

EUROMOD

COUNTRY REPORT



CZECH REPUBLIC (CZ)

2009 – 2013

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EUROMOD version G2.0



EUROMOD is a tax-benefit microsimulation model for the European Union (EU) that enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes and work incentives for the population of each country and for the EU as a whole.

EUROMOD has been enlarged to cover 27 Member States and is updated to recent policy systems using data from the European Union Statistics on Income and Living Conditions (EU-SILC) as the input database, supported by DG-EMPL of the European Commission.

This report documents the work done in one annual update for 2009-2013. This work was carried out by the EUROMOD core developer team, based mainly in ISER at the University of Essex, in collaboration with a national team.

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The results presented in this report are derived using EUROMOD version G2.0 EUROMOD is continually being improved and the results presented here may not match those that would be obtained with later versions of EUROMOD.

For more information, see: <http://www.iser.essex.ac.uk/research/euromod>

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The seven-year Programme targets all stakeholders who can help shape the development of appropriate and effective employment and social legislation and policies, across the EU-27, EFTA-EEA and EU candidate and pre-candidate countries.

PROGRESS mission is to strengthen the EU contribution in support of Member States' commitment. PROGRESS is instrumental in providing analysis and policy advice on PROGRESS policy areas; monitoring and reporting on the implementation of EU legislation and policies in PROGRESS policy areas; promoting policy transfer, learning and support among Member States on EU objectives and priorities; and relaying the views of the stakeholders and society at large

For more information see: <http://ec.europa.eu/progress>

The information contained in this publication does not necessarily reflect the position or opinion of the European Commission.

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1. BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The tax-benefit system is unified. There are no exceptions.
- The tax system can be generally changed in January each year. Main benefit changes happen at the same time, but may also be implemented in June.
- Retirement age is different depending on age of the person, for women it also depends on the number of raised children. The pension age has been increasing by two months for men and four months for women for each year since 1996 until the end of 2012 when it reached the maximum of 68 years for all persons born in 1983. The retirement age for persons born after 1983 will be further increased by 2 months per year of birth.
- Minimum school leaving age is 15; a dependent child is classified as a child that has not yet finished compulsory schooling and until 26 if he or she is training for future employment; or, alternatively, if the child cannot train for future employment because of injury, long-term illness or if the child is not able to work.
- The income tax system is an individual system; however (in 2005-2007) married couples with at least one child all living in the same household could choose to fill out a joint tax return.
- The means-tested benefit system assesses entitlement according to benefit unit income. The benefit unit is the nuclear family - the couple (cohabiting or married) or single adult plus any dependent children.

1.2 Social Benefits

Social benefits can be broken down into the following categories:

1.2.1 Social insurance benefits

Unemployment benefit is short term benefit, which is available for unemployed individuals actively searching for a job.

Sickness benefits create the sickness insurance system which is intended for people in remunerative work, for whom it provides security through financial sickness insurance benefits in cases of so-called short-term social events (temporary inability to work due to an illness, injury or quarantine, caring for a family member, pregnancy and maternity or caring for a child).

Pension system contains five types of pensions: old-age pensions, full invalidity pensions, part-invalidity pensions, widow or widower pensions, and orphan pensions.

Disablement Benefit (*nemocenské dávky*): this benefit is paid for all days that a person is disabled, but not more than for one year (or at most two years if the person is disabled due to work injury). The amount of the benefit is calculated from the daily benefit base.

Benefit for Treatment of a Family Member (*ošetřovné*): this benefit is for treatment of a family member for a person caring for an ill child under ten, or caring for a person over ten if required. The person undergoing treatment must live in the same household as the benefit recipient. The benefit is paid for at most nine days, or at most 16 days if the person caring for a child younger than 10 lives alone with the child in the household.

Maternity and Pregnancy Benefit (*vyrovnávací příspěvek v těhotenství a v mateřství*): is paid to women working at a less well-paid position because of her pregnancy or maternity. The benefit is provided from the day she leaves a better-paid position until at most nine months after the birth of her child. The net benefit base is the same as that of disablement benefit for the period after two weeks of illness. The amount of the benefit is calculated as the difference between the net benefit base before and after moving to a less well-paid position.

Maternity Allowance (*peněžitá pomoci v mateřství*): is available for women who give birth to children and who have paid health insurance for at least 270 days in the prior two years. Eligible entrepreneurs must have paid health insurance for at least 270 days in the last year before the birth. The woman must not have a paid position and may not run her own business. The maternity allowance is paid for maximum of 28 weeks.

Social insurance benefits are not simulated in Euromod because of lack of relevant data, the exception is unemployment benefit that can be partially simulated under a number of assumptions.

1.2.2 State social support

- Means-tested
 - **Child allowance:** is basic long-term benefit provided to families with dependent children.
 - **Social allowance:** aims to help families with low incomes to cover the costs of their children's needs. Social allowance only available for families with disabled children since 2011 and abandoned since 2012.
 - **Housing benefit:** should help households to cover the costs of housing.
- Non-means tested
 - **Parental allowance:** aimed at parents who care in person and on a daily basis for a child up to four years old.
 - **Foster care benefits:** for dependent children placed in foster care. The child continues to be entitled to this allowance even after reaching adulthood, up to a maximum of 26 years of age, provided that they remain a dependent child and live under the same roof as their former foster parent(s).
 - **Funeral grant:** is available to a person arranging a funeral.
 - **Birth grant:** is available to any mother who gives birth to one or more children.

1.2.3 Social assistance

Social necessity benefits: serve as a last resort. When a net household income including any state social support benefits is less than the family-level MLS, the household is entitled to social necessity benefit.

Social care benefits are one-off allowances usually paid to disabled people for specific purposes. For example, these benefits may include specific amounts for homecare services, spa services, increased cost of diabetic food, wheelchair purchase, increased cost for blind or otherwise disabled persons, for reconstruction of houses needed for disabled access, etc.

The system is organized around a key parameter — the so-called minimum living standard (MLS).

- *Not strictly benefits*

There are no benefits of this type in the Czech Republic.

1.3 Social contributions

The social contributions in the Czech Republic can be divided into two parts:

Social insurance and state employment policy contributions consist of pension insurance, contributions for the state employment policy and sickness insurance. The participation in this system is compulsory for all persons, who have income from work and business.

Contribution for public health insurance is administrated by special public bodies – health insurance companies. The participation in this system is compulsory for all persons. The contribution of persons, who cannot have income from work and business, is paid by the state budget.

1.4 Taxes

The current Czech taxation system was introduced in 1992. While direct taxes include income tax and real estate tax, indirect taxation consists of value added tax (VAT), excise taxes, road tax, estate tax, beneficiary tax and the tax on the transfer of real estate.

Income Tax (*daň z příjmu*) is paid by corporations and individuals. The corporate income tax is 19% of gross profit. Personal income tax is paid by any person who has residence or lives in the Czech Republic for at least 183 days in a year. Taxable income includes all income earned in the Czech Republic and abroad. The tax rate is flat and equal to 15%. The second tax bracket with the additional tax rate (+ 7 %) was introduced since 2013, but it is relevant just for the income, which is taxed by social security contribution.

Real Estate Tax (*daň z nemovitosti*) has two parts: Land tax and Building tax. The tax is paid by the owner of land or building but the rates are very low.

Value Added Tax - VAT (*daň z přidané hodnoty*) is levied on the supply of goods, real estate transfers, services provided in the Czech Republic and imported goods from outside the European Union (EU). A typical VAT taxpayer is an entrepreneur or a company with headquarters or outlet in the Czech Republic if their turnover was higher than 1,000,000 CZK in the last 12 months or if they are registered as a voluntary taxpayer. VAT taxpayers may claim a return on the tax paid to other VAT taxpayers if the goods are used as inputs for production. The difference between VAT on sold goods and services and VAT on inputs is termed VAT tax duty. If the tax duty is negative, VAT taxpayers receive a refund. The standard VAT rate is 20% with a preferential rate of 14%.¹ The latter is levied on groceries, non-alcoholic beverages, books, newspapers and magazines, medical goods, medical services, water distribution, services linked to student accommodation and social housing, public transport, cultural and sport services, and imports of artistic and collector's items.

Excise Tax (*spotřební daň*) is levied on mineral oil, alcohol, beer, wine, tobacco and tobacco goods. The tax is levied on goods made in or imported to the EU.

Road Tax (*silniční daň*) is paid by entrepreneurs for each vehicle used for business purposes and for all vehicles above 12 tons irrespective of use, except vehicles designated for agricultural purposes.

¹ The VAT rates (standard / preferential) increased in the last years a lot, the rates were 19% / 5% till 2007, 19% / 9% in 2008 and 2009, 20% / 10% in 2010 and 2011, and 20% / 14% since 2012.

2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Simulation of benefits in EUROMOD

| | Variable name(s) | Treatment in Euromod | | | | | Why not fully simulated? |
|------------------------------------|------------------|----------------------|------|------|------|------|---|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | |
| Sickness Benefits | bhl | I | I | I | I | I | The amount of benefit depends on the previous income and length of sickness. |
| Passive employment policy benefits | bun_s | PS | PS | PS | PS | PS | The amount of benefit depends on the previous earning stream for a period of time, and on time spent in previous employment, and on length of past periods of unemployment. |
| Child Allowance | bch00_s | S | S | S | S | S | |
| Social Allowance | bchmt_s | S | S | - | - | - | Not simulated in 2011 due to lack of information on disability status among children. Benefit cancelled in 2012. |
| Foster Care benefits | bfafp | I | I | I | I | I | |
| Housing Benefit | bho_s | S | S | S | S | S | |
| Parental Allowance | bfapl_s | PS | PS | PS | PS | PS | Eligibility taken from data |
| Birth grant | bchba_s | S | S | S | S | S | |
| Allowance for Living | bsa00_s | S | S | S | S | S | |
| Supplement for Housing | bsaho_s | S | S | S | S | S | |
| Total social assistance | bsa_s | S | S | S | S | S | |
| Income tax bonus | tinrf_s | S | S | S | S | S | |
| Education related allowances | bed | I | I | I | I | I | Sources and amount may vary |
| Other Social Benefits | bfaot | I | I | I | I | I | Sources and amount may vary |
| Old age pension | poa | I | I | I | I | I | Amount depends on unobserved working histories |
| Disability pension | pdi | I | I | I | I | I | Amount depends on unobserved working histories and disability level |
| Survivors pension | psu | I | I | I | I | I | Amount depends on unobserved working histories |

Notes: “-”: policy did not exist in that year; “E”: *excluded* from the model as it is neither included in the micro-data nor simulated; “I”: *included* in the micro-data but not simulated; “PS” *partially simulated* as some of its relevant rules are not simulated; “S” *simulated* although some minor or very specific rules may not be simulated.

Simulation of taxes and social contributions in EUROMOD

| | Variable name(s) | Treatment in Euromod | | | | | Why not fully simulated? |
|--|------------------|----------------------|------|------|------|------|--|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | |
| Income tax final liability | tin00_s | S | S | S | S | S | |
| Separate tax scheme liability | tinpx_s | S | S | S | S | S | |
| Propety tax | tpr | I | I | I | I | I | Information on property value unobserved |
| Employees ssc | tscee_s | S | S | S | S | S | Includes all components of ils_sicee |
| Employer’s ssc | tscer_s | S | S | S | S | S | Includes all components of ils_sicer |
| Entrepreneurs ssc | tscse_s | S | S | S | S | S | Includes all components of ils_sicse |
| State funded public health insurance contributions | tschlgv_s | S | S | S | S | S | |

Notes: “-” policy did not exist in that year; “E” policy is *excluded* from the model’s scope as it is neither included in the microdata nor simulated by Euromod; “PS” policy is *partially simulated* as some of its relevant rules are not simulated; “S” policy is *simulated* although some minor or very specific rules may not be simulated.

- **Structural changes between 2009 and 2010**

No changes.

- **Structural changes between 2010 and 2011**

Social allowance only available for families with disabled children. This element is not modelled due to lack of information on disability status among children.

- **Structural changes between 2011 and 2012**

Social allowance is cancelled.

- **Structural changes between 2012 and 2013**

No changes.

2.2 Order of simulation and interdependencies

Employee and employer social and health contributions as well as income tax are simulated first as they are deductible from the income tax taxable income. Social benefits are simulated after income tax as they are tax exempt and, when means-tested, the income tests are based on net income. The order of simulate of benefits takes into account the “cumulative nature” of their income tests. The income test of Social Allowance and Housing Benefit are the same as the Child Allowance plus this benefit. As for Social Assistance, its income test is the same as the previous plus Social Allowance and Housing Benefit.

Simulated policies & order of simulations

| | | | | | | | | |
|---|---|---------------|-----|-----|-----|-----|-----|---|
| ▶ | ● | uprate_cz | on | on | on | on | on | DEF: UPRATING FACTORS |
| ▶ | ● | ildef_cz | on | on | on | on | on | DEF: INCOME CONCEPTS |
| ▶ | ● | tundef_cz | on | on | on | on | on | DEF: ASSESSMENT UNITS |
| ▶ | ● | DefCons_cz | on | on | on | on | on | DEF: define constants |
| ▶ | ● | neg_cz | on | on | on | on | on | SWITCH: recode negative income to zero |
| ▶ | ● | yem_cz | off | off | off | off | off | SWITCH: minimum wage |
| ▶ | ● | cer_cz | on | on | on | on | on | SIC: employer social and health insurance contributions |
| ▶ | ● | cee_cz | on | on | on | on | on | SIC: employee social and health insurance contributions |
| ▶ | ● | cse_cz | on | on | on | on | on | SIC: self employed social and health insurance contributions |
| ▶ | ● | tin_cz | on | on | on | on | on | TAX: income tax |
| ▶ | ● | bun_cz | on | on | on | on | on | BEN: unemployment benefit, partially simulated (to fully simulate switch currently "off" functions to "on") |
| ▶ | ● | cot_cz | on | on | on | on | on | "SIC: state funded public health insurance contributions (students, pensioners, children, etc.)" |
| ▶ | ● | bfapl_cz | on | on | on | on | on | BEN: parental allowance |
| ▶ | ● | bch00_cz | on | on | on | on | on | BEN: child allowance |
| ▶ | ● | bchmt_cz | on | on | off | n/a | n/a | BEN: social allowance |
| ▶ | ● | bchba_cz | on | on | on | on | on | BEN: birth grant |
| ▶ | ● | bho_cz | on | on | on | on | on | BEN: housing benefit |
| ▶ | ● | bsa_cz | on | on | on | on | on | BEN: social assistance (social necessity benefit / Allowance for Living) |
| ▶ | ● | output_std_cz | on | on | on | on | on | DEF: STANDARD OUTPUT INDIVIDUAL LEVEL |
| ▶ | ● | output_hh_cz | off | off | off | off | off | DEF: STANDARD OUTPUT HOUSEHOLD LEVEL |

2.3 Policy switches

There are two standard switches included into the spine (see above):

- **neg_cz**: switched ON by default
 - recodes negative income to zero; currently this policy only recodes negative self-employment income to zero, initial value stored in *i_yse0*
- **yem_cz**: switched OFF by default
 - if hourly wage is lower than hourly minimum wage recalculate in accordance to the minimum wage, leaving hours of work as recorded in the data; if ON overwrites *yem*.

