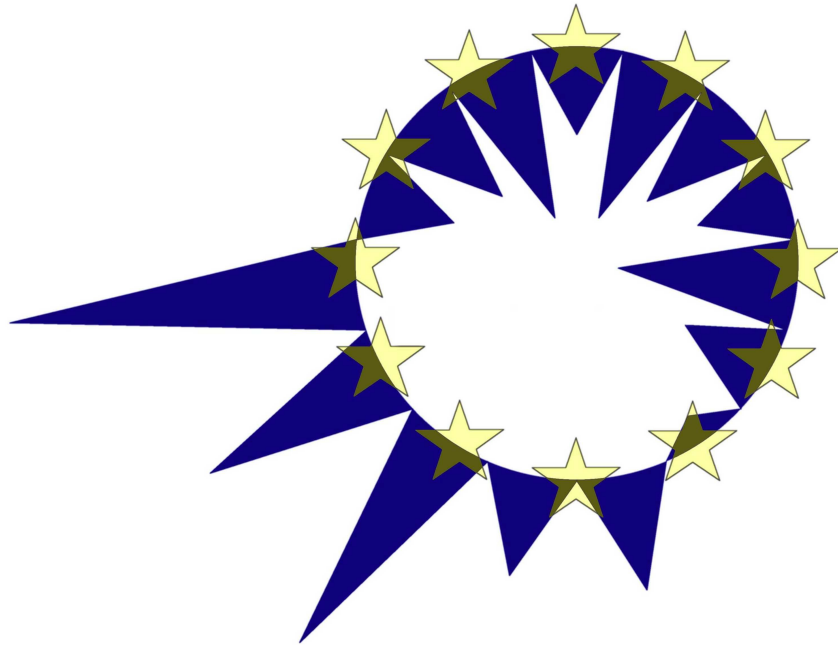


EUROMOD

COUNTRY REPORT



CZECH REPUBLIC (CZ)

2005 - 2008

Daniel Münich and Jan Pavel

15/12/2010

EUROMOD version F3.0



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.

A major EUROMOD development project (*EUROMODUpdate*) is being supported by DG-EMPL with the key objective to improve and extend EUROMOD's usefulness. This will involve enlarging and updating EUROMOD from 19 countries to cover all 27 Member States and recent policy systems, using EU-SILC (European Union Statistics on Income and Living Conditions) data as the input database. *EUROMODUpdate* project began in February 2009 and will last 3 years.

The work is being carried out by the EUROMOD core developer team, based mainly in ISER University of Essex, in collaboration with a group of national teams.

A project Steering Group has been established, under the chairmanship of Sir Tony Atkinson.

Preparatory work in some of the New Member States is being conducted by the European Centre, Vienna, under the leadership of Orsolya Lelkes.

EUROMOD coordinator: Holly Sutherland

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The results presented in this report are derived using EUROMOD F3.0. EUROMOD is continually being improved and updated and the results presented here represent the best available at the time of writing.

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



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1. BASIC INFORMATION

1.1 Basic figures Basic figures

Table 1. Basic figures

	Pop. (m.) ^[b]	pop. < 18 (%)	pop. ≥ 65 (%)	Life expect. Men / women (years)	Fertility rate	Unemp rate	GDP per head (PPP in CZK) ^[c]	Currency Name	Exch. rate ^[a]
2005	10.2	18.6	14.1	72.9/79.1	1.282	7.9	17,058	CZK	30.030
2006	10.3	18.3	14.3	73.5/79.7	1.328	7.1	18,213	CZK	28.495
2007	10.3	18.0	14.5	73.7/79.9	1.438	5.3	19,949	CZK	28.715
2008	10.4	17.8	14.7	73.9/80.1	1.497	4.4	20,150	CZK	23.895

[a] Euro exchange rate on 30th of June. Czech national Bank

http://www.cnb.cz/cs/financni_trhy/devizovy_trh/kurzy_devizoveho_trhu/denni_kurz.jsp

[b] Source: Czech statistical office, Demographic yearbooks,

http://www.czso.cz/csu/2006edicniplan.nsf/publ/4019-06-za_rok_2005

[c] Source: Czech statistical office, 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)

Table 2. Tax-benefit system and government budget

	Total general government revenue ^[1] % of GDP	Total tax receipts ^[1] % of GDP	Total general government expenditure ^[1] % of GDP	Social protection ^[a] % of GDP
2005	44.2	39.3	48.0	20.5
2006	43.7	38.7	46.5	19.8
2007	44.2	38.9	44.9	19.6
2008	46.3	40.6	48.6	n.a.

