EU-SILC 2010 Operation

Intermediate quality report

Czech Republic

December 2011

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1. Common cross-sectional European Union indicators

1.1 Common cross-sectional European Union indicators based on the cross-sectional component of EU-SILC

Primary Laeken indicators of social cohesion

At-risk-of-poverty rate, by gender and selected age groups

The percentage of persons in the total population and in the relevant age and gender breakdowns, over the total population or over the relevant age or gender subset, with an equivalised disposable income below the at-risk-of-poverty threshold.

Table 1 At-risk-of-poverty rate, by gender and selected age groups

Age	Gender	Rounded value
Total	total	9.0
	men	8.0
	women	10.0
0_17 years	total	14.3
18_64 years	total	8.1
	men	7.3
	women	8.8
65+ years	total	6.8
	men	2.1
	women	10.3

At-risk-of-poverty threshold, illustrative values

The at-risk-of-poverty threshold is set at 60% of the national median equivalised disposable income. The value of the at-risk-of-poverty threshold shall be expressed in PPS (purchasing power standards), Euro and national currency (CZK) for two illustrative household types (single person and household with 2 adults with 2 children under 14 years).

Table 2 At-risk-of-poverty threshold, illustrative values

Household type	Currency	Rounded value
Single person	EUR	4 235
	NAT	111 953
	PPS	6 048
Two adults with two children under 14 years	EUR	8 894
	NAT	235 100
	PPS	12 702

Relative median at-risk-of-poverty gap

This indicator is the difference for each age group and gender between the at-risk-of-poverty threshold for the total population and the median equivalised disposable income of persons (in the relevant breakdown) below the same at-risk-of-poverty threshold, expressed as a percentage of the at-risk-of-poverty threshold.

Table 3 Relative median at-risk-of poverty gap, by age and gender

Age	Gender	Rounded value
Total	total	21.1
	men	23.6
	women	18.9
0_17 years	total	25.5
18_64 years	total	22.2
	men	24.0
	women	21.3
65+ years	total	7.5
	men	10.6
	women	7.1

Material deprivation rate

This indicator is defined as the percentage of population with an enforced lack of at least three/four out of nine material deprivation items in the 'economic strain and durables' dimension.

The nine items considered are
1) arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments,
2) capacity to afford paying for one week's annual holiday away from home,
3) capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day,
4) capacity to face unexpected financial expenses 8 500 CZK,
5) household cannot afford a telephone/mobile phone,
6) household cannot afford a colour TV,
7) household cannot afford a washing machine,
8) household cannot afford a car,
9) ability of the household to pay for keeping its home adequately warm.

Table 4 Proportion of population lacking at least three/four items in the "economic strain and durables" dimension of the material deprivation items

Age	Gender	At-risk-of-poverty	Tree items Rounded value	Four items Rounded value
Total	total	total	15.1	6.2
		yes	51.7	30.1
		no	11.4	3.8
	men	total	13.9	5.8
		yes	52.4	31.4
		no	10.5	3.6
	women	total	16.2	6.5
		yes	51.2	29.1
		no	12.4	4.0
0_17 years	total	total	18.9	8.6
		yes	59.0	35.8
		no	12.2	4.1
18_64 years	total	total	14.2	6.0
		yes	51.1	30.1
		no	11.0	3.8
	men	total	13.0	5.5
		yes	49.7	29.5
		no	10.1	3.6
	women	total	15.5	6.4
		yes	52.2	30.6
		no	12.0	4.1
65+ years	total	total	14.2	4.3
		yes	36.7	15.5
		no	12.6	3.5
	men	total	11.4	3.7
		yes	37.7	22.1
		no	10.9	3.3
	women	total	16.3	4.8
		yes	36.5	14.5
		no	14.0	3.7

At-risk-of-poverty rate, by age and gender

The percentage of persons in the total population and in the relevant age and gender breakdowns, over the total population or over the relevant age or gender subset, with an equivalised disposable income below the 'at-risk-of-poverty threshold'.

Table 5 At-risk-of-poverty rate, by age and gender

Age	Sex	Rounded value
Total	total	9.0
	men	8.0
	women	10.0
0_17 years	total	14.3
18_24 years	total	11.2
	men	11.5
	women	11.0
25_49 years	total	8.0
	men	6.9
	women	9.2
50_64 years	total	6.8
	men	6.2
	women	7.3
65+ years	total	6.8
	men	2.1
	women	10.3

At-risk-of-poverty rate, by household type

The 'at-risk-of-poverty rate (after social transfers) broken down by household type is calculated as the percentage of persons in each breakdown with an equivalised disposable income below the 'at-risk-of-poverty threshold'.

Table 6 At-risk-of-poverty rate, by household type

Household type		Rounded value
Total		9.0
Households without dependent children		
Total		6.5
One adult	younger than 64 years	17.4
	older than 65 years	18.7
Single	female	22.0
	male	11.6
Two adults	at least one aged 65 years and over	1.9
	younger than 65 years	5.9
Three or more adults		2.9
Households with dependent children		
Total		11.4
Single parent with dependent children		37.7
Two adults with	one dependent child	7.9
	two dependent children	8.7
	three or more dependent children	20.9
Three or more adults with dependent children		5.7

At-risk-of-poverty rate by work intensity of the household and by gender and selected age groups

The 'at-risk-of-poverty rate (after social transfers) broken down by different work intensity categories and broad household types is calculated as the percentage of persons in work intensity and household type (over the total population in the same group) with an equivalised disposable income below the 'at-risk-of-poverty threshold'.

The work intensity (WI) of the household refers to the number of months that all working age household members have been working during the income reference year as a proportion of the total number of months that could theoretically be worked within the household.

Table 7 At-risk-of-poverty rate by work intensity of the household, by gender

Age	Sex	Household type	WI	Rounded value
Total	total	No dependent children	WI = 0	16.9
			0 < WI < 1	5.5
			WI = 1	1.4
		With dependent children	WI = 0	80.4
			0 < WI < 0.5	37.9
			0.5 < WI < 1	10.1
			WI = 1	3.4
	men	No dependent children	WI = 0	17.1
			0 < WI < 1	5.2
			WI = 1	1.4
		With dependent children	WI = 0	80.2
			0 < WI < 0.5	39.2
			0.5 < WI < 1	9.9
			WI = 1	3.5
	women	No dependent children	WI = 0	16.7
			0 < WI < 1	5.9
			WI = 1	1.5
		With dependent children	WI = 0	80.5
			0 < WI < 0.5	36.6
			0.5 < WI < 1	10.3
			WI = 1	3.3

At-risk-of-poverty rate by most frequent activity status and, by gender

The 'at-risk-of-poverty rate (after social transfers) broken down by most frequent activity status during the income reference period as well as gender is calculated as the percentage of persons in each breakdown (over the total population in the same breakdown) with an equivalised disposable income below the 'at-risk-of-poverty threshold'.

Table 8 At-risk-of-poverty rate, by most frequent activity status and by gender

Activity	Sex	Rounded value
Total at-work	total	3.7
	men	3.7
	women	3.6
Total not at-work	total	12.7
	men	11.2
	women	13.6
Unemployment	total	40.6
	men	42.1
	women	39.3
Retired	total	6.6
	men	1.9
	women	9.5
Other inactive	total	12.9
	men	13.2
	women	12.8

At-risk-of-poverty rate by accommodation tenure status and by gender and selected age groups

The 'at-risk-of-poverty rate (after social transfers) broken down by accommodation tenure status and by gender and selected age groups is calculated as the percentage of persons in each modified accommodation tenure status and in the relevant age and gender breakdown (over the total population in the same accommodation tenure status and in the same age and gender breakdown) with an equivalised disposable income below the 'at-risk-of-poverty threshold'.

Table 9 At-risk-of-poverty rate, by accommodation tenure status, gender and selected age groups

Age	Tenure status	Sex	Rounded value
Total	owner or rent free	total	6.9
		men	6.0
		women	7.7
	rent	total	18.2
		men	16.8
		women	19.5
0_17 years	owner or rent free	total	9.8
	rent	total	29.9
18_64 years	owner or rent free	total	6.3
		men	5.8
		women	6.7
	rent	total	15.7
		men	14.0
		women	17.4
65+ years	owner or rent free	total	6.1
		men	2.0
		women	9.3
	rent	total	11.0
		men	3.1
		women	15.7

Dispersion around the risk-of-poverty threshold

This indicator is defined as the percentage of persons, over the total population, with an equivalised disposable income below 40 %, 50 % and 70 % of the national disposable income.