2.4 Social benefits

Main reference amounts used for calculating social benefits or income testing are discussed below.

- **Minimum Living Standard (MLS)**

The system is organized around a key parameter — the so-called minimum living standard (MLS). This amount is calculated at the personal level, and is intended to reflect the cost of living. Most types of benefits are then defined as given percentages of the family-level MLS.

The construction of MLS has one element. Amounts of MLS are different for single person, first adult in family, another adult in family and for children (three categories according to age).

| <i>MLS (in CZK per month)</i> | <i>2009-2011</i> | <i>2012-2013</i> |
|--|------------------|------------------|
| Single | 3,126 | 3,410 |
| First person in household | 2,880 | 3,140 |
| Second and other persons who are not a dependent child | 2,600 | 2,830 |
| Subsistence Minimum (CZK) | 2,020 | 2,200 |
| Dependent child aged | | |
| ○ under 6 years | 1,600 | 1,740 |
| ○ 6 - 15 years | 1,960 | 2,140 |
| ○ 15 - 26 years | 2,250 | 2,450 |

- **Minimum self-employment income for income test of social benefits**

If person in the family has the income from business as the main income, its contribution to the income for the purpose of testing eligibility for social benefits cannot be lower than 50 % of average wage in previous year.

- **Average & minimum wage**

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------------------|--------|--------|--------|--------|--------|
| Average wage: | | | | | |
| in previous year | 23,400 | 23,400 | 23,800 | 24,200 | 25,000 |
| in Q1-3of previous year | 22,943 | 22,897 | 23,324 | 23,726 | 24,409 |
| Minimum wage: | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |

* Economy-wide average wage in the first three quarters of the preceding year

2.4.1 Social Insurance

2.4.1.1 Unemployment Benefits (bun_cz)

Unemployment benefits are available for individuals actively searching for a job who were employed for at least 12 months in the previous three years and who are not receiving an old-age pension, full invalidity pension or sickness benefits. The employment record required to be eligible for unemployment benefits includes the time taken preparing a partially disabled person for a job, military or civil service, custody of a child less than three years old or a disabled child up to the age of 18, custody of disabled person above 80 or partially disabled relatives above 80, and the time of receiving disablement benefit.

The benefit entitlement for people less than 50 years is 5 months; from 50 to 55 years are 8 months and over 55 years, 11 months. *Note: duration of the benefit is taken from the data in simulations due to incomplete information.*

The basis for calculating unemployment benefit includes income net of social insurance contributions and income tax, i.e. the average net monthly wage in the previous job, or the net profit from previous entrepreneurial activity. The amount of benefit is in the first 2 months equal 65% of the average net wage in the last employment, next 2 months it is 50% and for the remaining time it is 45%. The maximum amount of unemployment benefit is 58% of the economy-wide average wage in the first three quarters of the preceding year (see table above). The minimum amount (which is applied, if it is not possible to prove the amount of previous income) is 12% of the average wage in the first three quarters of the preceding year. *Note: minimum threshold is not implemented in EUROMOD due to data constraints.*

- **Changes in 2010**

No change

- **Changes in 2011**

In case of voluntary withdrawal from the work, the coefficient for calculation of unemployment benefit is reduced to 45%. *Note: This element is not simulated in EUROMOD due to lack of information on reasons for withdrawal from work and incidence.*

- **Changes in 2012**

A person is entitled to unemployment benefit if he or she was employed for at least 12 months during the last two years.

In case of voluntary withdrawal from the work, entitlement to unemployment benefit begins after 6 months. *Note: This element is not simulated in EUROMOD due to lack of information on reasons for withdrawal from work and incidence.*

- **Changes in 2013**

No change

2.4.2 State Social Support

All benefits provided through the state social support are not taxable and may be divided between means-tested and non-means-tested benefits. General net household income for the purpose of testing eligibility for the state social support is defined as taxable income for the purpose of income taxation, stipends, housing supplements from employers, bonuses, alimony, sickness benefits, unemployment benefits, income from abroad and pensions. Net profit from entrepreneurial activity is included if it is greater than zero and its contribution to the income for the purpose of testing eligibility for social benefits cannot be lower than 50 % of average wage in previous year. On the other hand, general net household income does not include any debts.

A family is defined for the purpose of state social support (except housing benefit for which all persons of the same domicile address are considered in the same unit of assessment) as a person, dependent children, parents of dependent children, spouses or partners, dependent children of dependent children (if they are not married, widowed or divorced) if they live with the person in the same household and meet the cost of living together. If a dependent child is under 18, the condition of meeting the costs of living together is not required. If a dependent child is over 18 and under 26 and is training for future employment, the condition of meeting the costs together is not required if the child has the same domicile address as her parents. A spouse is considered to be a unit member.

A dependent child for the purpose of state social support is classified as a child that has not yet finished compulsory schooling and until 26 if he or she is training for future employment (i.e., is in education); or, alternatively, if the child cannot train for future employment because of injury, long-term illness or if the child is not able to work. A child between the end of compulsory schooling and 18 is also dependent if registered at a district labour office and not receiving unemployment benefit. A child receiving a full invalidity pension is not considered a dependent child.

2.4.2.1 Child Allowance (bch00_s)

Child allowance is a benefit provided to families with dependent children with an income of less than 2.4 times the family's living minimum. The net household income which is tested for the purpose of child allowance is the general net household income plus foster care benefit and parental allowance. The relevant period for the income test is the calendar year prior to the year when the income is tested.

The allowance, per child, is provided on three levels, depending on the age of the child:

| Age of the dependent child | Amount of monthly child allowance per child in CZK |
|----------------------------|--|
| Up to 6 years of age | 500 |
| From 6 – 15 years | 610 |
| From 15 – 26 years | 700 |

- **Changes in 2010**

No changes.

- **Changes in 2011**

No changes.

- **Changes in 2012**

No changes.

- **Changes in 2013**

No changes.

2.4.2.2 Social Allowance (bchmt_cz)

A social allowance is available to families with at least one dependent child if their net income was less than $2 \times MLS$ in the previous quarter. (The 2 is the parameter A). Net household income for the purpose of the income test is the net household income relevant for a child allowance test plus the child allowance. The relevant time span for the income test is the previous calendar quarter.

The amount of the allowance is determined as

$$SocialAllowance = \sum Children'sMLS - \frac{\sum Children'sMLS \times \max\{NetIncome, TotalMLS\}}{TotalMLS \times 2}$$

The children's part of MLS may be increased by multiplying the allowance by 2.7 if the child is disabled, 2.4 if the child is partially disabled, 1.2 if the child is persistently ill and 1.1 if children are born within three years. The household part of MLS can be multiplied by 1.4 if both or just one parent are disabled, 1.1 if one of the parents is disabled, and by 1.05 for a single parent (who does not need to be disabled). If several conditions are fulfilled, the social allowance is then the sum of the basic allowance and the sum of allowances calculated as allowances with particular conditions, minus the basic allowance.

- **Changes in 2010**

No changes.

- **Changes in 2011**

A social allowance is available only to families with disabled children. Other parameters are the same.

Note: Increase in social allowance for children with disability is not modelled in EUROMOD due to lack of information on disability status for children. Effectively social allowance is not modelled in EUROMOD since 2011 when it was available for families with disabled children only.

- **Changes in 2012**

The benefit was cancelled.

2.4.2.3 Housing Benefit (bho_cz)

The household is entitled to this benefit if its housing costs are higher than 30% (35% in Prague) of the net household income, while the housing costs are at most the normative costs. The normative costs are declared by the Ministry of Labour and Social Affairs, reflecting the number of persons in the household, the number of inhabitants in the municipality, and the type of housing (rental and other). The amount of the housing benefit is equal to the difference between the normative costs and 30% (35% in Prague) of the net household income. If the net household income is lower than the MLS, the household is entitled to the benefit if its housing costs are higher than 30% (35% in Prague) of the MLS. The amount of the benefit is 30% (35% in Prague) of the MLS.

Monthly normative costs (CZK) in 2009

| Normative costs of housing in rental housing (CZK / month) | | | | | |
|--|--------|-----------------------------|-----------------|-----------------|--------------|
| Number of persons in family | Prague | Number of persons in family | | | |
| | | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 5,877 | 4,816 | 4,597 | 4,309 | 4,016 |
| 2 | 8,499 | 7,037 | 6,738 | 6,344 | 5,943 |
| 3 | 11,638 | 9,739 | 9,348 | 8,832 | 8,309 |
| 4 and more | 14,597 | 12,307 | 11,835 | 11,213 | 10,582 |

| Normative costs of co-operative housing and owner housing | | | | | |
|---|--------|---|-----------------|-----------------|--------------|
| Number of persons in family | Prague | Number of inhabitants in the municipality | | | |
| | | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 3,356 | 3,356 | 3,356 | 3,356 | 3,356 |
| 2 | 5,062 | 5,062 | 5,062 | 5,062 | 5,062 |
| 3 | 7,124 | 7,124 | 7,124 | 7,124 | 7,124 |
| 4 and more | 9,078 | 9,078 | 9,078 | 9,078 | 9,078 |

- *Changes in 2010*

No changes.

- *Changes in 2011*

New monthly normative costs (CZK)

| Normative costs of housing in rental housing (CZK / month) | | | | | |
|--|--------|-----------------------------|-----------------|-----------------|--------------|
| Number of persons in family | Prague | Number of persons in family | | | |
| | | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 6,363 | 5,117 | 4,863 | 4,406 | 4,293 |
| 2 | 9,183 | 7,478 | 7,130 | 6,505 | 6,350 |
| 3 | 12,557 | 10,328 | 9,872 | 9,056 | 8,852 |
| 4 and more | 15,744 | 13,055 | 12,506 | 11,521 | 11,276 |

| Normative costs of co-operative housing and owner housing | | | | | |
|---|---|---------------|-----------------|-----------------|--------------|
| Number of persons in family | Number of inhabitants in the municipality | | | | |
| | Prague | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 3,723 | 3,723 | 3,723 | 3,723 | 3,723 |
| 2 | 5,584 | 5,584 | 5,584 | 5,584 | 5,584 |
| 3 | 7,818 | 7,818 | 7,818 | 7,818 | 7,818 |
| 4 and more | 9,950 | 9,950 | 9,950 | 9,950 | 9,950 |

- *Changes in 2012*

New monthly normative costs (CZK)

| Normative costs of housing in rental housing (CZK / month) | | | | | |
|--|-----------------------------|---------------|-----------------|-----------------|--------------|
| Number of persons in family | Number of persons in family | | | | |
| | Prague | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 7,068 | 5,616 | 5,352 | 4,563 | 4,379 |
| 2 | 10,144 | 8,157 | 7,796 | 6,715 | 6,464 |
| 3 | 13,813 | 11,214 | 10,742 | 9,330 | 9,001 |
| 4 and more | 17,269 | 14,135 | 13,565 | 11,862 | 11,466 |

| Normative costs of co-operative housing and owner housing | | | | | |
|---|---|---------------|-----------------|-----------------|--------------|
| Number of persons in family | Number of inhabitants in the municipality | | | | |
| | Prague | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 4,053 | 4,053 | 4,053 | 4,053 | 4,053 |
| 2 | 6,042 | 6,042 | 6,042 | 6,042 | 6,042 |
| 3 | 8,421 | 8,421 | 8,421 | 8,421 | 8,421 |
| 4 and more | 10,699 | 10,699 | 10,699 | 10,699 | 10,699 |

- *Changes in 2013*

New monthly normative costs (CZK)

| Normative costs of housing in rental housing (CZK / month) | | | | | |
|--|-----------------------------|---------------|-----------------|-----------------|--------------|
| Number of persons in family | Number of persons in family | | | | |
| | Prague | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 7,489 | 5,964 | 5,687 | 4,858 | 4,665 |
| 2 | 10,750 | 8,663 | 8,284 | 7,150 | 6,886 |
| 3 | 14,637 | 11,908 | 11,412 | 9,929 | 9,584 |
| 4 and more | 18,307 | 15,017 | 14,419 | 12,631 | 12,214 |

| Number of persons in family | Normative costs of co-operative housing and owner housing | | | | |
|--------------------------------|---|------------------|--------------------|--------------------|-----------------|
| | Number of inhabitants in the municipality | | | | |
| | Prague | Above 100,000 | 50,000 – 99,999 | 10,000 – 49,999 | below 10,000 |
| 1 | 4,396 | 4,396 | 4,396 | 4,396 | 4,396 |
| 2 | 6,557 | 6,557 | 6,557 | 6,557 | 6,557 |
| 3 | 9,131 | 9,131 | 9,131 | 9,131 | 9,131 |
| 4 and more | 11,615 | 11,615 | 11,615 | 11,615 | 11,615 |

2.4.2.4 Parental Allowance (bfapl_cz)

Parental allowance is available for a parent who cares in person and on a daily basis for a child up to four years old (or up to seven years old when the child is disabled). If the person receives maternity benefit or sickness benefit associated with childbearing, the amount of these benefits is subtracted from the parental allowance. It is non-means tested benefit.

Note: due to lack of information in the data about parents who care in person for children, EUROMOD simulations take eligibility from the data (i.e., only those reporting parental allowance in the data are eligible for this benefit).

The parent can select the period of support and also the amount of the allowance, as follows:

- faster draw-down of parental allowance – after maternity benefit (hereinafter referred to as MB) at the increased rate (11,400 CZK) until the child is 24 months old; only parents who are entitled to MB of at least 380 CZK per calendar day may request this form of draw down;
- standard draw-down – after MB at the basic rate (7,600 CZK) until the child is 36 months old; only parents who are entitled to MB may request this form of draw down;
- slower draw-down – after MB or from the birth of the child (if the parent is not entitled to MB) at the basic rate (7,600 CZK) until the child is 21 months old and after it at the reduced rate (3,800 CZK) until the child is 48 months old.

In the case of disabled children, the parent is entitled to parental allowance at the basic rate (7,600 CZK) until the child is 7 years of age, from the day on which the child is diagnosed as a child suffering from a long-term disability or a severe long-term disability, regardless of the form of draw-down that had been previously selected (prior to the diagnosis of the child's state of health). If the child draws care allowance (according to Act on Social Services), the parent is entitled to half-pay parental allowance. If the child diagnosed as a child suffering from a long-term disability or a severe long-term disability does not draw care allowance, the parent is entitled to parental allowance at the lower rate (3,000 CZK) from 7 to 10 years of the child's age.

A parent is entitled to parental allowance provided:

- a child under the age of 3 years attends a creche or other facility for pre-school children for a maximum of 5 calendar days in a month;
- a child over the age of 3 years attends a kindergarten or similar facility for pre-school children for no more than 4 hours a day or a maximum of 5 calendar days in a month;
- the child attends a remedial care centre, creche, kindergarten or similar facility for disabled pre-school children for no more than 4 hours a day;
- a child of a disabled parent attends a creche, kindergarten or similar facility for pre-school children for no more than 4 hours a day;

- a child diagnosed as a child suffering from a long-term disability or a severe long-term disability attends a creche, kindergarten or similar facility for pre-school children for no more than 6 hours a day or performs compulsory education.