Source: [a] Eurostat (2010) http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database



Table 3. Social protection expenditure by function (as % of total social protection expenditure)

	Sickness/ health care	Disability	Old age	Survivors	Family/ children	Unemployment	Housing	Social exclusion
2005	6.9	1.5	7.2	0.8	1.6	0.8	0.1	0.5
2006	7.0	1.5	7.6	0.8	1.5	0.7	0.1	0.5
2007	6.6	1.6	7.4	0.8	1.5	0.6	0.1	0.5
2008	6.4	1.5	7.6	0.8	1.8	0.7	0.1	0.2

Source: Eurostat (2010)

http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Table 4. Taxation (as % of total tax receipts)

	Personal income tax	Corporate income tax	Social security contributions		Taxes on goods and services	Other taxes
			Employees*	Employers		
2005	9.5	9.4	12.2	21.5	24.6	22.8
2006	9.0	10.2	12.7	21.6	23.7	22.9
2007	9.1	10.6	12.7	21.4	23.4	22.7
2008	8.6	9.7	12.6	21.7	24.5	22.9

* Includes self-employed

Source: OECD (2009)

1.2 The tax-benefit system

1.2.1 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.
- Until 1995, the statutory pension age was 60 for men and 57 for women with no children, 56 for women who had raised one child, 55 for women with two children, 54 for women with three or four children, and 53 for women with five or more children. The pension age has been increasing by two months for men and four months for women for each year since 1996, and this will continue until the end of 2012. As at 2005, the pension age is 61 years and 8 months for men, 60 years and 4 months for childless women, 59 years and 4 months for women with 1 child, etc.
- 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) married couples with at least one child all living in the same household may 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.

1.3 Social Benefits

Social benefits can be broken down into the following categories:

1.3.1 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 180 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, or 37 weeks to a woman who has had more than one child or is single or a widow or does not live with a partner.

Social 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.

1.3.2 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.
- **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.

1.3.3 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).

- *Scope and scale*

Table 5. Social benefits: recipients [thousands]

Year	2005	2006	2007	2008
Social Benefits	2 645	2 684	2 719	2 754
Pensions	3 029	2 707	2 727	2 222
Sickness Benefits	127	119	103	104
Passive employment policy benefits				
State Social Support				
Child Allowance	1 805	1 760	1 670	888
Social Allowance	330	297	241	166
Foster Care benefits	7	n.a.	n.a.	n.a.
Housing Benefit	262	234	115	86
Commuting Benefit	-	-	-	-
Parental Allowance	291	307	339	358
Birth	102	106	114	119
Funeral Grant	107	103	102	14
'Crayon' Allowance ('Pastelkovne')	-	65	57	2
Social Assistance				
Other Social Incomes	n.a.	n.a.	5	5
Regular Social Assistance Benefits	n.a.	169	72	66
Supplement for Housing	-	-	25	21
Contribution on social services	-	-	260	307

Notes: “-” policy did not exist in that year; n.a. information not available



Source: MPSV Yearbooks (Statistická ročenka z oblasti práce a socialních vecí)

Table 6. Social benefits: amounts [million CZK]

Year	2005	2006	2007	2008
Social Benefits				
Pensions	243 648	261 464	282 876	305 536
Sickness Benefits	31 661	32 774	34 671	31 882
Passive employment policy benefits	7 013	7308	7 016	7 115
State Social Support				
Child Allowance	11 195	11 033	10 236	6 232
Social Allowance	4 779	4 418	4 607	3 174
Foster Care benefits	467	585	765	840
Housing Benefit	4 459	2 287	1 565	1 619
Commuting Benefit		-	-	-
Parental Allowance	12 627	13 526	28 690	28 294
Birth and Funeral Grant	1 429	1591	2 606	1 718
'Crayon' Allowance ('Pastelkovne')	-	64	57	2
Social Assistance				
Other Social Incomes	4 714	6 266	170	146
Regular Social Assistance Benefits	9 575	8 500	2 593	2 176
Supplement for Housing	-	-	524	473
Contribution on social services	-	-	14 608	18 253

Notes: “-” policy did not exist in that year; n.a. information not available

Source: MPSV Yearbooks (Statistická ročenka z oblasti práce a socialních vecí)

- *Not strictly benefits*

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

1.4 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.



- *Scope and scale*

Table 7. Social contributions: contributors

	2005	2006	2007	2008
Employers (compulsory) ^[a]	n.a.	n.a.	n.a.	n.a.
Employees (compulsory) ^[b]	4,085	4,162	4,287	4,250
Entrepreneurs (compulsory) ^[c]	911	904	918	938
Entrepreneurs (voluntary) ^[d]	241	222	211	169

Notes:

[a] Number of employers who pay social and/or health insurance contributions for their employees is not reported.

[b] The number of health and social insured employees is the same.

[c] For self-employed health insurance is mandatory, while social (including sickness and pension) insurance is not. Therefore, number of health uninsured is reported.

[d] Voluntary insured are those self-employed without parallel employment who opt for voluntary sickness insurance, because other insurances (health and social are voluntary) and self-employed with parallel employment are insured automatically.

Source: CSSZ Yearbooks

Table 8. Social contributions: amounts [mil. CZK]

	2005	2006	2007	2008
Employers (compulsory) ^[a]	308,418	329,335	359,493	375,400
Employees (compulsory) ^[b]	108,317	116,556	127,661	133,300
Entrepreneurs (compulsory) ^[c]	63,874	74,545	85,360	83,960
Entrepreneurs (voluntary) ^[d]	883	900	902	840

Notes:

[a] Number of employers who pay social and/or health insurance contributions for their employees is not reported.