Table 10 Dispersion around the at-risk-of-poverty threshold, by gender and selected age group

% of the national median income	Age	Sex	Rounded value
40%	Total	total	2.9
		men	2.7
		women	3.0
	0_17 years	total	5.6
	18_64 year	total	2.7
		men	2.5
		women	2.9
	65+ year	total	0.4
		men	0.2
		women	0.3
50%	Total	total	5.2
		men	5.1
		women	5.4
	0_17 year	total	9.7
	18_64 year	total	4.9
		men	.4.7
		women	5.1
	65+ year	total	1.8
		men	0.7
		women	1.3
70%	Total	total	15.5
		men	13.6
		women	17.3
	0_17 year	total	21.3
	18_64 year	total	13.6
		men	12.5
		women	14.8
	65+ year	total	16.9
		men	8.0
		women	23.6

Intensity of material deprivation by age, gender and at-risk-of-poverty status

This indicator is defined as the mean number of items lacked by persons considered as deprived in the 'economic strain and durables' dimension.

Table 11 Intensity of material deprivation (mean number of deprived items)

Age	Gender	At-risk-of-poverty	Rounded value
Total	total	total	3.6
		yes	4.0
		no	3.5
	men	total	3.6
		yes	4.0
		no	3.5
	women	total	3.6
		yes	3.9
		no	3.4
0_17 years	total	total	3.7
		yes	4.0
		no	3.5
18_64 years	total	total	3.6
		yes	4.0
		no	3.5
	men	total	3.7
		yes	4.1
		no	3.5
	women	total	3.6
		yes	3.9
		no	3.5
65+ years	total	total	3.4
		yes	3.6
		no	3.4
	men	total	3.5
		yes	4.0
		no	3.4
	women	total	3.4
		yes	3.6
		no	3.3

Housing cost overburden rate

This indicator is defined as the percentage of the population living in a household where the total housing costs (net of housing allowances) represent more than 40% of the total disposable household income (net of housing allowances).

Table 12 Housing cost overburden rate, by age

Age	At-risk-of-poverty	Rounded value
Total	total	9.7
	yes	49.4
	no	5.8
0_17 years	total	9.9
	yes	47.0
	no	3.7
18_64 years	total	8.9
	yes	51.3
	no	5.1
65+ years	total	13.1
	yes	45.5
	no	10.8

Table 13 Housing cost overburden rate, by age and gender

Age	Gender	Rounded value
Total	total	9.7
	men	8.1
	women	11.2
0_17 years	total	9.9
18_64 years	total	8.9
	men	7.8
	women	9.9
65+ years	total	13.1
	men	8.1
	women	16.9

Table 14 Housing cost overburden rate, by tenure status

Tenure status	Rounded value
Outright owner	6.1
Owner with mortgage	9.2
Tenant – market price	31.1
Tenant – reduced price or free	17.2

Table 15 Housing cost overburden rate, by degree of urbanisation

Degree of urbanisation	Rounded value
Densely populated area	11.9
Intermediate area	8.4
Thinly populated area	8.5

Table 16 Housing cost overburden rate, by household type

Household type			Rounded value
No dependent children	Total		11.3
	1 person household	total	30.8
		man	23.9
		women	35.1
		0_64 years	31.0
		65+ years	30.5
	2 person household	both age 0_64 years	10.7
		at least one age 65+	7.0
	2 or more adults		6.7
With dependent children	Total		8.1
	Single parent		27.7
	2 adults	1 dependent child	8.4
		2 dependent child	6.3
		3 or more dependent children	8.5
	2 or more adults		6.4

Overcrowding rate

The indicator is defined as the percentage of the population living in an overcrowded household. A person is considered as living in an overcrowded household if the household does not have at its disposal a minimum of rooms equal to: 1 room for the household; 1 room for each couple; 1 room for each single person aged 18+; 1 room for two single people of the same sex between 12 and 17 years of age; 1 room for each single person of different sex between 12 and 17 years of age; 1 room for two people under 12 years of age.

Table 17 Overcrowding rate - total population, by age

Age	At-risk-of-poverty	Rounded value
Total	total	22.5
	yes	44.2
	no	20.4
0_17 years	total	34.4
	yes	59.6
	no	30.2
18_64 years	total	22.2
	yes	40.5
	no	20.6
65+ years	total	9.4
	yes	24.1
	no	8.4

Table 18 Overcrowding rate - total population, by age and gender

Age	Gender	Rounded value
Total	total	22.5
	men	22.5
	women	22.5
0_17 years	total	34.4
18_64 years	total	20.6
	men	21.7
	women	22.7
65+ years	total	9.4
	men	7.7
	women	10.8

Table 19 Overcrowding rate - total population, by tenure status

Tenure status	Rounded value
Outright owner	17.6
Owner with mortagage	13.8
Tenant – market price	50.8
Tenant – reduced price or free	41.8

Table 20 Overcrowding rate - total population, by degree of urbanisation

Degree of urbanisation	Rounded value
Densely populated area	26.5
Intermediate area	20.5
Thinly populated area	20.2

Table 21 Overcrowding rate - total population, by household type

Household type			Rounded value
No dependent children	Total		11.8
	1 person household	total	14.6
		man	18.8
		women	11.9
		0_64 years	15.8
		65+ years	13.2
	2 person household	both age 0_64 years	6.7
		at least one age 65+	5.9
	2 or more adults		11.1
With dependent children	Total		32.7
	Single parent		52.3
	2 adults	1 dependent child	20.3
		2 dependent child	27.2
		3 or more dependent children	52.6
	2 or more adults		30.9

Table 22 Overcrowding rate – population without single-person households, by age

Age	At-risk-of-poverty	Rounded value
Total	total	23.3
	yes	50.1
	no	21.0
0_17 years	total	34.4
	yes	59.6
	no	30.2
18_64 years	total	22.7
	yes	45.0
	no	21.0
65+ years	total	7.8
	yes	43.1
	no	7.2

Table 23 Overcrowding rate – population without single-person households, by age and gender

Age	Gender	Rounded value
Total	total	23.3
	men	22.8
	women	23.8
0_17 years	total	34.4
18_64 years	total	22.7
	men	21.9
	women	23.5
65+ years	total	7.8
	men	5.7
	women	10.1

Context indicators

Inequality of income distribution S80/S20 income quintile share ratio

S80/S20 income quintile share ratio: Ratio of total income received by the 20% of the country's population with the highest income (top quintile) to that received by the 20% of the country's population with the lowest income (lowest quintile).

Rounded value	3.5

Inequality of income distribution: Gini coefficient

The relationship of cumulative shares of the population arranged according to the level of income, to the cumulative share of the total income received by them.

Rounded value	24.9

At-risk-of-poverty rate anchored at a fixed moment in time (2005), by gender and selected age groups

For a given year 'T', this indicator is defined as the percentage of the population whose equivalised total disposable income in that given year is below the 'at-risk-of-poverty threshold' calculated in the standard way for the reference year or base year, currently 2005, and then adjusted for inflation.

The population consists of all the persons that have been living in private households for the current year T for the calculation of this indicator. For the calculation of the 'at-risk-of-poverty threshold' in the base year (2005) the population consists of the persons that lived in private households during the base year.

Table 24 At-risk-of-poverty rate anchored at a fixed moment in time (2005), by age and gender

Age	Gender	Rounded value
Total	total	5.1
	men	5.0
	women	5.2
0_17 years	total	9.6
18_64 years	total	4.8
	men	4.6
	women	5.0
65+ years	total	1.1
	men	0.7
	women	1.4

At-risk-of-poverty rate before social transfers, by gender and selected age groups

The 'at-risk-of-poverty rate before social transfers' shows the percentage of persons (over the total population) having an equivalised disposable income before social transfers excluding old-age benefits below the 'at-risk-of-poverty threshold'.