The parent's income is not tested; the parent may carry out an occupational activity without losing their entitlement to parental allowance. However, during the period of this occupational activity, the parent must ensure that the child is in the care of another adult.

Note: due to lack of information in the data about the parents choices of period of support and amount of the allowance, EUROMOD simulations assume that all parents opt for the "standard draw-down" allowance.

- **Changes in 2010**

No changes.

- **Changes in 2011**

No changes.

- **Changes in 2012**

Parental allowance is provided until the total amount of 220,000 CZK is drawn, maximum up to 4 years of child's age.

A parent may select the amount of parental allowance and thus the period of its drawing under the condition that at least one parent in a family is a person participating in sickness insurance.

Note: Most people in the Czech Republic fulfil the conditions for selecting dose level. Due to limitation of data we assume that everyone choose to receive benefits for 36 months, which means a monthly benefit in the amount of 6.111 CZK.

- **Changes in 2013**

No changes.

2.4.2.5 Birth Grant (bchba_cz)

A birth grant is available to any mother who gives birth to one or more children. The birth grant may be paid to the father if the mother died during birth or to a foster parent when the child (or children) is under one. In 2009 the amount was 13,000 CZK per one child.

- **Changes in 2010**

No changes.

- **Changes in 2011**

Families are entitled to the birth grant provided the family income (defined in the same way as net household income for child allowance) in the calendar quarter prior to the birth of the first child does not exceed 2.4 times the family's living minimum. The birth grant amounts to 13,000 CZK for the first live-born child. If another live-born child/children is/are born together with the first live-born child the total birth grant is 19,500 CZK. The benefit is paid only in the case of the birth of the first child.

Note: Income test modelled on current years' income. Means-tested incomes defined in the same way as in case of child allowance, but parental allowances are excluded from the income test (as income should refer to the calendar quarter before the birth of the first child). Assumption made that observed siblings in the family are all siblings.

- **Changes in 2012**

No changes.

- *Changes in 2013*

No changes.

2.4.3 Social Assistance

2.4.3.1 Social Assistance Benefits (Benefits of Material Needs – bsa_s)

Social necessity benefit serves as a last resort. A family and a dependent child are defined in the same way as for state social support, with the exception of housing benefit. The condition that the household must meet the costs of living together is always tested here. A temporary period spent outside the household for the purposes of work or training for future employment is allowed.

The net household income for the purpose of testing eligibility for the benefits is defined as 70% of work and other taxable income (net income) + 80 % of unemployment benefits and sickness benefits + 100 % of other income (e.g. pensions) but without tax bonus and housing benefit.

New benefits of social assistance are:

- Allowance for Living
- Supplement for Housing
- Extraordinary Immediate Assistance

Allowance for Living (bsa00_s)

Persons or families are entitled to an allowance for living if the income of these persons or families is less than the amount of living when “reasonable” housing costs have been deducted. Amount of living is equal (in ”standard“ situation) to the sum of MLS.

The amount of the allowance for living is set as the difference between the amount of living of a person or family and the income of that person or family, less reasonable housing costs. (Reasonable housing costs are the cost of housing to a maximum of 30%, in Prague 35%, of the income of the person or family).

Supplement for Housing (bsaho_s)

It is targeted at households whose net household income, including housing benefit and social assistance benefit and after paying housing costs (at most the normative costs), is still lower than the MLS. Their income is then topped up to the MLS on the assumption that the individual actively seeks a job.

Extraordinary immediate assistance

This is provided to persons who find themselves in situations that have to be resolved immediately. The Act addresses five situations that justify this benefit:

1. Where persons do not meet the conditions of material need but, due to a lack of funds, suffer from a serious threat to their health. The benefit tops up a person’s income so that it is level with the existence minimum (or the subsistence minimum in cases of dependent children).

2. Where persons are victims of a serious extraordinary event (a natural disaster, storms and gales, ecological disaster, fire, etc.) The maximum amount of the benefit is fifteen times the individual's subsistence minimum.
3. Where persons do not have enough resources to cover essential one-off expenditure connected, in particular, with the payment of an administrative fee for duplicate copies of personal documents or in cases of monetary loss. The maximum amount of the benefit is the amount of this one-off expenditure.
4. Where persons do not have enough resources to acquire or repair basic furniture or durables or to cover justified costs relating to the education or special interests of dependent children. The amount of the benefit may be a maximum of the specific expense, but the sum of benefits granted must not exceed ten times the individual's subsistence minimum in one calendar year.
5. Where persons are at risk of social exclusion. This concerns, for example, the situation of persons who have been released from custody or from prison, who have left an orphanage or foster care on reaching adulthood, or who have completed treatment for an addiction. A benefit of up to 1,000 CZK may be granted. The benefit may be awarded repeatedly, but the sum of benefits granted in one calendar year may not exceed four times the individual's subsistence minimum.

Note: due to lack of information in the data about this type of circumstances, EUROMOD simulations don't include Extraordinary immediate assistance.

Since 2009 a new element was added to calculation of Total minimum living standard for social assistance. If an adult person is without work more than 6 months, the minimum living standard for social assistance is just subsistence minimum and not Subsistence minimum + 0.5*(minimum living standard - Subsistence minimum). It is not relevant for pensioners, sick persons and people, who are participating on the public work.

- ***Changes in 2010***

No changes.

- ***Changes in 2011***

No changes.

- ***Changes in 2012***

No changes.

- ***Changes in 2013***

No changes.

2.5 Social contributions

The social contributions in the Czech Republic can be divided into two parts:

- Social insurance and state employment policy contributions consist of pension insurance, contributions for the state employment policy and sickness insurance.
- Contributions for public health insurance

2.5.1 Employee social contributions

Social insurance and state employment policy contributions

The contributory base for employee is the gross wage plus any bonuses, standby-duty remuneration, etc. of the employee, but not income which is not subject to income taxation, income from occasional work, compensations, rewards for increased productivity, etc.

Contributions for Public Health Insurance

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The contributory base is the same as in Social insurance and state employment policy contributions. But there is a minimum contributory base, which is equal to minimum wage (it is not applied, if the person uses the minimum contributory base as self employed). For those who do not have permanent income such as students, pensioners, children, the state pay minimum insurance², therefore the minimum contributory base is not relevant in these cases. A maximum contributory base was introduced in 2008. Information on the contribution rates and maximum contribution bases is provided below.

Contribution rates in 2009-2013:

| | <i>Employee</i> | <i>Employer (per employee)</i> | <i>Entrepreneur</i> |
|-------------------|-----------------|------------------------------------|----------------------------|
| Social Insurance | 6.5% | 25.0% | 29.2% |
| Of which: Pension | 6.5% | 21.5% | 28.0% |
| Unemployment | n/a | 1.2% | 1.2% |
| Sickness | n/a | 2.3% | 1.4%*; 2.3%* since 2011 |
| Health Insurance | 4.5% | 9.0% | 13.5% |
| Total | 11.0% | 34.0% | 44.1% |

Note: * paid on a voluntary basis.

Maximum contribution bases in 2009-2013 (in CZK per year):

| <i>Max base for:</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>2013</i> |
|--|-------------|-------------|-------------|-------------|-------------|
| Public Health Insurance contributions | | | | 1 809 864 | n/a |
| Soc. insurance and state employment policy contributions | 1 130 640 | 1 707 048 | 1 781 280 | 1 206 576 | 1 242 432 |

* Applied for both for income from employment and business activities. If the person has both types of income (job and business), the contribution bases are summed.

- **Other changes in 2010**

No changes

- **Other changes in 2011**

No changes

- **Other changes in 2012**

A maximum annual contributory base was introduced in different amounts for Social insurance and state employment policy contributions and Contributions for Public Health Insurance.

- **Changes in 2013**

A maximum contributory base was cancelled in the case of Contributions for Public Health Insurance.

2.5.2 Employer social contributions

Social insurance and state employment policy contributions

Contributory base is the same as in the case of employee. Information on the contribution rates and maximum bases provided in section 2.5.1.

Contributions for Public Health Insurance

² For information on the state funded public health insurance contributions see section 2.5.4 (cot_cz)

Contributory base is the same as in the case of employee. Information on the contribution rates and maximum bases provided in section 2.5.1.

- ***Changes in 2010***

New maximum contributory base (see section 2.5.1).

- ***Changes in 2011***

New maximum contributory base (see section 2.5.1).

- ***Changes in 2012***

A maximum contributory base was introduced in different amounts for Social insurance and state employment policy contributions and Contributions for Public Health Insurance (see section 2.5.1).

- ***Changes in 2013***

A maximum contributory base was cancelled in the case of Contributions for Public Health Insurance. New amount for Social insurance and state employment policy contribution base (see section 2.5.1)..

New part of the pension insurance was introduced. The person can apply to the second pillar and start paying insurance for pension savings (pojistné na důchodové spoření). The rate is 5 %. If the person is registered to the second pillar, the rate of pension insurance (paid by employee or self-employed) reduced by 3 percentage points. *Note: the new part of pension not modelled in 2013 due to lack of information on enrolment and scope.*

2.5.3 Self-employed social contributions

Social insurance and state employment policy contributions

Entrepreneurs pay pension insurance and contributions for the state employment policy, while sickness insurance is paid on a voluntary basis. For entrepreneurs it is important, if the business activity is the main source of income or not. In 2009 the business activity is the main source of income, if the monthly income from wages and salaries is lower than 2,000 CZK. In 2012 this amount was increased to 2,500 CZK. Income from business activity is minor source of income as well, if the person is student (and the age is lower or equal to 26) or pensioner. If the person has both types of income (job and business), the contribution bases are summed.

a) If income from business activity is the main source of income

- For entrepreneurs, the base is 50 % of net income (gross income minus costs) in the last year, but not more than the maximum contribution base (see table in section 2.5.1).
- There is an annual minimum contribution base of (in CZK per year):

| <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>2013</i> |
|-------------|-------------|-------------|-------------|-------------|
| 70 668 | 71 136 | 74 220 | 75 420 | 77 652 |

b) If income from business activity is the minor source of income

- If the year gross income minus costs is lower than 56,532 CZK, there is no obligation to pay social insurance. In other cases the participation in the social insurance is compulsory and the contribution base is 50% of net income in the last year, but not more than the maximum contribution base (see table in section 2.5.1).

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- There is not obligation to pay social insurance if the annual gross income minus costs is lower than (in CZK per year):

| 2009 | 2010 | 2011 | 2012 | 2013 |
|--------|--------|--------|--------|--------|
| 56 532 | 56 901 | 59 374 | 60 329 | 62 122 |

Contributions for public health insurance

For entrepreneurs, the base is 50% of net income in the last year, but not more than the maximum contribution base (see table in section 2.5.1).

If the income from business activity is the main source of income, the annual contribution base cannot be lower than (in CZK per year):

| 2009 | 2010 | 2011 | 2012 | 2013 |
|---------|---------|---------|---------|---------|
| 141 330 | 142 254 | 148 440 | 150 822 | 155 304 |

If the person has both types of income (job and business), the contribution bases are summed.

The maximum contribution bases for both types of contributions are updated annually and are the same as in case of employees. See table in Section 2.5.1 for details.

- *Other changes in 2010*

No change

- *Other changes in 2011*

The rate of sickness insurance contribution of entrepreneur increased from 1.4 to 2.3 % (see table in section 2.5.1). Other changes in 2012

The business activity is the main source of income, if the month income from wages and salaries is lower than 2,500 CZK per month.

- *Other changes in 2013*

A maximum contributory base was cancelled for Contributions for public health insurance.

2.5.4 Credited insurance contributions (cot_cz)

For those who do not have permanent income such as students, pensioners, children, unemployed registered at the labour offices the state pays minimum insurance to health insurance companies. State minimum insurance is calculated as a multiple of the contributory base for state-insured and rate 13.5%. The value of the contributory base is determined by government decree and for the years 2009-2013 is the CZK 5013 per month.

2.6 Personal income tax

2.6.1 Tax unit

Personal income tax is paid by any person who has residence or lives in the Czech Republic for at least 183 days in a year. Taxable income includes all income earned in the Czech Republic and abroad. If a person lives in the Czech Republic for the purpose of study or recuperation or less than 183 days in a year, the taxable income is only the income from the Czech Republic.

- *Changes in 2010*

No changes

- *Changes in 2011*

No changes

- *Changes in 2012*

No changes

- *Changes in 2013*

No changes

2.6.2 Exemptions

The tax base does not include income from selling one's own house or flat if a person has lived there for at least two years before the transfer, and if the house or flat was not used for business purposes, or if the time between buying and selling the house or flat was more than five years³. Nor does it include loans and drafts, income from property insurance, sickness benefits, state social support, social assistance, unemployment benefit, income from public health insurance, the amount of pensions lower than 36 * minimum wage per year, maintenance paid to soldiers, stipends, donations from the state budget, tax bonuses, benefactions, alimony, travel expenses paid by employers, meals or beverages provided by employers, complementary pension insurance with the state support paid by employers up to 5% of the gross wage, interest income from savings for building purposes or purchase of a house for which state support is provided, gift income not exceeding 500 CZK, winnings in state lotteries, income from appreciation of currency, and income taxed according to a separate tax scheme.

- *Changes in 2010*

No changes.

- *Changes in 2011*

If annual taxable income from employment, business and rental exceeds 840 000 CZK, the total value of pensions has to be taxed.

- *Changes in 2012*

No changes.

- *Changes in 2013*

No changes.

2.6.3 Tax allowances

Taxpayers may deduct the following allowances from their tax base (in CZK per year):

- *Gifts to charitable organisations* may be deducted if the amount of the gift is at least 2% of the tax base or 1,000, and if the charity is recognised by the state. The taxpayer may deduct at most 10% of the tax base.
- *Interest* used for mortgage repayments.
- *Complementary pension insurance with state support*. The total deductible amount is the sum of all payments to complementary pension funds less 6,000. The amount deducted may not exceed 12,000.
- *Private life insurance*. The maximum total deductible amount is 12,000. The taxpayer must be insured for at least five years, and must be under 60. The minimum amount of insurance premium is 40,000 if the duration of insurance is between 5 and 15 years, and 70,000 if the duration is more than 15 years.

³Furthermore, the tax base does not include income from selling chattels with the exception of personal vehicles, ships and aeroplanes, provided that the time between buying and selling these items was less than one year.

- *Labour union fees.* The taxpayer may deduct fees paid to labour unions. The maximum amount is either 1.5% of the taxable income or 3,000.

The taxpayer deducts 1/12 of the amount for each month during which the conditions listed above are met. In the case of personal exemption, the taxpayer deducts the whole amount if the conditions are met at least on the last day of the year.

- ***Changes in 2010***

No changes

- ***Changes in 2011***

No changes

- ***Changes in 2012***

No changes

- ***Changes in 2013***

Complementary pension insurance with state support: the total deductible amount is the sum of all payments to complementary pension funds less 12,000 CZK per year.

