure 6 Proportions of households that cannot afford to provide their children with following items, CR, 2014**



Another monitored indicator of social security is the share of people at risk of poverty and social exclusion indicator. This indicator corresponds to the sum of persons who are: at risk of poverty or severely materially deprived or living in households with very low work intensity. Values of these three indicators of social exclusion in the Czech Republic are in the long term the lowest in the EU.

The share of people at risk of poverty or social exclusion was 14.8 % in the Czech Republic in 2014. The groups of people that are at risk of poverty or social exclusion the most are lone-parent families and two-parent families with 3 or more children. The proportion of people at risk of poverty or social exclusion was 14.6 % in the Czech Republic in 2013, which was the third lowest value in the EU (see Map 1).

**Map 1 People at risk of poverty or social exclusion, EU, 2013**