Table 25 At-risk-of-poverty rate before social transfers, by gender and selected age groups (except pensions)

Age	Gender	Rounded value
Total	total	18.1
	men	17.0
	women	19.1
0_17 years	total	26.0
18_64 years	total	17.1
	men	16.0
	women	18.3
65+ years	total	12.6
	men	8.3
	women	15.8

In-work at-risk-of-poverty rate

The 'at-risk-of-poverty rate' broken down by most frequent activity status during the income reference period and gender is calculated as the percentage of persons in each breakdown (over the population in the same breakdown) with an equivalised disposable income below the 'at-risk-of-poverty threshold' for the whole population.

Table 26 In-work at-risk-of-poverty rates

Activity		Rounded value
In-work	Full-time	3.4
	Part-time	6.7

Housing deprivation rate by item

The indicator is defined as the percentage of the population deprived of each available housing deprivation items (leaking roof, bath/shower, toilet, darkness, bath/shower and toilet).

Table 27 Housing deprivation by item, by age

Age	At-risk-of-poverty	Rounded value
Total	total	4.5
	yes	12.8
	no	3.7
0_17 years	total	7.1
	yes	19.5
	no	5.0
18_64 years	total	4.5
	yes	11.3
	no	3.9
65+ years	total	1.7
	yes	3.7
	no	1.5

Table 28 Housing deprivation by item, by age and gender

Age	Gender	Rounded value
Total	total	4.5
	men	4.5
	women	4.5
0_17 years	total	7.1
18_64 years	total	4.5
	men	4.2
	women	4.7
65+ years	total	1.7
	men	1.2
	women	2.0

Housing deprivation rate by number of items

The indicator is defined as the percentage of the population deprived of 0, 1, 2, 3, or 4 of the housing deprivation items.

The items considered are: 1. Leaking roof, damp walls/floors/foundation, or rot in window frames or floor (variable HH040), 2. Bath or shower in the dwelling (variable HH081), 3. Indoor flushing toilet for sole use of the household (variable HH091), 4. Problems with the dwelling: too dark, not enough light (variable HH160).

Table 29 Housing deprivation by number of items, by age and gender

Age	Gender	Rounded value				
		no items	HH040	HH081	HH091	HS160
Total	total	85.8	11.8	0.5	0.7	3.7
	men	86.2	11.6	0.5	0.7	3.6
	women	85.5	11.9	0.5	0.7	3.8
0_17 years	total	85.5	12.1	0.3	0.3	4.0
18_64 years	total	86.0	12.0	0.5	0.7	3.6
	men	85.6	11.8	0.5	0.9	3.5
	women	86.4	12.2	0.4	0.5	3.8
65+ years	total	86.4	10.5	0.9	1.4	3.9
	men	87.6	9.7	0.7	1.0	3.4
	women	85.6	11.1	1.0	1.6	4.2

Median of the housing cost burden distribution (median share of housing cost)

This indicator is defined as the median of the housing cost burden (HCB) distribution, i.e. the distribution among individuals of the share of the total housing costs (net of housing allowances) in the total disposable household income (net of housing allowances).

Table 30 Median of the housing cost burden distribution, by age

Age	At-risk-of-poverty	Rounded value
Total	total	19.1
	yes	39.9
	no	18.1
0_17 years	total	19.5
	yes	38.4
	no	18.1
18_64 years	total	18.1
	yes	40.4
	no	17.4
65+ years	total	22.9
	yes	38.0
	no	22.2

Table 31 Median of the housing cost burden distribution, by age and gender

Age	Gender	Rounded value
Total	total	19.1
	men	18.4
	women	19.7
0_17 years	total	19.5
18_64 years	total	18.1
	men	17.7
	women	18.6
65+ years	total	22.9
	men	21.6
	women	24.2

1.2 Other Indicators

Equivalised disposable income

The average of the equivalised disposable income of each person.

Mean equalised disposable income (HY020 equalised)	210 984.5

The gender pay gap

The gender pay gap is not calculated from EU-SILC.

2. Accuracy

2.1 Sampling design

2.1.1 Type of sampling

The survey was carried out on the whole territory of the Czech Republic. The sample size of newly selected dwelling (first wave in 2010) was 4 300 dwellings. Dwellings were selected using stratified two-stage sampling design. At the first sampling stage small geographical areas (CEUs – Census Enumeration Units) were selected by probability sampling. In the second stage selection a sample of 10 dwellings was drawn from each CEU.

2.1.2 Sampling units

Census Enumeration Districts (CEUs) constitute the first-stage sampling units. CEUs are small geographical areas covering the whole territory of the country. They are used as enumeration districts during the census, but their use is more general. Continuously updated geographical register is maintained by the CZSO, where these units form the basic geographical layer, on which subsequent aggregations are based. This register is the base for an integrated hierarchical geographical information system and is the base for databases of regional indicators and statistical data.

For each CEU, a list of all buildings is maintained in the register. This list is updated from administrative data of the construction authorities (new buildings', flats' or commercial premises' acceptation protocols, demolitions' protocols). For each building, the number of dwelling units is recorded.

CEUs vary considerably in size measured in number of dwelling units in them. Before drawing of the first stage sample, the sampling frame of CEUs had to be adjusted in two ways:

- As noted above, CEUs have wider use than sampling of dwellings and there are CEUs not containing any buildings dwellings (like industrial areas, railway stations and the like). These CEUs, where the number of dwellings is zero, are dropped from the sampling frame.
- In order to enable incorporation of small census enumeration units into the sampling process (to reach the required full geographical coverage of the national territory), small CEUs (with less then 20 inhabited dwellings) were merged with adjacent CEUs and this larger merged CEU entered the first stage of sampling. Therefore, in some cases, the 10 dwellings sampled in the second stage belong to two, in exceptional cases even more, real administrative CEUs. The survey design variable DB060 (PSU) is later coded according to this adjusted structure of the sampling frame, to keep the dwellings together as they were actually sampled.

In the second stage, 10 dwellings was sampled in each sampled CEU. CZSO's regional fieldwork units (each covering one of the 14 NUTS3 administrative regions) received the list of selected dwellings (address + identification number of the flat in buildings with more than one flat). Before the actual fieldwork, the regional fieldwork units' staff carried out identification of the selected dwellings and filled in the contact names on the list of selected dwellings for interviewers.

The ultimate sampling unit was the dwelling, i.e. all persons with usual residence in that dwelling (their only place of residence or their main place of residence, according to the EU-SILC definition) were included in the survey. This includes also foreign nationals and subtenants living in the selected dwelling.

The household definition is based on the sharing of expenditures concept, in line with the definition of Paragraph 115 of the national Civil Code – based on the declaration of the persons in sampled dwelling unit that they permanently live together and finance together expenditures to cover their needs.

2.1.3 Stratification criteria

The sampling of CEUs is stratified by region (NUTS4) and municipality size with following four categories:
- below 2 000 inhabitants
- 2 000 – 9 999 inhabitants
- 10 000 – 49 999 inhabitants
- 50 000 and more inhabitants

2.1.4 Sample size and allocation criteria

The total sample size was 11 171 dwellings (11 274 households) from which 4 300 addresses were newly selected and 6 871 dwellings (6 949 households) were revisited from previous waves. The new sample was allocated to the strata using proportional algorithm (proportionally to the number of dwellings in the sampling frame).

2.1.5 Sample selection schemes

In the first stage, CEUs were sampled with probability proportional to size (number of dwellings). Simple random sampling without replacement is used for sampling of constant number of 10 dwellings in each sampled CEU.

2.1.6 Sample distribution over time

Due to the limited duration of the fieldwork period, the survey was organized as a one-shot survey. Sample was not distributed into separate waves over the duration of the fieldwork.

2.1.7 Renewal of the sample: Rotational groups

The survey will in the long term use the integrated four-year rotational panel design. Since the 2005 operation was the first year of the survey, there was only one sample replication and no rotation was applied. In years 2006 to 2010 was added a new replications. In 2009 first rotational panel was ended and the household from the 2005 operation was dropped from the sample. In 2010 the household from the 2006 operation was dropped from the sample. Each next year, one sub-sample rotates out and a new one is drawn and substituted for.

The sample rotation will be at the level of CEUs as primary sampling units (whole CEUs will be added to/dropped from the sample).