2.6.4 Tax base

The tax base for personal income tax is divided into five partial tax bases:

1. super gross wages and salaries (since 2008);
2. income from business activities including income from agriculture, forestry and fishery; income from copyright;
3. capital income including dividends, interest, revenues from expiration of contract of complementary pension insurance with state support; income from life insurance (minus premium paid); income from options and forwards;
4. rental income;
5. and other income.

Wages and Salaries

If the amount of wages and salaries is less than 5,000 CZK per month and the character of the job is occasional, it is taxed by a separate tax rate (15 %).

Since 2008 the social and health insurance contribution paid by employer is a part of the partial tax base of “Wages and salaries”.

Note: due to lack of information in the data about occasional jobs, EUROMOD simulations don't include this special rate for low wages and salaries.

Income from business activities

Entrepreneurs may account for losses in order to reduce their profit, but only in the case of the same activity. For entrepreneurs, taxable income is also net of costs (social and health insurance contribution is not tax deductible item). Instead of deducting the amount of actual costs, a taxpayer may replace it by 80% of revenues from agriculture, forestry, fishery and craft, 60 % of revenues of non-craft activities, 40% of revenues of copyright or 30% of rental revenues.

If the entrepreneur's spouse helps the entrepreneur with his or her business, the taxable income from this partnership is divided such that the partner may have taxable income of at most 50% or 540,000 CZK per year (or 45,000 CZK for each month of the business partnership) of the total taxable income of the married couple. If more persons live with an entrepreneur in the same household and help him or her with his business, the taxable income is then divided so that the entrepreneur's partners may have at most 30% or 180,000 CZK per year (or 15,000 per

month) of total taxable income. If a child in the household is a business partner, the parents are not eligible for a tax allowance per child or for a tax bonus per child. Children in compulsory schooling may not be made partners.

Honorariums of less than 7,000 CZK per month are taxed at a separate tax rate (15 %).

Note: due to lack of information in the data we taxed this type of income as a part of the tax base that is taxed at a progressive rate.

Capital income

Almost all incomes are taxes by the separate tax rate (15 %).

Rental income

The taxable income is net of costs.

Other income

Other income includes income from occasional activities exceeding 20,000 CZK per year, income from the transfer of own real estate (with exemptions described below), nourishments, pensions exceeding 36 * minimum wage per year, winnings in lotteries exceeding 10,000 CZK.

The total tax base is the sum of the five partial tax bases mentioned above. The total tax base cannot be lower than the partial tax base "wages and salaries".

- **Changes in 2010**

No changes.

- **Changes in 2011**

No changes.

- **Changes in 2012**

No changes.

- **Changes in 2013**

No changes.

2.6.5 Tax schedule

Just one rate – 15 %.

- **Changes in 2010**

No changes.

- **Changes in 2011**

No changes.

- **Changes in 2012**

No changes.

- **Changes in 2013**

New additional tax rate was introduced. If the income from Wages and Salaries and from business activities exceeds the maximum contributory base for social insurance and state employment policy contributions, the income, which is above this amount, is taxed by addition tax rate 7 %.

2.6.6 Tax credits

2.6.6.1 "Standard" tax credits:

- *Personal tax credit* for each taxpayer (in CZK per year):

| 2009 | 2010 | 2011 | 2012 | 2013 |
|--------|--------|--------|--------|--------|
| 24,840 | 24,840 | 23,640 | 24,840 | 24,840 |

- *Spouse tax credit* (24,840 CZK) applies if a spouse lives with the taxpayer in the same household and does not have a yearly income higher than 68,000 CZK. The income of the spouse tested for this purpose is generally in gross terms. It does not include disability pension, state social support, social care benefits, state support for complementary pension insurance, state support for savings for building purposes, or stipends. The tax credit doubles (49,680 CZK) if the spouse is disabled.
- *Disability tax credit* (2,520 CZK) if the taxpayer receives a part-invalidity pension. If the taxpayer receives a full invalidity pension, he or she may deduct 5,040 CZK.
- *Student tax credit* (4,020 CZK) may be applied if the taxpayer is less than 26 and is an undergraduate student, or when he/she is a graduate student and is less than 28.

Note: When modelling Disability tax credit partial disability is assumed for all recipients due to lack of information on disability level.

- ***Other changes in 2010***

Disability tax credit was divided into 3 levels:

- Disability 1st level – tax credit 2,510 CZK per year
- Disability 2nd level – tax credit 2,510 CZK per year
- Disability 3rd level tax credit 5,040 CZK per year

- ***Other changes in 2011***

No changes

- ***Other changes in 2012***

No changes

- ***Other changes in 2013***

If a taxpayer receives pension, she cannot apply personal tax credit.

2.6.6.2 Refundable child tax credit

Persons, who care for dependent children, may deduct (after the use of standard credits) from their income tax a tax credit per child. A child or children must live in the same household as the parents (or may alternatively be temporarily placed in institutions for the purpose of study or preparation for future work). Persons are eligible for an allowance for each month in which the conditions are met. The amount of the tax credit is (in CZK per child per year):

| 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------|-------------|-------------|-------------|-------------|
| 10,680 | 11,604 | 11,604 | 13,404 | 13,404 |

If the tax duty is lower than the tax credit, the difference is called a tax bonus and is paid to the taxpayer, while the taxpayer's tax duty is then zero. The tax bonus is paid just in the case that the taxable income of the person is higher than 6 times the minimum wage per year. The maximum amount of tax bonus is 52 200 CZK per year. If the tax duty is higher than the tax credit, the taxpayer pays the difference between the two. Only one parent can claim the refundable child tax credit.

A dependent child for the purposes of tax allowance or bonuses is defined as an own child, adopted child, child in foster care, children of one's spouse and grandchildren if they are younger than 18, or younger than 26 if not receiving full invalidity pension and currently preparing for future employment. A child who cannot prepare for future employment because of injury, long-term illness or disability that prevents work is also considered a dependent.

- ***Other changes in 2010***

No changes

- ***Other changes in 2011***

No changes

- ***Other changes in 2012***

The maximum amount of tax bonus is changed to 60,300 CZK per year

- ***Other changes in 2013***

If taxpayer uses expenses, which are calculated as a % of income (possible in the case of income from business activities and rental income), and these types of income represent more than 50 % of the tax base, it is not possible to apply refundable child tax credit and spouse tax credit.

Note: the latter not modelled in EUROMOD as no information available on the share of expenses applied to income from business activities and rental income.

3. DATA

3.1 General description

EUROMOD database description

| | |
|-------------------------|--|
| EUROMOD database | CZ_2010_a1 |
| Original name | EU-SILC and Životní podmínky (SILC) 2010 |
| Provider | Eurostat and Czech Statistical office |
| Year of collection | 2010 |
| Period of collection | Feb 20 – May 9, 2010 |
| Income reference period | Year 2007 |
| Sampling | Two stage random sampling |
| Unit of assessment | HH[1] |
| Coverage | Private households[2] |
| Sample size | 21,379 IND 10,720 HH |
| Response rate | 83,1% |

Notes:

[1] One person living alone or a group of people living at the same apartment (address) **and** sharing expenditures (housekeeping concept). If more than one household was found in a dwelling unit, all hh in selected dwellings were included as eligible for the survey.

[2] households living at private residential addresses

SILC survey is a survey introduced in the Czech Republic following Eurostat guidelines and it added to already existing surveys, namely quarterly rotating panel of Labour Force Survey (VŠPS) and annual Household Budget Surveys. First survey was done in 2006 (SILC 2005).

The SILC survey is regarded as a multipurpose source. Data have been used for several official and unofficial income distribution analyses and for tax/benefit modelling. SILC is the only suitable survey available for EUROMOD purposes thanks to its annual frequency and information on both labour statuses and incomes.

The CZ database is a sample of household created by two stage random sampling. The 2010 sample includes households from 4 waves. During the first-wave visit all households are surveyed and from these households all the persons who have the dwelling as their main place of residence. This rule also applies to foreign nationals and subtenants. During waves 2-4 only those households are surveyed which have as their members the so called panel persons (those surveyed in the 1st wave). Panel persons who moved from the original household are followed up. At their new address, all persons are included in the survey who are members of the same household as the panel person.

Data was collected by interviews and interviewers filled in the answers into paper or electronic questionnaires (PAPI/CAPI data collection). Data collection in the field lasted from February 20 to April 25, 2010 (PAPI) or to May 9 (CAPI) and was coordinated by workers from regional departments responsible for fieldwork.

As in the previous years, the survey was carried out on the whole territory of the Czech Republic. The interviewers visited 6 949 households (6 784 households at their original address and 165 households at their new address) pertaining to waves 2 - 4 and, furthermore, 4 300 newly selected dwellings.

The sample was obtained by applying two-stage probability sampling scheme independently on each of the 14 administrative regions (NUTS3 regions). The total number of dwellings selected in each region was chosen to be proportional to the region's size. At the first sampling stage small geographical areas (CEU's - census enumeration units or districts) were selected by

probability sampling. These CEU's served as a basis for the second-stage selection (a sample of 10 dwellings was drawn from each CEU).

Before selecting the sample of dwellings, the sampling frame had to be adjusted 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 than 20 inhabited dwellings) were merged with adjacent CEUs and the resulting larger CEUs entered the first stage of sampling. Consequently, in some cases, the 10 dwellings sampled in the second stage belong to two, in exceptional cases even more, real administrative CEUs.

The primary database used for the Euromod is the Eurostat UDB SILC for the Czech Republic. Since some variables are needed in greater disaggregation, these are added from the SILC database provided directly by the CSO (it contains variables defined differently from the Eurostat UDB). In particular, following variables are being used from the Czech SILC database (Czech acronyms in brackets)⁴:

- dmp (vel) – population size of residential unit to account for different housing allowance;
- bch00 (pbydl) – Housing Allowance (příspěvek na bydlení) – child allowances;
- bchmt (socp) – Social Allowance (sociální příspěvek + zaopatřovací příspěvek till 2004) reported at household level;
- bfapl (rodap) - Parental Allowances (rodičovský příspěvek);
- bfafp (pestp) - Foster Care Benefits (dávky pěstounské péče);
- bfaot (ostdav) - Other Social Benefits including Birth and Funeral Grant (ostatní dávky SSP = porodné a pohřebné);
- tin (dan) – Income Tax at personal level (daň z příjmů fyzických osob);
- tsc (pojis) - Health and social insurance contribution of employee at individual level (zdravotní a sociální pojistné odvody zaměstnance);
- cz_pensiontype (dduch) - Czech system types of pensions (druh důchodu);
- cz_pensioant (duch) - Total amount received in pension benefits according to Czech types in cz_pensiontype (důchod).

Size of the household - number of household members on the date of the interview, including persons temporarily away if the period of actual or foreseen absence is shorter than 6 months and the person has no other private address. For persons studying away from home, the period of absence may be longer than 6 months, provided that the person has no private address and retains financial ties to other household members. Persons with a period of absence longer than 6 months, persons without financial ties to the household and persons temporarily present at the time of the interview who have their private address elsewhere are excluded.

3.2 Sample quality and weights

- *Non-response*

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 substitution for the ineligible units is not allowed, the survey was conducted in 10 624 dwellings and 10 720 households (in some of the dwellings there was more than one household). The overview of the survey response is presented by the following table:

⁴ Variables are reported at household level if not stated otherwise.

| | 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 agree 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 provided that the person is not the head of the household. The category comprising non-contacts or those temporarily absent covers situations when the interviewer did not establish a contact with the selected household, despite having made the prescribed minimum number of attempts at personal contact. The overview of the survey response in CR and in regions is in the following table:

| Region (NUTS3) | Total | | | 1st wave | | | 2nd - 4th wave | | |
|-----------------|---------------|----------|------|---------------|----------|------|----------------|----------|------|
| | HHs in survey | response | | HHs in survey | response | | HHs in survey | response | |
| | | count | % | | count | % | | count | % |
| Hl. m. 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 |
| CR total | 10 720 | 9 098 | 84,9 | 4 007 | 2 633 | 65,7 | 6 713 | 6 465 | 96,3 |

Participation in this 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 abuse of the personal data), 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.

- **Weights**

Compared to data from other statistics and registers, selected characteristics of our sample showed that a phenomenon typical of household surveys had occurred - high level of non-response (influenced with a rotational panel by prior response) had biased the proportions in the final data file from which results are obtained. The deformation of demographic characteristics and social structure of the sample did not allow to use simple techniques of grossing up (post-stratification). To reach a sufficient level of bias elimination, which is the necessary precondition for obtaining good estimates, it was necessary to use more sophisticated methods.

Well-tried iteration method of weight calibration was utilized, which minimizes the difference between the known and the grossed up values of selected characteristics. Although what is dealt with is a panel survey comprising data of four practically independent samples (waves 1-4), a simple calibration method was utilized which did not distinguish the waves but worked with all households in totality.

At the same time and in line with Eurostat recommendations the already standard system of integrated weights was made use of in the survey, i.e. a single set of grossing-up coefficients which was subsequently used to produce results for both households and individuals. As the basis for calculations the following traditional calibration variables were used:

As the basis for calculations the following traditional calibration variables were used:

- Number of inhabited dwellings in each NUTS3 region, subdivided into family houses (detached and semi-detached houses) and apartments, based on the 2001 Census continuously updated from administrative sources of construction authorities
- Population characteristics:
- Population totals in each NUTS 3 region (from demographic statistics)
- 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 the 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)
- 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+)
- Sex
- Municipality size (below 2 000 inhabitants, 2 000 - 9 999, 10 000-49 999, 50 000+ inhabitants)

Since the target population of the survey was persons living in private households, the data from demographic statistics was adjusted by subtracting institutionalized population (from social security administrative data), persons in prisons and foreign residents living in hostels and rooming houses.

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

The method described above deals with non-response successfully, i.e. it corrects the bias due to similar composition of households that failed to respond. First of all, it improves demographic and social structure but, as a by-product, it also eliminates deformation of income indicators related to these structures.

Descriptive Statistics of the Grossing-up weight

| Number | 2005 | 2007 | 2008 | 2010 |
|---------------|-------------|-------------|-------------|-------------|
| Mean | 569.94 | 442.07 | 379.86 | 486.59 |
| Median | 520.55 | 396.13 | 337.54 | 446.56 |
| Maximum | 2600 | 3475 | 2875 | 1846 |
| Minimum | 100 | 100 | 100 | 129 |
| Max/Min | 26.00 | 347.5 | 287.5 | 63.7 |
| Decile 1 | 312.38 | 243.51 | 204.16 | 143.06 |
| Decile 9 | 874.80 | 683.29 | 599.44 | 755.93 |
| Dec 9 / Dec1 | 2.80 | 2.81 | 2.94 | 5.28 |

- ***Item non-response and under-reporting***

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 income sources or data on some income components can be altogether missing (item non-response). So as not to reduce the size of the processed dataset pointlessly the missing income was imputed using correct statistical methods.

In LC 2010 the interviewer failed to obtain income information for one person in an otherwise successfully interviewed household only in 22 cases. The missing income of such individuals the CSO made replacements with income of another, randomly selected person with the same characteristics, i.e. a simple hot-deck method was applied to it.

Underestimation of income is a natural consequence of the fact that respondents either tends to give lower than actual values or simply do not recall having had certain irregular or small incomes at all. 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 made by the CSO where there was sufficiently reliable external statistical source or where the conjectures could be based on legislation.

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Data on gross income from employment were compared with data from wage statistics broken into sectors of activity and, for those who were revisited and who stayed in their former job positions, with the data obtained for 2008 (LC 2009). The undervaluing of income was not significant, with the bias being bipolar. The LC income could thus even be overestimated (when gross income was reported as net). In all clear cases, therefore, appropriate corrections were applied by the CSO. In the case of income from private enterprise, there was no need for corrections.

In the case of social benefits for which there is 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 receipt by eligible households was applied by the CSO and amounts provided were corrected by the CSO according to the amounts set by the legislation. With old age benefits (pensions from the social security system) the tendency to underestimation is negligible but as there were falls in this kind of income without any outward reason, the amounts were corrected by the last year's values by the CSO.

Amounts declared by the unemployed as unemployment benefits were again overestimated. Unemployed respondents tend to report their income from the social security system as unemployment benefits and do not distinguish them from the minimum income support benefits (claimed on the basis of 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 by the CSO as minimum income support benefits or other social benefits.

The CSO reports that it was not possible to correct the underestimation of sickness benefits (where omissions related to short-term illnesses could not be identified on the existing data), means-tested social benefits whose claims depend on the previous income (prior to the income reference period), capital income, and non-monetary income generated by own-consumption.

Comparison of the aggregated income from this survey with the household sector aggregates of the national accounts (even after subtraction of items which are not covered by household income surveys) is problematic. Concerning its aggregated value the income obtained by direct questioning in 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 LC 2010 are reliable and, as to their time series, consistent. They are fully comparable with similar statistics produced in developed EU countries.

3.3 Data adjustment

Adjustments to variables are kept to a minimum. Some minor data cleaning is done to ensure that the relationships of individuals within households are coherent. As we focus on the income reference year (2009), children who are born in the year of the survey are dropped from the final micro dataset.

The developing team did not adjust the original data obtained from the CSO any further since all the necessary adjustments were done already by the CSO the developing team does not have information detailed enough to inspect or even revise adjustments by the CSO which are described above.

3.4 Imputations and assumptions

3.4.1 Time period

The household definition is based on the sharing of expenditures concept, in line with the definition of Paragraph 115 of the 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. As the 16-year olds such persons were regarded who had reached this age by 31 December 2009. Reference periods:

- Age: December 31st, 2009.
- Other demographic variables - marital status, education, housing, financial situation: at the date of the interview.

- Work activity of those who changed their job or economic status was collected for each individual month of 2009. If the work activity stayed the same all the year round, one (yearly) value was entered. Work activity figures are gathered by self-definition of the respondent (respondents themselves choose among different types of activity the one that fits their case the most). Its value depends primarily on the respondent's main occupation and on the time spent in it. Subsequently, other data was collected related to the respondent's work activity (status in employment, profession). At the same time, and also pertaining to individual months or as a year value, parallel activities were surveyed (second job, study) together with data on receipt of pensions and social benefits.
- Economic activity was not collected but derived from the monthly/yearly data (if monthly data was the basis, the activity with the highest incidence was coded as the yearly value). For those who completed their education in 2009 the latter half of the year was considered.
- Current employment variables (current employment status, occupation): on the date of the interview.
- Income data (both monetary and in kind): calendar year 2009.
- Subjective questions focused on housing and financial problems: on the date of the interview. Health problems: last twelve months. All questions in 2010 module: on the date of the interview.
- Housing, consumer durables, financial and social situation of household: on the date of the interview, unless the question specifically refers to some other period.

3.4.2 Gross incomes

Incomes related to household as a whole were collected at the household level: social benefits targeted at households, rental income and value of goods produced directly by the household through either a private or a professional activity (e.g. own production of food from farming).

Collected at individual level: income from employment (main job, secondary jobs), sickness benefits, old-age benefits, unemployment benefits, social benefits attributable at individual level (such as parental leave benefit or disability benefits) and other incomes (capital income, sales of property, insurance claims).

Income from employment (both main job and possible secondary jobs) was collected both either gross of tax and social insurance or net, incomes from non-employment contracted work only gross. Self-employed persons could choose from several ways to record the result of their enterprise. They could state the gross profit/loss according to their tax declaration, they could give the sum which served as the yearly basis for calculating their monthly health and social security contributions or could make their own estimate of their gross or net profit/loss. With family members co-operating in private enterprise run by another member of the family only proportionate part of the income from the business was entered.

Rental income was collected either gross or net, based on what information respondents were able to provide. All other kinds of income were collected net and subsequently appropriate rules of the tax system were applied to estimate the gross amounts. In addition, the information was collected on claimed tax deductibles to enable calculation of taxes and social insurance contributions. Sum of individual net incomes then forms the main national indicator – net monetary income of household.

Besides this national indicator of household income, it was necessary to construct internationally comparable household income indicator, which is based on Eurostat methodology for EU-SILC surveys. This indicator is named “disposable household income”. The difference between these two definitions of household income is in inclusion/exclusion of

certain components of income (received lump sum and irregular inter-household transfers, non-cash employment income, income from life insurance, regular taxes on immovables).

Household income in kind consists of consumption of food, products and services originating from the household's own productive activity and of perquisites provided by employers (company car and company-paid or co-financed meals). The CZK value of own-production in kinds was calculated from reported amounts using the average price of the given commodity. The value of a company car arrived at by applying the rules of income tax system (the minimum monthly amount of CZK 1000 was entered). The contribution of the employer to the employee's meals was calculated using the number of meals, their actual price and the (lower) price that the employee paid for them.

Selected income components:

- Income from employment: defined in line with the national tax law. Includes income from employment contract or similar arrangement between employer and employee. Also includes incomes of owners of the incorporated business from work for their company, income of members of statutory boards and other governing bodies of corporations, remuneration based on holding of elected public posts, income of apprentices in vocational schooling for their work undertaken as part of their practical training and income from flexible short-term contracts under special regime set in the Labour Code.
- Income from self-employment: includes also income from farming activities, if these are the professional activity, income from independent professional practices (lawyers, doctors) and income from intangible assets (copyrights).
Income from main employment: includes income of employees from their main job. In case of multiple coincident jobs, the declaration of the main job was left to the respondent.
- Income from secondary employment: includes salaries from secondary jobs, conducted besides the main job or self-employment activity of the respondent and income from flexible short-term contracts under special regime set in the Labour Code.
Income from secondary self-employment activity: analogous to the secondary employment income. It includes income from secondary self-employment activity undertaken in addition to the main job of the respondent (where respondent declared employment contract as his/her main job).
- Social income: is in principle net. Gross amounts were included only for rare cases of pensions above the tax-exempt limit. In these cases, tax was applied to the amount above this limit (CZK 198 thousand).
Sickness benefits item includes all sorts of benefits from the social sickness insurance, i.e. also maternity leave benefit, reduced employment income compensation in pregnancy and motherhood, income support for persons caring for household member in the need of short-term care (mostly care for children during their illness).
- Other social support benefits include social benefits for foster parents taking care of adopted children, birth grants, death grants, and CZK 1000 grant for books and other equipment of children entering primary education.
- Other social benefits include certain benefits connected to the termination of employment in selected professions, various other social benefits like benefit for persons providing long-term homecare for their relative in need, support for care in spas and other social benefits for families with children, old and disabled citizens, which are mostly administered by the municipal authorities.
- Material indigence benefits include regular and lump sum monetary benefits that help the household pay their food and housing bills or contribute to satisfying their basic needs.
Income from capital contains interest from savings, bonds and various forms of deposits, dividends from shares, profits from incorporated businesses, income from investments abroad.

- **Other income** includes income from occasional property rentals, life and material insurance, sale of own-produced goods, income from organisations not elsewhere classified (scholarships and pocket money of apprentices, grants from charity and non-governmental organisations), lottery winnings, prizes, pay for occasional not contracted jobs, regular inter-household transfers (alimonies and the like).
- **Housing costs:** In the case of more than one household in one dwelling unit, the costs were divided according to their actual contribution to their financing. When the household reported its housing costs only in one item as the rent paid for accommodation, the partial amounts were estimated based on the data from households, which provided the detailed information on their housing costs. Estimates were modelled by regression models taking into account the type of dwelling (family houses vs. other), type of rent (market rent vs. regulated rent contracts), number of household members and usual local level of housing costs (municipality, census enumeration unit).

3.4.3 Disaggregation of harmonized variables

Disaggregation is applied for family benefits bfa (derived from hy050g) such as $bfa = bfapl + bfafp + bfaot + bch00 + bchmt$ which represent national specific variables (Czech name in brackets: Parental Allowances (rodicovsky prispevek) + Foster Care Benefits (Davky pestounske pece) + Other Social Benefits (Porodne a Pohrebne = Birth and Funeral Grant) + Child Allowances (Pridavky na deti) + Social Allowances (Socialni priplatek).

Variable cz_pensions is derived from CZ SILC data variable Pensions (Duchody) which does not differentiate between 6 types of pensions. Variable cz_pensiontype is added providing coded information on pension type.

Social insurance variable tscee is created from CZ SILC variable (Zdravotni a socialni pojisteni) containing information on social and health insurance contributions paid by individuals (employees or self-employed) together. CZ SILC does not provide information on social and health insurance contributions paid by employers.

Variable tin (Personal Income Tax) is obtained from the CZ SILC variable (Dan z prijmu).

3.5 Updating

To account for any time inconsistencies between the input dataset and the policy year, updating factors are used. Each monetary variable (i.e. each income component) is updated so as to account for changes in the non-simulated variables that have taken place between the year of the data and the year of the simulated tax-benefit system. Updating factors are generally based on changes in the average value of an income component between the year of the data and the policy year. For detailed information about the construction of each updating factor as well as the sources that have been used, see Annex 1.

As a rule, updating factors are provided both for simulated and non simulated income components present in the input dataset. Note however that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the updated original variables in the dataset. Updating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable. The list of updating factors as well as the sources used to derive them can be found in Annex 1.

4. VALIDATION

4.1 Aggregate Validation

EUROMOD results are validated against external benchmarks. Detailed comparisons of the number of people receiving a given income component and total yearly amounts are shown in Appendix 2. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against external official data. The main discrepancies between EUROMOD results and external benchmarks are discussed in the following subsections. Factors that may explain the observed differences are also discussed.

4.1.1 Components of disposable income

Disposable income definition in EUROMOD provides an internationally comparable household income indicator. The indicator is very similar to the EU-SILC definition of household disposable income, but differs in the inclusion/exclusion of certain components (see Table 4.1 below). In particular, the EUROMOD definition of disposable income does not include company cars and repayments/receipts for tax adjustment, which are both included in the EU-SILC definition. Moreover, the EU-SILC definition of disposable household income newly includes pensions from individual private plans, which is not included in the EUROMOD definition. Otherwise, the definitions are the same.

Table 4.1 Components of disposable income

| | EUROMOD [2009] | EU-SILC [2010] |
|---|-------------------|-------------------|
| | ils_dispy | HY020 |
| Employee cash or near cash income | + | + |
| Employer's social insurance contribution | 0 | 0 |
| Company car | 0 | + |
| Contributions to individual private pension plans | 0 | 0 |
| Cash benefits or losses from self-employment | + | + |
| Pension from individual private plans | + | 0 |
| <i>Unemployment benefits</i> | + | + |
| <i>Old-age benefits</i> | + | + |
| <i>Survivor' benefits</i> | + | + |
| Sickness benefits | + | + |
| Disability benefits | + | + |
| Education-related allowances | + | + |
| Income from rental of a property or land | + | + |
| <i>Family/children related allowances</i> | + ¹ | + |
| Social exclusion not elsewhere classified | + | + |
| Housing allowances | + | + |
| Regular inter-household cash transfer received | + | + |
| Interests, dividends, etc. | + | + |
| Income received by people aged under 16 | + | + |
| Regular taxes on wealth | - | - |
| <i>Regular inter-household cash transfer paid</i> | - ² | - |
| <i>Tax on income and social contributions</i> | - | - |
| Repayments/receipts for tax adjustment | 0 | + |

Notes: ¹ includes income tax bonus; ² Maintenance payments

4.1.2 Validation of incomes inputted into the simulation

4.1.2.1 Original income

[See tables in Appendix 2]

Tables 18 and 19 show, respectively, the number of recipients and the total amount of different sources or original income available in EUROMOD's input data. These incomes are used by the model but are not simulated.

Due to differences in rounding and income assignment the total amounts and total numbers of recipients of different sources of income in EUROMOD's input database may be slightly different from those in the original EU-SILC. This is the case, for example, of employment and self-employment income, with a ratio between EUROMOD and original EU-SILC dataset in the base year being around 1.02 for respective totals. The number of recipients is different in case of those income sources that are reported in the EU-SILC at the household level and which were assigned to particular individuals in the EUROMOD input data, such as investment and property income.

As commented in section 3, EUROMOD input data are adjusted for each policy year by updating factors that take into account average changes of each income source. The number of recipients/payers of each income/benefit/tax is held constant in the EUROMOD input data. This may cause discrepancies with external statistics in years of rapid changes in the labour market. Within the period in question (2009-2012) the ratios for the number of recipients of original income in EUROMOD is relatively stable compared to external statistics and is slightly over-estimated for both employment (by 2-4%) and self-employment (by 5-9%) income. The total amount of self-employment income is highly over-estimated in EU-SILC compared to external statistics.

4.1.2.2 Disability, old-age, survivor and sickness benefits

[See tables in Appendix 2]

Tables 20 and 21 show the number of recipients and total amount of pensions and benefits that are not simulated by EUROMOD, but which are used for the calculation of disposable income as they are reported in the input database.

- Pensions: in aggregate terms, pensions seem to be well represented in the EU-SILC and EUROMOD input data (compared to external statistics). Significant difference appears only in the number of disability pensioners and the total amount of disability pensions paid in 2010-2012. The reason is the change in conditions for disability pension eligibility (and in the amount of these pensions) that was introduced in 2010. The change in eligibility was not modelled in EUROMOD due to limitations of the SILC data (amount depends on unobserved working histories and disability level). In general, the system of disability pension was made less generous in 2010, that's why the external statistics show decrease in both number of recipients and the amount of disability pensions.

Another discrepancy in terms of pension amounts is in the survivor's pensions, that are slightly underestimated.

- Sickness benefits: sickness benefits depend on previous wages of the employee and they appear in the total monthly pay-check sum and are not well recognised and not remembered by employees. It explains why the amount of sickness benefits is largely underreported in the SILC data.