2.1.8 Weightings

2.1.8.1 Design factor

The sample was designed as a self-weighting sample. Design factor for all sampled dwellings is equal to 1.

2.1.8.2 Non-response adjustments

The original sample was designed as a self-weighting probability sample. However, non-ignorable level of non-response biased the structure of the sample of achieved interviews. For example, compared to the available demographic statistics and external data, the achieved average household size was significantly smaller. There was under-representation of the self-employed, of the unemployed as well as of persons living in larger cities. On the other hand, there was over-representation of persons in the retirement age and of persons living in family houses.

Due to the limited information on non-respondents of the first wave restricted only to the geographical information obtainable from the sampling frame, the possibilities for modelling using propensity to response models were quite limited. There was an option by second wave households to utilize information, which was obtained from previous SILC wave, and to adjust their previous year weights for attrition. In that case it would be difference between first and next wave weighting procedures. Experimental computations show that this method would entail excessive weights variability increase. Therefore, united calibration for all the waves was used as the method for correcting non-response.

The achieved sample was re-weighted using the integrated calibration technique (producing the same weights on household and personal level). This technique ensures that the weighted sample structure corresponds to a set of known external population characteristics. The calculations were implemented using the CALMAR software in SAS.

2.1.8.3 Adjustments to external data

The following calibration variables were used:

- Number of inhabited dwellings in each NUTS3 region, subdivided into family houses (detached and semi-detached houses) and flats, based on the 2001 Census continuously updated from administrative sources of construction authorities
- Population characteristics:
    o Population totals in each NUTS3 region (from demographic statistics)
    o Economic activity characteristics in each NUTS3 region:
        ▪ Number of pensioners (excl. pensions for orphans), based on the administrative data from social security administration
        ▪ Number of unemployed (registered unemployed from administrative source of the Ministry of Labour and Social Affairs, corrected for unregistered unemployment using the Labour Force Survey data)
        ▪ Number of self-employed (estimate based on the Labour Force Survey)
        ▪ Number of children aged 0-15 (from demographic statistics)
    o Demographic characteristics at the national level (based on the demographic statistics):
        ▪ Age groups (0-15, 16-24, 25-34, 35-44, 45-54, 55-64, 65+)
        ▪ Gender at the national level
        ▪ Municipality size at the national level (below 2 000 inhabitants, 2 000 - 9 999, 10 000 - 49 999, 50 000+ inhabitants)

Since the target population of the survey were persons living in private households, the demographic statistics aggregate data were adjusted by subtracting institutionalised population (from social security administrative data) and persons in prisons.

2.1.8.4 Final cross-sectional weights

Final household cross-sectional weight was result of Calmar calibration.

	N	Minimum	Maximum	Mean	Std. Dev.
Weights DB090	9 098	129	1 847	456.11	204.78

The number of cross-sectional weights (number of DB090 > 0 is 9 109) differs from the number of successfully interviewed households by 11. There can be more than one household in the dwelling and in these cases occurred that one of the households in the dwelling refused the interview, was unable to respond, moved or the households have merged while at least one of the households in the dwelling was successfully interviewed. Since the calibration is performed at the dwelling level, these households get also non-zero weight. Nevertheless the number of successfully interviewed households (DB130 = 11) is 9 098.

2.1.9 Substitutions

Substitutions were not used.

2.2 Sampling errors and effective sample size

The estimated standard errors and Kish factors for the main indicators are provided below:

Table 32 Number of observations, value, standard errors for income components and Kish factor

Indicator	N	Value	Std. error	Kish
At-risk-of-poverty rate after social transfers:				
Male	10 250	0.08001	0.00492	1.20899
Female	11 129	0.09965	0.00478	1.13638
Hh with dependant children	10 458	0.11427	0.00314	1.15673
Hh without dependant children	11 921	0.06450	0.00233	1.14036
Inequality of income distribution:				
S80/S20 income quintile share ratio	21 379	3.47174	0.06188	1.12892
Gini coefficient	21 379	0.24948	0.00341	1.18687

The estimated standard errors take into account the complex sampling scheme used in the survey (stratification, two-stage design). Results were obtained using the Jackknife Repeated Replication. The computations were done in SAS programs for variance estimation of the measures required for Intermediate Quality Report developed Università degli Studi di Siena. All indicators were calculated at individual level.

2.3 Non-sampling errors

2.3.1 Sampling frame and coverage errors

Sampling frame covers existing buildings with the information on number of dwelling units in each building (see part on sampling units for description of the register of CEUs).

Out of the 4 300 newly sampled dwelling unit records (in the first wave), 319 were found to be ineligible for the survey (7.4 %). Fieldwork staff undertaking pre-fieldwork identification of sampled dwelling units and interviewers must declare clear confirmation of the fact, that the dwelling unit was not located.

2.3.2 Measurement and processing errors

2.3.2.1 Measurement errors

Development of the questionnaires

Data collection had the form of an interview and interviewers filled in the answers into paper questionnaires (PAPI data collection) or into electronic questionnaires (CAPI data collection)

The survey was conducted using paper questionnaires designed for OCR technology data capture (scanning). The first SILC questionnaires were developed in 2004. The inputs for designing the questionnaires were the questionnaires from Microcensus surveys (national income survey), the harmonised description of EU-SILC target variables (technical document SILC 065) and the blueprint questionnaire in English used for previous SILC pilots in old Member States. Basic questionnaire structure follows the practice already well established in the Microcensus, with three main forms: dwelling unit questionnaire with household membership rooster, household questionnaire and personal questionnaire. The questionnaires were first tested in pilot survey of 600 randomly sampled households (Spring 2004). The pilot project involved 14 future regional co-ordinators of the survey and small group of experienced interviewers (2-3 per region). After this fieldwork test, questionnaire was updated and partly re-designed, with active involvement of the regional staff and the participating interviewers. Together with the questionnaires, detailed interviewers guidelines were developed with binding instructions to all questions.

The survey was conducted using electronic questionnaires with the assistance of programmatic system BLAISE. It is developed Statistics Netherlands and it is standard for questionnaire survey. Since 2008 will be a gradual transition to CAPI data collection. The electronic questionnaires were first tested in pilot survey of 412 randomly sampled households (November 2007). There were used electronic questionnaire EU-SILC. The content of the pilot survey were demographic and social characteristics, inter-household transfers, consumption from household own production, spending

on dwelling, personal income, labour status and employment and health. After this fieldwork test, questionnaire was updated and partly re-designed, with active involvement of the regional staff and the participating interviewers. Together with the questionnaires, detailed interviewers guidelines were developed with binding instructions to all questions.

The content of the survey was divided into three questionnaires with different units of reference:

Questionnaire A (dwelling unit questionnaire): contained the rooster with the list of all persons with usual residence in the selected dwelling, their basic demographic and social characteristics, information on sharing of expenses to determine household units[1] and relationship of each person to the main user of the dwelling and to the head of household.

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

Questionnaire C (personal questionnaire): filled in by each household member aged 16+ as of 31 December 2009 (i.e. persons born in 1993 and earlier). This questionnaire contained information on labour status and employment, personal income, participation in private pension plans, health, education, selected biographical information and module questions.

Reference periods

- Age: 31 December 2009
- Other demographic variables, marital status, education: at the date of the interview
- Current employment variables (current employment status, occupation, …): at the date of the interview
- Income data: calendar year 2009
- Housing, consumer durables, financial and social situation of household: at the date of the interview, unless the question specifically refers to some other reference period

Interviewers

The survey participate 758 interviewers on the whole. The survey by force of paper questionnaire (PAPI) was performing by 451 interviewers (approximately almost 13 households per interviewers). The survey by the aid of electronic questionnaires (CAPI) was performing by 307 interviewers; most of them were staff of CZSO (approximately almost 17 households per interviewer). The following table shows the successfulness of the interviewers by their basic characteristics (if there are more than one household in the dwelling, at least one interviewed household is considered as successfully surveyed).

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[1] Since the household definition is based on sharing of expenditures (housekeeping concept), there are dwelling units with more than one household. If this was the case, all households in selected dwellings were included as eligible for the survey.

Table 33 Response by interviewers' characteristics (%)

Interviewers' characteristics	Total	Wave 1	Wave 2	Wave 3	Wave 4
Age:					
Age ≤ 40	80.47	65.30	91.68	91.50	96.15
Age 41-60	83.41	66.01	89.67	92.69	96.46
Age > 60	84.98	65.67	91.70	95.07	95.78
Sex:					
Male	87.32	73.82	92.63	95.88	96.87
Female	81.85	63.46	89.76	92.39	95.78
Education:					
Primary	91.30				91.30
Lower secondary	87.89	73.28	94.86	93.51	96.41
Upper secondary	82.19	64.27	90.28	92.91	96.37
Tertiary education	84.17	69.01	87.73	91.78	94.92
Economic activity:					
Employed	82.27	65.58	89.96	92.33	96.26
Student	83.23	69.10		100.00	96.93
Retired	86.05	66.80	91.88	97.54	95.81
Unemployed	80.95	55.56	100.00		100.00
Other	78.15	53.49	87.72	95.56	94.00
Experience with surveys:					
SILC 2008 - yes	86.02	66.77	91.48	92.84	95.96
- no	78.53	64.74	89.31	92.62	97.25
SILC 2009 - yes	84.45	65.44	90.85	93.08	95.91
- no	76.80	66.36	87.72	90.28	97.47
Other - yes	83.64	66.97	90.25	92.93	95.42
Different interviewer in 2008	90.42		88.61	87.75	96.14
Same interviewer as in 2008	93.72		91.14	93.91	96.04
Total	83.05	66.71	90.45	92.75	96.09

2.3.2.2. Processing errors

Data processing

In case of PAPI data were captured using OCR technology (scanning). After the data collection in the field, the regional fieldwork staff gathers the questionnaire material. While accepting the material from each interviewers, the initial check is performed – the way, how the questionnaires are filled, completeness of the questionnaires, basic consistence checks. Then, control sum of numerical values on each page is calculated and filled by the regional coding staff. Larger tables, with more numerical data, have their own control sums. At the same time, the coding staff coded some variables – occupation (ISCO), sector of employment (NACE) and country codes for country of birth and citizenship variables.

After this preparatory phase, questionnaires are scanned into raw data files. CZSO has three specialised scanning units with technical equipment and expertises in this data capture technology. This technology is also used extensively in business and agricultural surveys. Control sums are automatically checked during scanning. Whenever the sum of captured values does not match the control sum or when some number is not properly recognised, that position of the questionnaire appears as image on the screen of the operator for verification. Images of the scanned questionnaires are also stored with the captured data with unique filenames allowing linking of each data record with the image of the questionnaire, from which the data were captured.

In case of CAPI data were collected into electronic questionnaire with the aid of programming system BLAISE in application eDomset. After the data collection in the field, the regional fieldwork staff takes data file form the questionnaire material. While accepting the data file gathers the questionnaire material from each interviewers, the initial check is performed - the way, how the

questionnaires are filled, completeness of the questionnaires, basic consistence checks. After this preparatory phase, data from questionnaires are co-ordinate to general database CZSO.

The raw data files are then subject to initial centrally performed checks – checking the integrity of identification numbers, consistency with the sample, completeness of the questionnaire sets for all dwellings. Regional staff is responsible for further checking of the data for their respective region, using a special software application containing a set of logical controls, captured data and linked images of the questionnaires. Three kinds of errors are distinguished: critical errors (must be corrected, limited to a small set of key consistency issues), errors to verify (must be commented, involving contacting the interviewer in charge of that household, if additional information is necessary) and informative flags (extraordinary or unusual situations, which should be looked at).

2.3.3 Non-response errors

2.3.3.1 Achieved sample size

4 300 new dwellings entered the survey (1st wave) and 6 949 dwellings were revisited – 6784 at the last year's address and 165 were tracked to their new home. The fieldwork revealed that among the total of 11 171 dwellings in the sample there were 547 dwellings (4.9 %) unoccupied, unlocated or ineligible because the households had moved. Since there was no substitution for these ineligible units, the survey was conducted in 10 624 dwellings and 10 720 households. There were 96 additional interviewed households in these dwellings, since in 83 dwellings there are more households in one dwelling unit (household definition is based on sharing of expenses).

The overview of the survey response can be summarised by following table:

Table 34 Sample size – households

	Households			Response (%)		
	Total	1st wave	2nd-4th wave	Total	1st wave	2nd-4th wave
Response, total	9 098	2 633	6 465	84,9	65,7	96,3
Non-response, total	1 622	1 374	248	15,1	34,3	3,7
- Refusals (unwillingness to give information)	1 274	1 095	179	78,5	79,7	72,2
- Household not contacted. temporarily absent	248	207	41	15,3	15,1	16,5
- Household unable to respond (health limitation)	86	61	25	5,3	4,4	10,1
- Other reasons (linguistic etc.)	14	11	3	0,9	0,8	1,2

Refusals also include situations when the household did not refuse the survey as such, but did not accept to provide the information on income to the extent, which would qualify the household as successfully interviewed. The definition of successfully interviewed household allowed missing income data for only one person and the person must not be the head of the household. Non-contacts, temporarily absent category cover situations, when the interviewer did not establish contact with the selected household, despite the prescribed minimum number of three attempts of personal contact.

Table 35 Regional disparities in response

Region (NUTS3)	Total			1st wave			2nd and 3rd wave		
	HHs in survey	Response		HHs in survey	Response		HHs in survey	Response	
		count	%		count	%		count	%
Praha	1 157	834	**72,1**	558	272	48,7	599	562	93,8
Stredocesky	1 247	1 067	**85,6**	453	300	66,2	794	767	96,6
Jihocesky	712	657	**92,3**	240	190	79,2	472	467	98,9
Plzensky	537	452	**84,2**	212	138	65,1	325	314	96,6
Karlovarsky	322	264	**82,0**	108	55	50,9	214	209	97,7
Ustecky	891	760	**85,3**	335	229	68,4	556	531	95,5
Liberecky	425	350	**82,4**	156	93	59,6	269	257	95,5
Kralovehradecky	560	472	**84,3**	214	141	65,9	346	331	95,7
Pardubicky	520	455	**87,5**	183	129	70,5	337	326	96,7
Vysocina	537	477	**88,8**	183	134	73,2	354	343	96,9
Jihomoravsky	1 129	934	**82,7**	441	275	62,4	688	659	95,8
Olomoucky	648	552	**85,2**	251	181	72,1	397	371	93,5
Zlinsky	634	571	**90,1**	208	158	76,0	426	413	96,9
Moravskoslezsky	1 401	1 253	**89,4**	465	338	72,7	936	915	97,8
CZ total	10 720	9 098	**84,9**	4 007	2 633	65,7	6 713	6 465	96,3

The lowest achieved response rate was in the City of Prague region (Praha), about 72 percent. This result has its objective reasons, as in any other large city, the social environment and dwelling structure in this metropolitan region is the least favourable for conducting household surveys. On the other hand, there are exceptionally high response rate, above 90 percent, at Jihocesky, Zlinsky and Moravskoslezsky region. For the remaining regions, the differences between response rates are not large (interval from 82 percent to 88 percent).

Participation in the national EU-SILC survey is voluntary, there is no duty imposed on households to provide the required information, like it is for example in the population census. The household must be informed about the content of the survey and that its participation is voluntary and left to its decision. The main reasons for refusal reported from the field are privacy reasons (objections against giving personal information and fear of misuse of the personal data), unwillingness to report income, fear of contact with interviewers as strangers. There is a considerable group of persons, who, as a matter of principle, strictly refuse to give any information about them and their households.

SILC data files non-response characteristics, with the SILC harmonised response rates:

Achieved sample size: 9 098
Number of households for which an interview is accepted for the database: 9 098
Number of persons of 16 years or older, who are members of the households and for whom the interview is accepted for the database: 18 209

2.3.3.2 Unit non-response

Address contact rate (Ra): the ratio of the number of address successfully contacted, to the number of valid addresses selected.

Household response rate (Rh): the ratio of the number of household interviews completed (and accepted in the database), to the number of eligible household at the contacted addresses.

Individual response rate (Rp): the ratio of the number of personal interviews completed (and accepted in the database), to the number of eligible individuals in completed households.