4.1.3 Validation of outputted (simulated) incomes

4.1.3.1 Unemployment, Family, Housing and Social assistance benefits

[See tables in Appendix 2]

Tables 22 and 23 show the number of recipients and amount of social benefits simulated by the EUROMOD:

- Unemployment benefit: methods counting the number of recipients in EUROMOD and in external statistics are not strictly comparable. However, the comparison of total expenditures shows that aggregate results for these simulated benefits are very close to official statistics with the exception of 2011 and 2012. In these years, the numbers from EUROMOD are overestimated, because there was a decrease in the number of people eligible for unemployment benefits in reality (there was a decrease in the inflow of newly unemployed).
- Child allowance: again, the number of recipients in EUROMOD is not strictly comparable to the external sources as units of analysis are different. However, the comparison of the total expenditure (which is not sensitive to the unit of analysis) shows that aggregate results for these simulated benefits are close to official statistics in 2009. Values in 2010-2012, however, are overestimated. The reason is that the actual number of recipients is decreasing (as we can see from the external statistics),⁵ which is not captured by EUROMOD data from 2009.
- Social allowance: the number of recipients for 2009 and 2010 is overestimated in EUROMOD (which may be caused by non-take-up of this benefit in reality, which is not captured by EUROMOD), but the total amount of benefits received is well-simulated. In 2011, social allowance was restricted only to families with disabled or seriously ill child/children, and it is thus not simulated due to lack of information on disability status among children in SILC (while in the external data, there still some recipients left). Since 2012, social allowance benefit was abolished.
- Parental allowances: results are stable and slightly overestimated.
- Birth grant: the number of recipients and overall amount is only slightly underestimated in comparison to the external statistics in 2009 and 2010. This was a universal benefit for newborn children and the number of new-borns is slightly underrepresented in SILC data.⁶ In 2011, the benefit became means-tested and paid only to first child in the family. For 2011 the sharp drop in reciprocity in EUROMOD is over-estimated, thus we underestimate both the number of recipients and the amount of benefit.
- Social assistance: Regular social assistance benefit is slightly overestimated for 2009 in the number of recipients, probably due to some non-take-up, but the simulated values are closer to external statistics in the other years, because of the aggregate increase in the number of recipients (that compensates for the take-up issues). The total amount of regular social assistance fits very well the external data for 2009, and slightly underestimates them for other years (because of the increase in the number of recipients in external data which cannot be captured by the model). The non-take-up problem is much more severe for the supplement for housing, where the number of recipients is overestimated more than three times. The total amount paid out is also overestimated, but not so much. The non-take-up problem of housing and social assistance benefits in

⁵ There was no change in eligibility rules for the child allowance in 2010. The decrease in the number of recipients in the external data was thus caused by some other reasons (change in non take-up possibly).

⁶ Reweighted number of children aged zero in SILC is slightly above 107,000 in 2009, while the external statistics report 118,000 new-born children in 2009.

the Czech Republic is documented in the literature (see Mareš, 2001⁷) and has been found with the Czech national tax-benefit microsimulation models as well,⁸ but the exact magnitude of the non-take-up of these benefits is not known.

- Housing benefit: number of recipients in 2009 and 2010 is overestimated as the simulation does not account for the benefit non-take-up. The overestimation of the total benefit expenditures is not so severe for 2009, and the important increase in the amount of benefit expenditures in 2010-2012 in the external data causes quite a good fit of the simulations for these years (the non-take-up problem is compensated with an increase in expenditures that is not captured with the model).

4.1.3.2 Taxes and Social insurance contributions

[See tables in Appendix 2]

Overall, EUROMOD slightly underestimates the total amount of taxes and contributions compared with external statistics (see Table 25). This is mainly due to underestimation of social security contributions by self-employed (see below). However, total number of taxpayers is estimated quite well by the EUROMOD (Table 24).

- Employee and employer contributions: according to the results, the number of contributions simulated by EUROMOD is quite precise and the amounts as well.
- Self-employed contributions: EUROMOD captures the number of self-employed paying social contributions very well, but the main discrepancy between EUROMOD and external statistics is in the amount of social contributions paid by self-employed, which is clearly underestimated in EUROMOD. This may be partly caused by the fact that self-employed may in some cases participate in social and health contributions voluntarily (or pay higher amount than the minimum required), which is not simulated by the model.
- Income tax: Number of taxpayers paying income tax is underestimated by around 15%. The reason is that EUROMOD calculates the number of taxpayers as the number of individuals paying *positive* income tax, while in the external statistics the number of taxpayers is the number of employees or self-employed individuals, no matter whether they pay positive or zero taxes (there are no data on number of people paying *positive* income taxes). The amount of income tax is also slightly underestimated in EUROMOD (mainly for 2009 and 2010). This may be caused by some underreporting of incomes in SILC data.
- Property tax is substantially underreported in EUROMOD for all year. Our interpretation is that individuals underreport their incomes and property taxes in the SILC. Moreover, the discrepancy between EUROMOD and external data becomes bigger in time, which may be caused by the fact that number of property owners increases over time (and this is not captured by the model).

4.2 Income distribution

4.2.1 Income inequality

[See graphs and tables in Appendix 2]

⁷ Mareš, P. (2001). Problém nečerpání sociálních dávek [The issue of non-take-up of social benefits]. VÚPSV, v.v.i., Praha.

⁸ There is a micro-simulation model, which has been prepared by the University of Economics Prague for Ministry of Labour and Social Affairs, and the microsimulation model developed as part of the project supported by the Czech Technological Agency (for details, see Dušek, Kalíšková and Münich, 2013: Distribution of Average, Marginal and Participation Tax Rates among Czech Taxpayers: Results from a TAXBEN Model. *Czech Journal of Economics and Finance*, 63(6).).

Graph 1 compares the distribution of disposable income between EU-SILC and EUROMOD data. Larger differentials appear in case of very-low and very-high income households. In the former case, it is probably due to misreporting of some social transfers in the EU-SILC and not accounting for the non-take-up in EUROMOD (housing allowance, etc.). In the later case, underestimation is probably due to incomplete reflection of all possible tax base deductions due to lack of necessary information in the SILC data. Also, the small differences in the disposable income definitions between EUROMOD and EU-SILC might cause some of the discrepancies in the distributions (see Table 4.1 above).

Table 26 provides the following indicators of income distribution: mean and median equivalised income⁹ (also by gender), income quintile ratio, and Gini coefficient. Results are presented for three different “sources”: own calculations using EUROMOD baseline output, own calculations based on the original EU-SILC microdata, and statistics published by Eurostat based on the EU-SILC data (“External statistics”).

According to results, the mean and median equivalised disposable incomes in EUROMOD are slightly larger than in the original EU-SILC data for the base year. There are three reasons possibly explaining the difference: a) inclusion of different sources in the definition of household disposable income (see Table 26 below), b) changes in the sample and in the weighting of observations, and c) changes in the amounts of some income sources (particularly taxes and benefits) due to its simulation in EUROMOD. Nevertheless, EUROMOD simulations are quite close to statistics from the Eurostat’s website with mean and median income being slightly overestimated in 2009 and slightly underestimated in the following years.

Income inequality is slightly lower in EUROMOD when measured by the income quintile ratio and the Gini coefficient. This is consistent with results obtained in other countries. In the case of the Czech Republic, the non-take-up of some social benefits (which is concentrated among lower income families) is likely to be one of the factors reducing income inequality in EUROMOD simulations.

4.2.2 At-risk-of-poverty rates

[See tables in Appendix 2]

Table 27 provides at-risk-of-poverty rates using poverty lines based on 40, 50, 60 and 70% of the median equivalised disposable income.¹⁰ As in the case of income inequality indicators, results are presented for three different “sources”: (i) own calculations using EUROMOD baseline output, (ii) own calculations based on the original EU-SILC microdata, and (iii) statistics published by Eurostat based on the EU-SILC data.

According to results, at-risk-of-poverty rates are lower in EUROMOD (compared to both calculations based on EU-SILC data and external statistics from Eurostat), particularly when using lower poverty lines (40 and 50% of the median). As suggested above, it is possible that the overestimation of some benefit amounts in EUROMOD (given by very high non-take-up of these benefits in reality) contributes to this difference.

Table 27 shows the at-risk-of-poverty rates (using 60% of the median equivalised disposable income as poverty line) by age groups as well. In line with previous results, at-risk-of-poverty rates calculated using EUROMOD are lower than using the original data from the EU-SILC with one exemption: individuals aged 50-64 years, where the simulations fit the statistics published by Eurostat quite well. EUROMOD simulated at-risk-of-poverty rate is underestimated the most for the group of children aged 0-17.

⁹ Using the OECD modified equivalence scale.

¹⁰ Using the OECD modified equivalence scale.

4.3 Validation of minimum wage

[See tables in Appendix 2]

In this section we give a brief overview of the impact of the minimum wage policy on income, taxes, social contributions, inequality and poverty rates. It should be noted, that the minimum wage policy is switched off in the baseline scenario. Imposing minimum wage increases the aggregate amounts of disposable income, gross earnings of employees, income tax and employee social insurance contributions only marginally across the years (see Table 28). There is a marginal impact on inequality (inequality is lower with the minimum wage policy enforced). The impact on at-risk of poverty rate (using the line of 60% median HDI) is also slightly positive (poverty risk decreases by around 1% in all years).

4.4 Summary of “health warnings”

This final section summarises the main findings concerning special aspects of the Czech part of EUROMOD or its database that should be borne in mind when planning appropriate uses of the model and when interpreting results.

The SILC sample is relatively small. Care should be taken in interpreting results for small population sub-groups.

The weights do not control for differential non-response according to any dimension.

There is underreporting by people with higher incomes and those with higher share of self-employment income and incomes from investment. Incomes of self-employed are in principle not very reliable figures since some portion of accounting expenditure made by self-employed effectively covers common living expenditures.

Sickness insurance benefits are substantially underreported in the SILC since people do not recognize them easily in their pay-checks. Information in the SILC does not allow for well-informed simulations of these benefits.

Some segments of the population are not sufficiently represented in the SILC sample (minorities, foreigners, home-less).

Some values of some observations are imputed already by the Statistical Office and cannot be disentangled from released data.

5. REFERENCES

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<http://www.mpsv.cz/cs/1353> (Social insurance reports – Matematicko-pojistné zprávy)

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<http://www.mpsv.cz/cs/3867> (Basic indicators of employment and social security in the Czech Republic – Základní ukazatele z oblasti práce a sociálního zabezpečení v ČR)

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Macroeconomic indicators:

[http://www.czso.cz/csu/redakce.nsf/i/cr: makroekonomicke_udaje/\\$File/HLMAKRO.xls](http://www.czso.cz/csu/redakce.nsf/i/cr: makroekonomicke_udaje/$File/HLMAKRO.xls)

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Czech Social Security Administration (pension and sickness insurance)

CSSZ Yearbooks: <http://www.cssz.cz/en/information/>

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Information of the Czech Tax Administration - Informace o činnosti daňové a celní správy České republiky

Taxes: <http://cds.mfcr.cz/cps/rde/xchg/cds/xsl/325.html?year=0>

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http://cds.mfcr.cz/cps/rde/xchg/cds/xsl/ceska_danova_sprava_7997.html?year=0

http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/vlad_fin_stat_55738.html

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Legal acts in English and terminology database:

<http://business.center.cz/business/pojmy/>

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State Social Support: <http://www.mpsv.cz/cs/2>

Social Insurance: <http://www.mpsv.cz/cs/1349>

Social Need: <http://www.mpsv.cz/cs/5>

Pensions: <http://www.mpsv.cz/cs/3>

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International

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APPENDIX 1: UPRATING FACTORS

| | Grp/No | cz_2009 | cz_2010 | cz_2011 | cz_2012 | cz_2013 | Comment |
|-----------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--|
| DefConst | | on | on | on | on | on | Uprating factors for CZ_2010_a1 |
| run_cond | | {IsUsedDatabase#1} | {IsUsedDatabase#1} | {IsUsedDatabase#1} | {IsUsedDatabase#1} | {IsUsedDatabase#1} | |
| #1_DatabaseName | | cz_2010_a1.txt | cz_2010_a1.txt | cz_2010_a1.txt | cz_2010_a1.txt | cz_2010_a1.txt | |
| \$supr_bch00 | | 1 | 1.0494 | 1.0417 | 1.0373 | 1.0373 | CSO http://www.czso.cz/csu/2010edicniplan.nsf/publ/3202-10-rok_2010 and previous years. Original source MPSV. Kept constant in 2013, no change in rate. |
| \$supr_bchmt | | 1 | 1.0356 | 1.5090 | 1.8411 | 1.8411 | same as for \$supr_bch00 |
| \$supr_bfafp | | 1 | 1.0028 | 1.0380 | 1.2448 | 1.2448 | same as for \$supr_bch00 |
| \$supr_bfaot | | 1 | 1.0001 | 0.9988 | 0.9871 | 0.9871 | same as for \$supr_bch00 |
| \$supr_bfapl | | 1 | 1.0419 | 1.0045 | 1.0283 | 1.0283 | same as for \$supr_bch00 |
| \$supr_bho | | 1 | 1.2183 | 1.3622 | 1.4615 | 1.4615 | same as for \$supr_bch00 |
| \$supr_bun | | 1 | 0.9769 | 0.9849 | 1.0429 | 1.0429 | MPSV - Employment Services; Based on average monthly unemployment benefit paid to registered unemployed. Computed as January value of each year relative to January of 2007. Source: monthly and quarterly statistics of the Labour ministry, http://portal.mpsv.cz/sz/stat . Kept constant in 2013, no change in rate. |
| \$supr_cpi | | 1 | 1.0116 | 1.0338 | 1.0703 | 1.1068 | Eurostat / Harmonized Indices of Consumer Prices (HICP): http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database . For 2013 assumption is made that the change will be the same as in 2012 (this corresponds with the prediction of inflation Finance ministry http://www.mfcr.cz/cps/rde/xbcr/mfcr/Makroekonomicka-predikce_2012-Q3_C.pdf) |
| \$supr_pdi | | 1 | 0.9718 | 0.9880 | 0.9842 | 0.9932 | Newly established based on more detailed data series provided by the CSSZ. http://www.cssz.cz/o-cssz/informace/statistiky/duchodova-statistika/ . Assumption made that increase will correspond to valorization done at the beginning of 2013 (0.9%). |
| \$supr_poa | | 1 | 1.0078 | 1.0505 | 1.0730 | 1.0820 | same as for \$supr_pdi |
| \$supr_psu | | 1 | 1.0066 | 1.0512 | 1.0733 | 1.0823 | same as for \$supr_pdi |
| \$supr_xhc | | 1 | 1.0232 | 1.0692 | 1.0653 | 1.0614 | CSO, Household budget surveys, item no.4. = Housing related costs including rents, energy, water, and fuels. Assumption made that the change will be the same as in 2012. |
| \$supr_xhcrt | | 1 | 1.0232 | 1.0692 | 1.0653 | 1.0614 | CSO, Household budget surveys http://www.czso.cz/csu/2010edicniplan.nsf/p/3002-10 , item no.4. Housing related costs including rents, energy, water, and fuels. Assumption made that the change will be the same as in 2012 |
| \$supr_yem | | 1 | 1.0194 | 1.0468 | 1.0757 | 1.0827 | CSO, Average wage increase, http://www.czso.cz/eng/redakce.nsf/i/pmz_ts . Assuming average wage growth by the Ministry of Finance for 2013: Source: http://www.mfcr.cz/cs/verejny-sektor/prognozy/makroekonomicka-predikce/2013/makroekonomicka-predikce-cervenec-2013-13603 |
| \$supr_yempv | | 1 | 1.0333 | 1.0533 | 1.0816 | 1.1115 | Calculated base on yem series lagged by 1 |