New replication

- **Household non-response rates (NRh)**

    NRh = (1-(Ra * Rh)) * 100

    Where

    $$Ra = \frac{\text{Number of addresses successfully contacted}}{\text{Number of valid addresses selected}}$$

    $$= \frac{\sum[DB120=11]}{\sum[DB120=all] - \sum[DB120=23]} = \frac{4007}{4325-0} = 0.92647$$

    $$Rh = \frac{\text{Number of household interviews completed and accepted for the database}}{\text{Number of eligible households at contacted addresses}}$$

    $$= \frac{\sum[DB135=1]}{\sum[DB130=all]} = \frac{2633}{4007} = 0.65710$$

    NRh=(1-(0.92647*0.65710))*100 = 39.121

    The household non-response rate is 39.12 %.

- **Individual non-response rates (NRp)**

    NRp = (1-(Rp))*100

    Where

    $$Rp = \frac{\text{Number of personal interview completed}}{\text{Number of eligible individuals}} = \frac{5250}{5250} = 1.00$$

    NRp = (1-1)*100 = 0 %

    So, the individual non-response rate is 0 %.

- **Overall individual non-response rates (*NRp)**

    *NRp=(1-(Ra*Rh*Rp))*100

    *NRp= (1-(0.92647*0.65710*1))*100 = 39.121

    So, the overall individual non-response rate is 39.12 %.

Total sample

- **Household non-response rates (NRh)**

    NRh = (1-(Ra * Rh)) * 100

    Ra = 10 720/(11 274 – 235) = 0.97110

    Rh = 9 098/10 720 = 0.84869[2]

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[2] There were more than one household units in some interviewed dwellings (83 cases, with 96 additional households, out of which 88 were successfully interviewed). These 88 households are included in the database. Their inclusion in the non-response calculation slightly bias upwards the non-response calculated at the household level – assuming that at least in some of the

NRh = (1-(0.97110*0.84869))*100 = 17.583

The household non-response rate is 17.58 %.

- *Individual non-response rates (NRp)*

    NRp = (1-(Rp))*100

    Rp = 18 209/18 209 = 1.00

    NRp = (1-1)*100 = 0 %

    The individual non-response rate is 0 %.

- *Overall individual non-response rates (*NRp)*

    *NRp=(1-(Ra*Rh*Rp))*100

    *NRp = (1-(0.97110*0.84869*1))*100 = 17.583

    The overall individual non-response rate is 17.58 %.

2.3.3.3 Distribution of households by 'record of contact at address' (DB120), by 'household questionnaire result' (DB130) and by 'household interview acceptance' (DB135)

First wave

Table 36 1st wave: Distribution of households by 'record of contact at address'

	Count	%
Total (DB120 = 11 to 23)	**4325**	**100.00**
Address contacted (DB120 = 11)	4007	92.65
Address non-contacted (DB120 = 21 to 23)	318	7.35
Total address non-contacted (DB120 = 21 to 23)	**318**	**100.00**
Address cannot be located (DB120 = 21)	318	100.00
Address unable to access (DB120 = 22)	0	0.00
Address does not exists or is non-residential address or is unoccupied or not principal residence (DB120 = 23)	0	0.00

Table 37 1st wave: Distribution of address contacted by 'household questionnaire result'

	Count	%
Total	**4007**	**100.00**
Household questionnaire completed (DB130 = 11)	2633	65.71
Interview not completed (DB130 = 21 to 24)	1374	34.29
Total interview not completed (DB130 = 21 to 24)	**1374**	**100.00**
Refusal to co-operate (DB130 = 21)	1095	79.69
Entire household temporarily away for duration of fieldwork – i.e. non-contacts (DB130 = 22)	207	15.07
Household unable to respond (illness, incapacity, etc.) (DB130 = 23)	61	4.44
Other reasons (DB130 = 24)	11	0.8
Household questionnaire completed (DB135 = 1+ 2)	**2633**	**100.00**
Interview accepted for data base (DB135 = 1)	2633	100.00
Interview rejected (DB135 = 2)	0	0.00

non-responding dwellings can also include more than one household unit, the denominator should be higher than 10 720. This difference is unknown, but is likely to be quite small.

Second wave

Table 38 2nd wave: Distribution of households by 'record of contact at address'

	Count	%
Total (DB120 = 11 to 23)	**2640**	**100.00**
Address contacted (DB120 = 11)	2538	96.14
Address non-contacted (DB120 = 21 to 23)	102	3.86
Total address non-contacted (DB120 = 21 to 23)	**102**	**100.00**
Address cannot be located (DB120 = 21)	0	0.00
Address unable to access (DB120 = 22)	0	0.00
Address does not exists or is non-residential address or is unoccupied or not principal residence (DB120 = 23)	102	100.00

Table 39 2nd wave: Distribution of address contacted by 'household questionnaire result'

	Count	%
Total	**2538**	**100.00**
Household questionnaire completed (DB130 = 11)	2388	94.09
Interview not completed (DB130 = 21 to 24)	150	5.91
Total interview not completed (DB130 = 21 to 24)	**150**	**100.00**
Refusal to co-operate (DB130 = 21)	108	72.00
Entire household temporarily away for duration of fieldwork – i.e. non-contacts (DB130 = 22)	25	16.67
Household unable to respond (illness, incapacity, etc.) (DB130 = 23)	15	10.00
Other reasons (DB130 = 24)	2	1.33
Household questionnaire completed (DB135 = 1+ 2)	**2388**	**100.00**
Interview accepted for database (DB135 = 1)	2388	100.00
Interview rejected (DB135 = 2)	0	0.00

Third wave

Table 40 3rd wave: Distribution of households by 'record of contact at address'

	Count	%
Total (DB120 = 11 to 23)	**1877**	**100.00**
Address contacted (DB120 = 11)	1815	96.70
Address non-contacted (DB120 = 21 to 23)	62	3.30
Total address non-contacted (DB120 = 21 to 23)	**62**	**100.00**
Address cannot be located (DB120 = 21)	0	0.00
Address unable to access (DB120 = 22)	0	0.00
Address does not exists or is non-residential address or is unoccupied or not principal residence (DB120 = 23)	62	100.00

Table 41 3rd wave: Distribution of address contacted by 'household questionnaire result'

	Count	%
Total	**1815**	**100.00**
Household questionnaire completed (DB130 = 11)	1741	95.92
Interview not completed (DB130 = 21 to 24)	74	4.08
Total interview not completed (DB130 = 21 to 24)	**74**	**100.00**
Refusal to co-operate (DB130 = 21)	51	98.92
Entire household temporarily away for duration of fieldwork – i.e. non-contacts (DB130 = 22)	13	17.57
Household unable to respond (illness, incapacity, etc.) (DB130 = 23)	9	12.16
Other reasons (DB130 = 24)	1	1.35
Household questionnaire completed (DB135 = 1+ 2)	**1741**	**100.00**
Interview accepted for data base (DB135 = 1)	1741	100.00
Interview rejected (DB135 = 2)	0	0.00

Fourth wave

Table 42 4th wave: Distribution of households by 'record of contact at address'

	Count	%
Total (DB120 = 11 to 23)	**2432**	**100.00**
Address contacted (DB120 = 11)	2360	97.04
Address non-contacted (DB120 = 21 to 23)	72	2,96
Total address non-contacted (DB120 = 21 to 23)	**72**	**100.00**
Address cannot be located (DB120 = 21)	1	1.39
Address unable to access (DB120 = 22)	0	0.00
Address does not exists or is non-residential address or is unoccupied or not principal residence (DB120 = 23)	71	98.61

Table 43 4th wave: Distribution of address contacted by 'household questionnaire result'

	Count	%
Total	**2360**	**100.00**
Household questionnaire completed (DB130 = 11)	2336	98.98
Interview not completed (DB130 = 21 to 24)	24	1.02
Total interview not completed (DB130 = 21 to 24)	**24**	**100.00**
Refusal to co-operate (DB130 = 21)	20	83.33
Entire household temporarily away for duration of fieldwork – i.e. non-contacts (DB130 = 22)	3	12.50
Household unable to respond (illness, incapacity, etc.) (DB130 = 23)	1	4.17
Other reasons (DB130 = 24)	0	0.00
Household questionnaire completed (DB135 = 1+ 2)	**2336**	**100.00**
Interview accepted for database (DB135 = 1)	2336	100.00
Interview rejected (DB135 = 2)	0	0.00

Total sample

Table 44 Total sample: Distribution of households by 'record of contact at address'

	Count	%
Total (DB120 = 11 to 23)	**11274**	**100.00**
Address contacted (DB120 = 11)	10720	95.09
Address non-contacted (DB120 = 21 to 23)	554	4.91
Total address non-contacted (DB120 = 21 to 23)	**554**	**100.00**
Address cannot be located (DB120 = 21)	319	57.58
Address unable to access (DB120 = 22)	0	0.00
Address does not exists or is non-residential address or is unoccupied or not principal residence (DB120 = 23)	235	42.42

Table 45 Total sample: Distribution of address contacted by 'household questionnaire result'

	Count	%
Total	**10720**	**100.00**
Household questionnaire completed (DB130 = 11)	9098	84.87
Interview not completed (DB130 = 21 to 24)	1622	15.13
Total interview not completed (DB130 = 21 to 24)	**1622**	**100.00**
Refusal to co-operate (DB130 = 21)	1274	78.54
Entire household temporarily away for duration of fieldwork – i.e. non-contacts (DB130 = 22)	248	15.28
Household unable to respond (illness, incapacity, etc.) (DB130 = 23)	86	5.30
Other reasons (DB130 = 24)	14	0.86
Household questionnaire completed (DB135 = 1+ 2)	**9098**	**100.00**
Interview accepted for data base (DB135 = 1)	9098	100.00
Interview rejected (DB135 = 2)	0	0.00

2.3.3.4 Distribution of substituted units

Substitutions were not used.

2.3.3.5 Item non-response

In following table there are an overview of the item non-response for all income variables is presented. The percentage households having received an amount, the percentage of households with missing values and the percentage of households with partial information is calculated.

These percentages are calculated as follows:

   % of households having received an amount: number of households (or persons) who have received something (yes to a filter) / total

   % of households with missing values: number of households (or persons) who said that they have received something but did not give any amount (no partial information) / number of households (or persons) who have received something (yes to a filter)

   % of households with partial information: number of households (or persons) who said that they have received something but gave partial information (amounts were not given for all components) / number of households (or persons) who have received something (yes to a filter)

Table 46 Overview of the non-response for the income variables: % households having received an amount, % of households with missing values and % of households with partial information

Item non-response (overview for different income components)[3]	% of households having received an amount	% of households with missing values (before imputation)	% of households with partial information (before imputation)
Total gross household income (HY010)	99.99	0.00	0.24
Total disposable household income (HY020)	100.00	0.00	0.24
Total disposable household income before social transfers except old-age and survivor's benefits (HY022)	98.96	0.00	0.24
Total disposable household income including social transfers except old-age and survivor's benefits (HY023)	90.84	0.00	0.27
Net income components at household level			
Income from rental of a property or land (HY040N)	5.57	0.39	0.00
Family related allowances (HY050N)	14.38	0.00	0.00
Social exclusion not elsewhere classified (HY060N)	1.55	0.00	0.00
Housing allowance (HY070N)	2.03	0.00	0.00
Regular inter-household cash transfer received (HY080N)	9.12	0.00	0.00
Income received by people aged < 16 (HY110N)	0.00	0.00	0.00
Regular taxes on wealth (HY120N)	67.48	0.00	0.00
Regular inter-household cash transfer paid (HY130N)	9.20	0.00	0.00
Tax on income and social contributions (HY140N)	67.27	0.00	0.00
Value of goods produced by own-consumption (HY170N)	49.97	0.00	0.00
Gross income components at household level			
Income from rental of a property or land (HY040G)	5.57	0.39	0.00
Family related allowances (HY050G)	14.38	0.00	0.00
Social exclusion not elsewhere classified (HY060G)	1.55	0.00	0.00
Housing allowance (HY070G)	2.03	0.00	0.00
Regular inter-household cash transfer received (HY080G)	9.12	0.00	0.00
Interests, dividends, etc. (HY090G)	14.25	0.00	0.00
Interest repayments on mortgage (HY100G)	10.15	0.00	0.00
Regular taxes on wealth (HY120G)	67.48	0.00	0.00
Regular inter-household cash transfer paid (HY130G)	9.20	0.00	0.00
Tax on income and social contributions (HY140G)	67.27	0.00	0.00
Value of goods produced by own-consumption (PY070G)	49.97	0.00	0.00

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[3] For the more detailed definitions of the SILC income variables, please refer to the SILC UDB Documentation

	% of persons 16+ having received an amount	% of persons with missing values (before imputation)	% of persons with partial information (before imputation)
Net income components at personal level			
Employee cash or near cash income (PY010N)	47.76	0.16	0.00
Contributions to individual private pension plans (PY035N)	44.20	0.05	0.00
Pension from individual private plans (PY080N)	0.49	0.00	0.00
Unemployment benefits (PY090N)	3.76	0.29	0.00
Old age benefits (PY100N)	30.85	0.04	0.00
Survivor' benefits (PY110N)	9.63	0.06	0.00
Sickness benefits (PY120N)	6.38	0.09	0.00
Disability benefits (PY130N)	8.05	0.07	0.00
Education-related allowances (PY140N)	0.78	0.00	0.00
Gross income components at personal level			
Employee cash or near cash income (PY010G)	47.76	0.16	0.00
Non cash employee income (PY020G)	27.43	0.14	0.00
Contributions to individual private pension plans (PY035G)	44.20	0.05	0.00
Cash benefits or losses from self-employment (PY050G)	8.52	0.32	0.00
Pension from individual private plans (PY080G)	0.49	0.00	0.00
Unemployment benefits (PY090G)	3.76	0.29	0.00
Old age benefits (PY100G)	30.88	0.05	0.00
Survivor' benefits (PY110G)	9.63	0.06	0.00
Sickness benefits (PY120G)	6.38	0.09	0.00
Disability benefits (PY130G)	8.05	0.07	0.00
Education-related allowances (PY140G)	0.78	0.00	0.00

2.4 Mode of data collection

Distribution of household members by data status (RB250)

Registers are not used at all. Due to strict definition of response, there are any "not completed interviews" at individual level or "not contacted individuals" (all such cases were filled as proxy or were self-administered by respondents).

Distribution of household members by type of interview (RB260)

The data collection methods were PAPI (Paper Assistance Personal Interview) around 54 percent, and CAPI (Computer Assistance Personal Interview) around 26 percent. Most of the questionnaires were filled during fact-to-face interview with the interviewer (81 percent). PAPI contain also interview that was carried out by PAPI and then feed into electronic questionnaire. Some personal questionnaires were filled as proxy interviews (19 percent) – information about household member was not present at the time of the interview was provided by another household member. In some case, where this was agreed with the household, interviewer left the personal questionnaire for some household member and collected it later (self-administered questionnaire).

Table 47 Distribution of household members by type of interview (RB260)

Method	Total		First wave	
	Count	%	Count	%
Face to face interview - PAPI	9 911	54.43	2 832	53.94
Face to face interview - CAPI	4 762	26.15	1 394	26.55
CATI, Telephone interview	not used	-	not used	-
Self-administered by respondent	13	0.07	7	0.13
Proxy interview	3 523	19.35	1 017	19.37
Total	18 209	100.00	5 250	100.00

Method	Second wave		Third wave		Fourth wave	
	Count	%	Count	%	Count	%
Face to face interview - PAPI	2 399	50.79	463	13.11	4 217	89.63
Face to face interview - CAPI	1 368	28.96	2 000	56.64	not used	-
CATI, Telephone interviews	not used	-	not used	-	not used	-
Self-administered by respondent	1	0.02	not used	-	5	0.11
Proxy interview	955	20.22	1 068	30.25	483	10.27
Total	4 723	100.00	3 531	100.00	4 705	100.00

2.5 Interview duration

The average interview duration in successfully interviewed households (the whole interview time: household + all personal questionnaires combined) was 31.3 minutes. The average interview duration we can divide between paper questionnaire interview (PAPI) and computer questionnaire interview (CAPI).