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| | Grp/No | cz_2009 | cz_2010 | cz_2011 | cz_2012 | cz_2013 | Comment |
|------------|--------|----------------|----------------|----------------|----------------|----------------|--|
| Uprate | | on | on | on | on | on | |
| dataset | | n/a | n/a | n/a | n/a | n/a | |
| dataset | | cz_2007_a2.txt | n/a | n/a | n/a | n/a | |
| dataset | | cz_2008_a3.txt | cz_2008_a3.txt | cz_2008_a3.txt | cz_2008_a3.txt | cz_2008_a3.txt | |
| Dataset | | cz_2010_**.txt | cz_2010_**.txt | cz_2010_**.txt | cz_2010_**.txt | cz_2010_**.txt | |
| def_factor | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | |
| afc | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | ASSETS : Financial Capital |
| bch | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | BENEFIT/PENSION : Child |
| bch00 | | \$supr_bch00 | \$supr_bch00 | \$supr_bch00 | \$supr_bch00 | \$supr_bch00 | BENEFIT/PENSION : Child : Main/Basic |
| bchmt | | \$supr_bchmt | \$supr_bchmt | \$supr_bchmt | \$supr_bchmt | \$supr_bchmt | BENEFIT/PENSION : Child : Means-Tested |
| bed | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | BENEFIT/PENSION : Education |
| bfa | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | BENEFIT/PENSION : Family |
| bfafp | | \$supr_bfafp | \$supr_bfafp | \$supr_bfafp | \$supr_bfafp | \$supr_bfafp | BENEFIT/PENSION : Family : Foster parent |
| bfaot | | \$supr_bfaot | \$supr_bfaot | \$supr_bfaot | \$supr_bfaot | \$supr_bfaot | BENEFIT/PENSION : Family : Other |
| bfaopl | | \$supr_bfaopl | \$supr_bfaopl | \$supr_bfaopl | \$supr_bfaopl | \$supr_bfaopl | BENEFIT/PENSION : Family : Parental leave |
| bhl | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | BENEFIT/PENSION : Health |
| bho | | \$supr_bho | \$supr_bho | \$supr_bho | \$supr_bho | \$supr_bho | BENEFIT/PENSION : Housing |
| bsa | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | BENEFIT/PENSION : Social Assistance |
| bun | | \$supr_bun | \$supr_bun | \$supr_bun | \$supr_bun | \$supr_bun | BENEFIT/PENSION : Unemployment |
| kfb | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | IN KIND : Fringe Benefit |
| kfbcc | 1 | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | IN KIND : Fringe Benefit: Company car |
| kivho | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | IN KIND : Imputed value : Housing |
| pdi | | \$supr_pdi | \$supr_pdi | \$supr_pdi | \$supr_pdi | \$supr_pdi | BENEFIT/PENSION : Disability |
| poa | | \$supr_poa | \$supr_poa | \$supr_poa | \$supr_poa | \$supr_poa | BENEFIT/PENSION : Old Age |
| psu | | \$supr_psu | \$supr_psu | \$supr_psu | \$supr_psu | \$supr_psu | BENEFIT/PENSION : Survivors |
| tad | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | TAX : repayments/receipts |
| tin | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | TAX : Income tax |
| tis | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | TAX : Income tax and SICs |
| tispy | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | TAX : income tax and sics : previous year |
| tpr | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | TAX : Property tax |
| xhc | | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | EXPENDITURE : Housing cost |
| xhcmomi | | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | EXPENDITURE : Housing cost : Mortgage Payment (interest+capital) : Mortgage Interest |
| xhcot | | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | \$supr_xhc | EXPENDITURE : Housing cost : Other |
| xhcrt | | \$supr_xhcrt | \$supr_xhcrt | \$supr_xhcrt | \$supr_xhcrt | \$supr_xhcrt | EXPENDITURE : Housing cost : Rent |
| xmp | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | EXPENDITURE : Maintenance Payment |
| xpp | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | EXPENDITURE : Private Pension (voluntary) |
| tscee | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | |
| tscer | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | |

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| | | | | | | | |
|---------|---|--------------|--------------|--------------|--------------|--------------|----------------------------|
| tscse | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | |
| yds | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | harmonised CPI |
| ydses_o | 2 | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | |
| yem | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | INCOME : Employment |
| yempv | | \$supr_yempv | \$supr_yempv | \$supr_yempv | \$supr_yempv | \$supr_yempv | |
| yi | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : Investment |
| yivwg | | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | \$supr_yem | |
| yot | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : other |
| ypp | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : Private Pension |
| ypr | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : Property |
| ypt | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : Private Transfers |
| yse | | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | \$supr_cpi | INCOME : Self Employment |
| ysepv | | \$supr_yempv | \$supr_yempv | \$supr_yempv | \$supr_yempv | \$supr_yempv | |

APPENDIX 2: MACRO VALIDATION TABLES

Table 18: Original income by sources: number of recipients (in thousands)

| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|------------------------|--------------------|-------|-------|-------|-------|---------------------|-------|-------|-------|-------|------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| Original income | 5,705 | 5,705 | 5,705 | 5,705 | 5,705 | | | | | | | | | 5,501 | 104% |
| Employment | 4,337 | 4,337 | 4,337 | 4,337 | 4,337 | 4,243 | 4,173 | 4,170 | 4,169 | 102% | 104% | 104% | 104% | 4,337 | 100% |
| Self-employment | 950 | 950 | 950 | 950 | 950 | 868 | 885 | 887 | 909 | 109% | 107% | 107% | 105% | 950 | 100% |
| Investment | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | 589 | 170% |
| Property | 382 | 382 | 382 | 382 | 382 | | | | | | | | | 222 | 172% |
| Private pension | 39 | 39 | 39 | 39 | 39 | | | | | | | | | 39 | 100% |
| Private transfers | 395 | 395 | 395 | 395 | 395 | | | | | | | | | 395 | 100% |
| In-kind income | | | | | | | | | | | | | | | |
| Fringe benefits | 2,465 | 2,465 | 2,465 | 2,465 | 2,465 | | | | | | | | | 2,465 | 100% |
| Imputed housing | 6,183 | 6,183 | 6,183 | 6,183 | 6,183 | | | | | | | | | 3,928 | 157% |

Notes:

(s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

External statistics for 2012 are not available (this holds for all incomes and recipients except for number of payments of social contributions - see table 24).

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2008 and official statistics from section 1.

Table 19: Original income by sources: overall amount (in millions of CZK)

| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|------------------------|--------------------|-----------|-----------|-----------|-----------|---------------------|-----------|-----------|-----------|-------|------|------|------|-----------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| Original income | 1,301,593 | 1,324,729 | 1,358,983 | 1,398,659 | 1,415,768 | | | | | | | | | 1,274,758 | 102% |
| Employment | 1,030,483 | 1,050,474 | 1,078,709 | 1,108,490 | 1,115,704 | 1,200,881 | 1,209,979 | 1,236,715 | 1,259,558 | 86% | 87% | 87% | 88% | 1,009,237 | 102% |
| Self-employment | 243,142 | 245,962 | 251,360 | 260,235 | 269,109 | 86,512 | 83,854 | 76,996 | 82,333 | 281% | 293% | 326% | 316% | 238,129 | 102% |
| Investment | 13,885 | 14,046 | 14,354 | 14,861 | 15,368 | | | | | | | | | 13,598 | 102% |
| Property | 10,320 | 10,440 | 10,669 | 11,046 | 11,422 | | | | | | | | | 10,107 | 102% |
| Private pension | 2,008 | 2,031 | 2,076 | 2,149 | 2,222 | | | | | | | | | 1,966 | 102% |
| Private transfers | 14,731 | 14,902 | 15,229 | 15,767 | 16,304 | | | | | | | | | 14,427 | 102% |
| Paid private transfers | 1,301,593 | 1,324,729 | 1,358,983 | 1,398,659 | 1,415,768 | | | | | | | | | 1,274,758 | 102% |
| In-kind income | 20,734 | 20,975 | 21,435 | 22,192 | 22,948 | | | | | | | | | 20,307 | 102% |
| Fringe benefits | 18,818 | 19,036 | 19,454 | 20,141 | 20,827 | | | | | | | | | 18,430 | 102% |
| Imputed housing | 2,836 | 2,869 | 2,932 | 3,035 | 3,139 | | | | | | | | | | |

Notes:
 (s) stands for simulated tax or benefit.
 * red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2008 and official statistics from section 1.

Table 20: Disability, old-age, survivor and sickness benefits: number of recipients (in thousands)

| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|--------------------|--------------------|-------|-------|-------|-------|---------------------|-------|-------|-------|-------|------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| Pensions | 2,839 | 2,839 | 2,839 | 2,839 | 2,839 | 2,790 | 2,819 | 2,873 | 2,866 | 102% | 101% | 99% | 99% | 2,839 | 100% |
| Old-age | | | | | | | | | | | | | | | |
| Old-age pension | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,108 | 2,260 | 2,340 | 2,341 | 104% | 97% | 94% | 94% | 2,200 | 100% |
| Disability | | | | | | | | | | | | | | | |
| Disability pension | 672 | 672 | 672 | 672 | 672 | 586 | 466 | 445 | 439 | 115% | 144% | 151% | 153% | 672 | 100% |
| Survivor's | | | | | | | | | | | | | | | |
| Survivor's pension | 678 | 678 | 678 | 678 | 678 | 725 | 720 | 716 | 714 | 94% | 94% | 95% | 95% | 678 | 100% |
| Sickness | 577 | 577 | 577 | 577 | 577 | 1,442 | 1,325 | 1,269 | 1,227 | 40% | 44% | 45% | 47% | 577 | 100% |

Table 21: Disability, old-age, survivor and sickness benefits: overall amount (in millions of CZK)

| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|--------------------|--------------------|---------|---------|---------|---------|---------------------|---------|---------|---------|-------|------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| Pensions | 337,793 | 338,203 | 351,049 | 357,034 | 360,075 | 331,705 | 340,162 | 359,234 | 367,864 | 102% | 99% | 98% | 97% | 330,829 | 102% |
| Old-age | | | | | | | | | | | | | | | |
| Old-age pension | 255,090 | 257,079 | 267,972 | 273,711 | 276,007 | 243,636 | 265,985 | 284,614 | 295,140 | 105% | 97% | 94% | 93% | 249,831 | 102% |
| Disability | | | | | | | | | | | | | | | |
| Disability pension | 61,079 | 59,357 | 60,346 | 60,114 | 60,664 | 60,989 | 47,682 | 47,451 | 45,476 | 100% | 124% | 127% | 132% | 59,820 | 102% |
| Survivor's | | | | | | | | | | | | | | | |
| Survivor's pension | 21,624 | 21,767 | 22,731 | 23,209 | 23,404 | 27,080 | 26,549 | 27,169 | 27,247 | 80% | 82% | 84% | 85% | 21,178 | 102% |
| Sickness | 337,793 | 338,203 | 351,049 | 357,034 | 360,075 | 331,705 | 340,162 | 359,234 | 367,864 | 102% | 99% | 98% | 97% | 330,829 | 102% |

Notes: (s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2008 and official statistics from section 1.

Table 22: Unemployment, Family, Housing and Social assistance benefits: number of recipients (in thousands)

| | EUROMOD Simulation | | | | | External statistics | | | | | Ratio | | | | EU-SILC 2009 | ratio |
|--|--------------------|------|------|------|------|---------------------|------|------|------|------|-------|------|------|-----|--------------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | | | |
| Unemployment | 397 | 397 | 397 | 397 | 397 | | | | | | | | | | | |
| Family | 980 | 968 | 845 | 873 | 868 | | | | | | | | | 692 | 142% | |
| (s) Child Allowance | 469 | 458 | 449 | 498 | 492 | 682 | 530 | 484 | | 69% | 86% | 93% | | | | |
| (s) Social Allowance | 243 | 235 | 0 | 0 | 0 | 146 | 148 | 26 | 0 | 166% | 159% | | | | | |
| Foster Care benefits | 4 | 4 | 4 | 4 | 4 | | | | | | | | | | | |
| (s) Parental Allowance | 410 | 410 | 410 | 410 | 410 | 362 | 337 | 323 | 306 | 113% | 122% | 127% | 134% | | | |
| (s) Birth Grant | 105 | 105 | 6 | 6 | 6 | 118 | 118 | 22 | | 89% | 89% | 28% | | | | |
| Social assistance | 89 | 89 | 110 | 128 | 125 | 72 | 91 | 101 | 116 | 123% | 97% | 108% | 110% | 81 | 109% | |
| (s) Regular Social Assistance Benefits | 89 | 89 | 110 | 128 | 125 | 72 | 91 | 101 | 116 | 123% | 97% | 108% | 110% | | | |
| (s) Supplement for Housing | 76 | 75 | 84 | 97 | 95 | 19 | 23 | 26 | 41 | 390% | 324% | 321% | 236% | | | |
| (s) Housing Benefit | 273 | 284 | 309 | 306 | 307 | 94 | 119 | | | 290% | 238% | | | | | |

Notes:

(s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2009 and official statistics from section 1.

Table 23: Unemployment, Family, Housing and Social assistance benefits: overall amount (in millions of CZK)

| | EUROMOD Simulation | | | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|--|--------------------|--------|--------|--------|--------|--------|--------|---------------------|--------|------|------|-------|------|--------|-------|---------|--|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio | | |
| Unemployment | 13,595 | 14,065 | 14,311 | 14,684 | 15,169 | 15,078 | 13,355 | 10,349 | 8,760 | 90% | 105% | 138% | 168% | 10,566 | 129% | | |
| Family | 48,623 | 48,444 | 44,194 | 37,540 | 37,473 | 38,853 | 37,331 | 31,343 | 29,788 | 125% | 130% | 141% | 126% | 34,245 | 142% | | |
| (s) Child Allowance | 5,368 | 5,240 | 5,092 | 5,715 | 5,647 | 4,754 | 3,875 | 3,496 | 3,338 | 113% | 135% | 146% | 171% | | | | |
| (s) Social Allowance | 2,816 | 2,763 | | | | 2,980 | 3,117 | 795 | 56 | 94% | 89% | | | | | | |
| Foster Care benefits | 302 | 302 | 313 | 375 | 375 | 927 | 1,009 | 1,066 | 1,242 | 33% | 30% | 29% | 30% | | | | |
| (s) Parental Allowance | 37,374 | 37,374 | 37,374 | 30,052 | 30,052 | 28,613 | 27,765 | 25,693 | 25,007 | 131% | 135% | 145% | 120% | | | | |
| (s) Birth Grant | 1,396 | 1,396 | 80 | 80 | 80 | 1,579 | 1,565 | 292 | 144 | 88% | 89% | 27% | 56% | | | | |
| Social assistance | 3,506 | 3,506 | 4,780 | 5,851 | 5,754 | 3,089 | 3,882 | 4,982 | 7,751 | 114% | 90% | 96% | 75% | 2,320 | 151% | | |
| (s) Regular Social Assistance Benefits | 2,341 | 2,329 | 3,508 | 4,381 | 4,312 | 2,328 | 2,862 | 3,820 | 5,910 | 101% | 81% | 92% | 74% | | | | |
| (s) Supplement for Housing | 1,165 | 1,177 | 1,271 | 1,470 | 1,442 | 512 | 686 | 850 | 1,673 | 228% | 172% | 150% | 88% | | | | |
| (s) Housing Benefit | 3,320 | 3,491 | 4,107 | 4,118 | 4,220 | 2,280 | 3,521 | 4,625 | 5,745 | 146% | 99% | 89% | 72% | | | | |

Notes:

(s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2009 and official statistics from section 1.