The following tables presents the mean interview duration in minutes calculated as the sum of the duration of all household interviews (HB100) plus the sum of the duration of all personal interviews (PB120), divided by the number of household members aged 16 and over whose household questionnaire is completed and accepted for the database (PB030)[4]

Table 48 Average interview durations in minutes (2006 to 2010)

2006	2007	2008	2009	2010
42.5	41.3	36.6	30.3	**31.3**

Table 49 Average interview durations in minutes by type of interview

Method	Total duration	Duration of personal questionnaire
Face to face interview - PAPI	38.6	21.2
Face to face interview – CAPI	29.1	13.0
Self-administered by respondent	33.1	20.6
Proxy interview	31.8	12.3
Total	31.3	17.6

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[4] If the household interview duration (HB100) or one personal interview duration (PB120) is missing for one member of the household, then the household is excluded from the calculation.

3. Comparability

3.1 Basic concepts and definitions

- The reference period: no differences between the national and standard EU-SILC concept
- The private household definition: no differences (there can be more households in one dwelling eligible for the survey)
- The household membership: no differences
- The income reference period used: calendar year 2009
- The period for taxes and social contributions: taxes and social insurance contribution refer to the income received during the income reference period
- The reference period for taxes on wealth: income reference period
- The lag between the income reference period and current variables: three to four months (the survey took place from the end of February to May 2010)
- The total duration of the data collection of the sample: 9 weeks (PAPI), 11 weeks (CAPI)
- Basic information on activity status during the income reference period: no differences

3.2 Components of income

3.2.1 Differences between the national definitions and standard EU-SILC definitions

The concepts and definitions used in the survey are those set in the EU-SILC documentation (definitions of target variables, as they are set in the EU-SILC regulations and technical document "Description of Target Variables – Doc. SILC 065). There is only one deliberate deviation from the used concepts:

3.2.2 The source or procedure used for collection of income variables

All the income variables are obtained by interview. The EU-SILC income target variables were divided to more subcomponents. The subcomponents were defined according to the Czech benefit system. These subcomponents were surveyed.

3.2.3 The form in which income variables at component level have been obtained

Both alternatives (gross amounts, net amount – net of taxes and social insurance contributions) were available to respondents for income from employment and self-employment income. In addition, information on claimed tax deductions was collected from respondents. Algorithms based on detailed application of the national tax rules were then used to calculate the complementary net/gross amount. Social benefits are generally tax-exempt – therefore there is no difference between gross and net values – they can be collected as one value and assigned to both gross and net.

Table 50 Overview of the collection of income data (net/gross values)

Income component	% collected net of taxes and social contributions	% collected gross[5]
Net income component at personal level		
Employee cash or near cash income (PY010N)	54.55	45.45
Non-cash employee income (PY020N)	-	-
Contributions to individual private pension plans (PY035N)	100.00	0.00
Cash benefits or losses from self-employment (PY050N)	-	-
Pension from individual private plans (PY080N)	100.00	0.00
Unemployment benefits (PY090N)	100.00	0.00
Old-age benefits (PY100N)	100.00	0.00
Survivor' benefits (PY110N)	100.00	0.00
Sickness benefits (PY120N)	100.00	0.00
Disability benefits (PY130N)	100.00	0.00
Education-related allowances (PY140N)	100.00	0.00
Gross income components at personal level		
Employee cash or near cash income (PY010G)	54.55	45.45
Non-cash employee income (PY020G)	0.00	100.00
Contributions to individual private pension plans (PY035G)	100.00	0.00
Cash benefits or losses from self-employment (PY050G)	30.28	69.72
Pension from individual private plans (PY080G)	100.00	0.00
Unemployment benefits (PY090G)	0.00	100.00
Old-age benefits (PY100G)	0.00	100.00
Survivor' benefits (PY110G)	0.00	100.00
Sickness benefits (PY120G)	0.00	100.00
Disability benefits (PY130G)	0.00	100.00
Education-related allowances (PY140G)	0.00	100.00

3.2.4 The method used for obtaining the income target variables in required form

Situation of missing income data for one of the household members was rare (22 cases). For these persons, the income was imputed by the simple hot-deck method (using randomly chosen person with similar characteristics from another household).

Another source of bias, which needs to be taken into account, stems from the interviewing. Data on income obtained during interviews with household members have the tendency to underestimate certain sources of income or data on some components is missing (item non-response).

Underestimation of income is a natural consequence of the fact, that respondents either tends to give lower then actual values or simply did not recall certain irregular or small incomes. It is, more or less, a non-sampling error, affected substantially by the incomes themselves and by their source. The possibilities to eliminate this underestimation of the survey data are limited. In the presented survey, only such adjustments were done, where there was sufficiently reliable external statistical source or which can be based on the legislation.

Data on gross income from employment were compared with corresponding data from wage statistics broken into sectors of activity (NACE). Different from the last year's survey and in

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[5] Gross amount does not include social insurance contributions for the self-employed – where these are treated in our national system as part of the tax-deductible costs and not as part of the gross self-employment income.

accordance with experience from other income surveys, income from work was underestimated (roughly by 5.4 %). Primarily, this underestimation concerned those incomes that were recorded as yearly lump sums. Such incomes were moderately boosted so that the average monthly gross pay by sectors approached the data from wage statistics. There was no need for corrections with income from private enterprise.

In case of social benefits for which there is a legal entitlement (parental leave benefit, child birth benefit, death grant provided to families of the deceased, to some extent also maternity leave benefit), a check on their receiving by the eligible households was applied and amounts provided were corrected according to the amounts fixed by the legislation. Old age benefits (pension from the social security system) were not corrected, since their underestimation is quite low.

Amounts declared by the unemployed as unemployment benefits were overestimated. Unemployed respondents tend to report their income from social benefits as unemployment benefits and do not distinguish them from the minimum income support benefits (claimed on the basis of the legal minimum subsistence amounts). In cases where the duration of unemployment and the reported amounts did not match the rules of the unemployment benefits provision, the reported amounts were re-classified as minimum income support benefits.

It was not possible to correct the underestimation of the sickness benefits (where respondents tend to forget spells of short-term illness over the 12 months income reference period), means-tested social benefits whose claims depend on the previous income (prior to the income reference periods), capital income and non-monetary income generated by own-consumption.

The value of goods produced by own-consumption was an estimate of the household based on the amount of consumed food and other goods, own production and goods from own business during the year 2008 (for example food and animals from own small-scale non-commercial farming activity, value of meals from own restaurant, bread from own bakery and the like).

4. Coherence

4.1 Comparison of income target variables and number of persons with external sources

The numbers of recipients of most of the incomes were used as calibration variables. The total gross income can be divided into four components: income of employees, income of self-employed, social income and other income. Any other sufficiently reliable source of household income is not available. The only part of income that can be reliably compared with the external source (administrative source) is the social income.

Table 51 Social income – comparison with administrative sources (Ministry of Labour and Social Affairs) – in million CZK

	EU-SILC 2009	Administrative source	Ratio*
Total social income	**384 261**	**409 650**	**93.8**
Sickness benefits PY120G	15 842	26 033	60.9
Pensions (all)	325 500	331 704	98.1
Unemployment benefits PY090G	9 147	15 078	60.7
Child benefits	4 744	4 736	100.2
Parental allowances	27 269	28 586	95.4
Housing allowances HY070G	1 772	2 280	77.7

* (EU-SILC/Administrative source)*100

The other income components except to social income can be only compared to national accounts for household sector. Comparison of the aggregated income from this survey with the household sector aggregates of the national accounts (even after their modification taking into account the items, which are not covered by household income surveys) is relatively difficult. Concerning its aggregated value the income obtained by direct questioning in the households will always be lower. The more important fact for evaluation of their credibility is that the trend in development of household income is in line with the trends in the national accounts. From this viewpoint, the presented results of SILC 2009 are in full agreement with data from the previous year and with related statistics from developed nations of the European Union.

Table 52 Income – comparison with national accounts – in million CZK

	EU-SILC 2009	National Accounts*	Ratio**
Income of employees	1 056138	1 192 496	88.8
Income of self-employed	240 828	298 996	78.8
Total gross income	**1 754 015**	**2 059 301***	**85.4**
Total net income	1 490 943	1 960 084***	77.1

* Preliminary results
** (EU-SILC/National Accounts)*100
*** Excluding imputed rent