Table 24: Taxes and social insurance contributions: number of payments (in thousands)

| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|---------------------------------------|--------------------|-------|-------|-------|-------|---------------------|-------|-------|-------|-------|------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| (s) Income tax + contributions | 5,287 | 5,287 | 5,287 | 5,287 | 5,287 | 5,043 | 5,159 | 5,150 | 5,104 | 105% | 102% | 103% | 104% | 3,016 | 181% |
| Social contributions | | | | | | | | | | | | | | | |
| (s) Employer | 4,337 | 4,337 | 4,337 | 4,337 | 4,337 | 4,155 | 4,273 | 4,293 | 4,268 | 104% | 102% | 101% | 102% | | |
| (s) Employees | 4,337 | 4,337 | 4,337 | 4,337 | 4,337 | 4,155 | 4,273 | 4,293 | 4,268 | 104% | 102% | 101% | 102% | | |
| (s) Self-employed | 950 | 950 | 950 | 950 | 950 | 888 | 887 | 857 | 836 | 107% | 107% | 111% | 114% | | |
| (s) Income tax | 4,134 | 4,151 | 4,279 | 4,224 | 4,527 | 4,934 | 4,885 | 4,872 | 4,890 | 84% | 85% | 88% | 86% | | |
| (s) Taxable income | 5,305 | 5,304 | 5,260 | 5,260 | 5,260 | 4,934 | 4,885 | 4,872 | 4,890 | 108% | 109% | 108% | 108% | | |
| Property tax | 2,701 | 2,701 | 2,701 | 2,701 | 2,701 | 3,672 | 3,773 | 3,864 | 3,890 | 74% | 72% | 70% | 69% | 2,701 | 100% |

Notes: (s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2009 and official statistics from section 1.

Table 25: Taxes and social insurance contributions: overall amount (in millions of CZK)

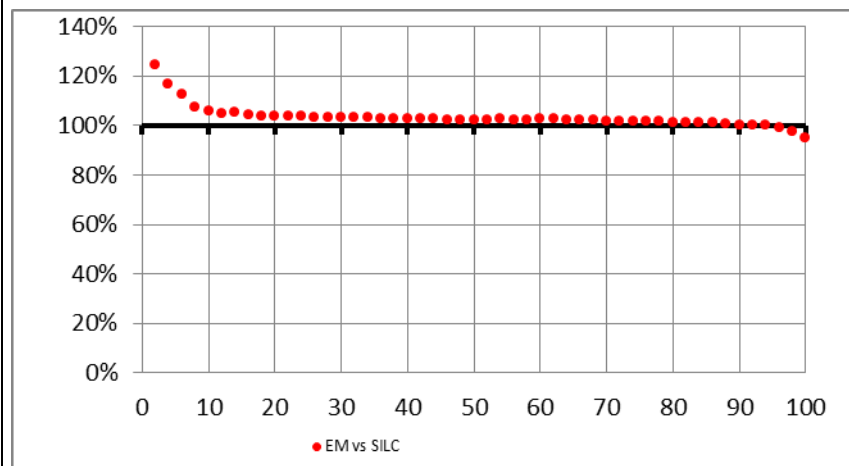
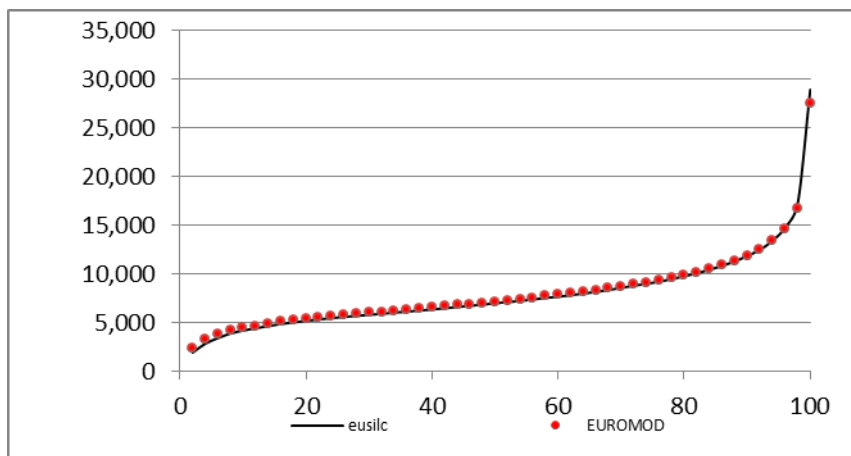
| | EUROMOD Simulation | | | | | External statistics | | | | Ratio | | | | EU-SILC | |
|---------------------------------------|--------------------|-----------|-----------|-----------|-----------|---------------------|---------|---------|---------|-------|------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2009 | 2010 | 2011 | 2012 | 2009 | ratio |
| (s) Income tax + contributions | 275,238 | 282,265 | 298,369 | 302,076 | 318,255 | 330,420 | 332,899 | 338,878 | | 83% | 85% | 88% | | 236,971 | 116% |
| Social contributions | | | | | | 213,813 | 213,069 | 216,566 | | | | | | | |
| (s) Employer | 347,150 | 355,622 | 365,246 | 373,884 | 376,848 | 338,456 | 349,228 | 372,760 | | 103% | 102% | 98% | | | |
| (s) Employees | 112,565 | 115,295 | 118,394 | 121,263 | 122,288 | 113,628 | 116,932 | 120,400 | | 99% | 99% | 98% | | | |
| (s) Self-employed | 56,389 | 57,816 | 60,416 | 61,780 | 63,877 | 100,185 | 96,137 | 96,166 | | 56% | 60% | 63% | | | |
| (s) Income tax | 106,284 | 109,154 | 119,558 | 119,033 | 132,090 | 116,607 | 119,830 | 122,312 | 123,049 | 91% | 91% | 98% | 97% | | |
| (s) Taxable income | 1,633,731 | 1,665,041 | 1,707,415 | 1,755,143 | 1,774,601 | | | | | | | | | | |
| Property tax | 1,677 | 1,697 | 1,734 | 1,795 | 1,856 | 6,361 | 8,747 | 8,568 | 9,541 | 26% | 19% | 20% | 19% | 1,643 | 102% |

Notes: (s) stands for simulated tax or benefit.

* red numbers stand for significant over or under estimation of EUROMOD results in comparison to external statistics.

Sources: EUROMOD results based on simulations, own calculations using EU-SILC 2009 and official statistics from section 1.

Graph 1. Distribution of equivalised disposable income: EUROMOD and EU-SILC 2010



Distribution of equivalised disposable income in EUROMOD and EU-SILC by percentile

Distribution of difference between EUROMOD and EU-SILC equivalised disposable income by percentile

Sources: EUROMOD results based on simulations and on own calculations using EU-SILC 2010.

Table 26: Income inequality

| | EUROMOD Simulation | | | | | External statistics | | | Ratio | | | EU-SILC | |
|------------------------------------|--------------------|-------|-------|-------|-------|---------------------|-------|-------|-------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | Ratio |
| Mean income (equivalised) | | | | | | | | | | | | | |
| total population | 8,083 | 8,245 | 8,861 | 8,627 | 8,601 | 7,981 | 8,440 | 8,765 | 101% | 98% | 101% | 7,946 | 102% |
| males | 8,243 | 8,411 | 9,036 | 8,798 | 8,773 | 8,159 | 8,637 | 8,990 | 101% | 97% | 101% | 8,122 | 101% |
| females | 7,928 | 8,086 | 8,693 | 8,462 | 8,436 | 7,810 | 8,249 | 8,550 | 102% | 98% | 102% | 7,776 | 102% |
| Median income (equivalised) | | | | | | | | | | | | | |
| total population | 7,189 | 7,340 | 7,899 | 7,658 | 7,634 | 7,058 | 7,451 | 7,791 | 102% | 99% | 101% | 7,041 | 102% |
| males | 7,372 | 7,526 | 8,070 | 7,827 | 7,800 | 7,220 | 7,644 | 8,024 | 102% | 98% | 101% | 7,188 | 103% |
| females | 7,052 | 7,199 | 7,735 | 7,513 | 7,494 | 6,900 | 7,274 | 7,581 | 102% | 99% | 102% | 6,887 | 102% |
| Income quantile ratio (S80/S20) | 3.23 | 3.23 | 3.24 | 3.26 | 3.24 | 3.50 | 3.50 | 3.50 | 92% | 92% | 93% | 3.50 | 92% |
| Gini Coefficient | 23.63 | 23.64 | 23.64 | 23.82 | 23.69 | 24.90 | 25.20 | 24.90 | 95% | 94% | 95% | 25.09 | 94% |

Notes:

Sources: EUROMOD results are based on simulations. Own calculations are using EU-SILC 2010 and official statistics from Eurostat's website http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database

Table 27: At-risk-of-poverty rates: using different poverty lines

| | EUROMOD Simulation | | | | | External statistics | | | Ratio | | | EU-SILC | |
|----------------|--------------------|-------|-------|-------|-------|---------------------|-------|-------|-------|------|------|---------|-------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 | 2009 | Ratio |
| 40% median HDI | | | | | | | | | | | | | |
| Total | 1.86 | 1.90 | 2.05 | 2.03 | 1.98 | 2.90 | 2.80 | 2.70 | 64% | 68% | 76% | 2.92 | 64% |
| Males | 2.09 | 2.11 | 2.22 | 2.16 | 2.11 | 2.70 | 2.70 | 2.60 | 77% | 78% | 85% | 2.81 | 74% |
| Females | 1.65 | 1.68 | 1.89 | 1.90 | 1.86 | 3.00 | 2.90 | 2.80 | 55% | 58% | 68% | 3.02 | 55% |
| 50% median HDI | | | | | | | | | | | | | |
| Total | 3.97 | 3.99 | 4.20 | 4.29 | 4.20 | 5.20 | 5.10 | 5.10 | 76% | 78% | 82% | 5.45 | 73% |
| Males | 4.10 | 4.12 | 4.31 | 4.42 | 4.36 | 5.10 | 4.90 | 4.80 | 80% | 84% | 90% | 5.33 | 77% |
| Females | 3.84 | 3.87 | 4.09 | 4.17 | 4.05 | 5.40 | 5.30 | 5.40 | 71% | 73% | 76% | 5.56 | 69% |
| 60% median HDI | | | | | | | | | | | | | |
| Total | 8.04 | 8.14 | 8.25 | 8.19 | 8.01 | 9.00 | 9.80 | 9.60 | 89% | 83% | 86% | 9.41 | 85% |
| Males | 7.21 | 7.30 | 7.60 | 7.51 | 7.36 | 8.00 | 8.90 | 8.70 | 90% | 82% | 87% | 8.48 | 85% |
| Females | 8.84 | 8.96 | 8.88 | 8.85 | 8.63 | 10.00 | 10.60 | 10.50 | 88% | 85% | 85% | 10.32 | 86% |
| 70% median HDI | | | | | | | | | | | | | |
| Total | 14.62 | 14.59 | 14.70 | 14.62 | 14.39 | 15.50 | 16.60 | 16.60 | 94% | 88% | 89% | 15.83 | 92% |
| Males | 12.90 | 12.84 | 13.04 | 13.00 | 12.81 | 13.60 | 14.60 | 14.40 | 95% | 88% | 91% | 13.94 | 93% |
| Females | 16.28 | 16.28 | 16.30 | 16.17 | 15.91 | 17.30 | 18.50 | 18.80 | 94% | 88% | 87% | 17.65 | 92% |
| 60% median HDI | | | | | | | | | | | | | |
| 0-17 years | 11.78 | 11.70 | 12.86 | 12.89 | 12.56 | 14.30 | 15.20 | 13.90 | 82% | 77% | 92% | 15.29 | 77% |
| 18-24 years | 9.76 | 9.89 | 10.73 | 9.88 | 9.82 | 11.20 | 12.70 | 13.40 | 87% | 78% | 80% | 11.89 | 82% |
| 25-49 years | 7.29 | 7.39 | 7.75 | 7.68 | 7.49 | 8.00 | 9.10 | 8.70 | 91% | 81% | 89% | 8.49 | 86% |
| 50-64 years | 6.77 | 6.94 | 6.54 | 6.70 | 6.66 | 6.80 | 7.40 | 8.80 | 100% | 94% | 74% | 6.87 | 99% |
| 65+ years | 6.21 | 6.42 | 4.96 | 4.97 | 4.71 | 6.80 | 6.60 | 6.00 | 91% | 97% | 83% | 6.74 | 92% |

* Using as poverty line 60% of equivalised disposable income (EDI)
 Sources: EUROMOD results are based on input data. Own calculations are using EU-SILC 2008 and official statistics from Eurostat's website
http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database

Table 28: Minimum wage validation (aggregate amounts in millions of national currency)

| | EUROMOD (baseline) | | | | | EUROMOD (with minimum wage) | | | | | Ratio | | | | |
|-------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------------------------|-----------|-----------|-----------|-----------|-------|------|------|------|------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2013 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Disposable income (total) | 1,452,990 | 1,470,628 | 1,499,212 | 1,537,750 | 1,542,241 | 1,454,013 | 1,471,597 | 1,500,120 | 1,538,583 | 1,543,038 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Employment income (total) | 1,030,483 | 1,050,474 | 1,078,709 | 1,108,490 | 1,115,704 | 1,031,568 | 1,051,500 | 1,079,662 | 1,109,375 | 1,116,574 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Income tax + contributions | 275,238 | 282,265 | 298,369 | 302,076 | 318,255 | 275,287 | 282,310 | 298,410 | 302,111 | 318,318 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Employee contributions | | | | | | | | | | | | | | | |
| (total) | 112,565 | 115,295 | 118,394 | 121,263 | 122,288 | 112,595 | 115,322 | 118,419 | 121,286 | 122,310 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Personal income tax (total) | 106,284 | 109,154 | 119,558 | 119,033 | 132,090 | 106,303 | 109,171 | 119,575 | 119,045 | 132,131 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Poverty risk (60% median HDI) | 8.04 | 8.14 | 8.25 | 8.19 | 8.01 | 7.97 | 8.09 | 8.17 | 8.13 | 7.94 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 |
| Gini Coefficient | 23.63 | 23.64 | 23.64 | 23.82 | 23.69 | 23.61 | 23.61 | 23.62 | 23.80 | 23.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Source: EUROMOD calculations