[b] The number of health and social insured employees is the same.

[c] For self-employed health insurance is mandatory, while social (including sickness and pension) insurance is not. Therefore, number of health uninsured is reported.

[d] Voluntary insured are those self-employed without parallel employment who opt for voluntary sickness insurance, because other insurances (health and social are voluntary) and self-employed with parallel employment are insured automatically.

Source: CSSZ Yearbooks

1.5 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 26% 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 base is divided into 5 partial tax bases. The income tax is paid from the net tax base which is the tax base minus social and health insurance contributions and other tax exemptions. The tax rate is progressive with the 4 tax brackets. Married couples with at least one child all living in the same household may choose to fill out a joint tax return.

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 19% with a preferential rate of 5%. 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*) are 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.

- *Scope and scale*

Table 9. Taxes: taxpayers

	2005	2006	2007	2008
Direct taxes				
Income tax (individuals)	n.a.	n.a.	n.a.	n.a.
Firms	n.a.	n.a.	n.a.	n.a.
Real estate tax	-	-	-	-
Road tax	-	-	-	-
Indirect taxes				
VAT	-	-	-	-
Excise tax	-	-	-	-

Notes: "n.a." not available, "-" not applicable

Source:

Table 10. Taxes: revenue (millions of CZK)

	2005	2006	2007	2008
Annual revenue (currency)	1,162,803	1,223,393	1,359,388	1,450,503
Direct taxes				
Individual Income Tax	142,431	136,783	151,461	143,315
Corporate Income Tax	144,821	141,773	166,417	187,621
Taxes on Property	13,074	13,491	15,538	15,510
Motor Vehicle Taxes	8,235	8,720	8,338	8,763
Social Security Contributions	416,139	441,933	488,407	513,374
Indirect taxes				
VAT	206,894	218,120	235,037	254,789
Excises	110,560	119,549	138,927	133,024

Notes:

Source: Governance Finance Statistics, State budget balance of revenues and expenditures

Státní závěrečný účet za rok 2009 -http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/statni_zav_ucet.html



2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Table 11. Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in Euromod				Why not fully simulated?
		2005	2006	2007	2008	
Sickness Benefits	bhl	I	I	I	I	The amount of benefit depends on the previous income and length of sickness.
Passive employment policy benefits	bun	PS	PS	PS	PS	The amount of benefit depends on the previous income.
Child Allowance	bch00_s	S	S	S	S	
Social Allowance	bchmt_s	S	S	S	S	
Foster Care benefits	bfafp	I	I	I	I	
Housing Benefit	bho_s	S	S	S	S	
Parental Allowance	bfapl_s	PS	PS	PS	PS	Eligibility taken from data
Regular Social Assistance Benefits	bsa00_s	S	S	S	S	
Supplement for Housing	bsaho_s			S	S	
Total social assistance	bsa_s	S	S	S	S	

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.

Table 12. Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in Euromod				Why not fully simulated?
		2005	2006	2007	2008	
Income tax	ils_tax	S	S	S	S	
Employees ssc	tscee_s	S	S	S	S	
Entrepreneurs ssc	tscese_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.



2.2 Simulated Policies and order of simulation

2.2.1 Simulated policies

Table 13. Simulated policies

Section	Policy Description	Year			
		2005	2006	2007	2008
2.3	Sickness Benefits	X	X	X	X
2.3	Passive employment policy benefits	X	X	X	X
2.3	Child Allowance	X	X	X	X
2.3	Social Allowance	X	X	X	X
2.3	Housing benefit	X	X	X	X
2.3	Parental Allowance	X	X	X	X
2.3	Birth grant	X	X	X	X
2.3	Social Necessity Benefits	X	X	-	-
2.3	Allowance for Living	-	-	X	X
2.3	Supplement for Housing	-	-	X	X
2.4	Employee social contributions	X	X	X	X
2.5	Income Tax	X	X	X	X
2.5	Child tax bonus	X	X	X	X

- *Structural changes between 2006 and 2007*

Big reform of social benefits system was implemented:

- new structure of the MLS
- new construction of Social Assistance Benefits.
- *Structural changes between 2007 and 2008*

Income tax reform:

- just one tax rate
- joint taxation of spouses was cancelled

2.2.2 Order of simulation

Employee and employer social and health contributions 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.



Table 14. EUROMOD Spine: order of simulation, 2005-2008

Policy	Description	Main output
ymw_cz	INC Minimum wage	ymw_s
cer_cz	SIC employer social and health insurance contributions	cer_s
cee_cz	SIC employee social and health insurance contributions	cee_s
cse_cz	SIC self employed social and health insurance contributions	cse_s
tin_cz	TAX income tax	tin_s
bun_cz	BEN unemployment benefit, partially simulated	bun_s
cot_cz	SIC State funded public health insurance contributions (students, pensioners, children, etc.)	cot_s
bfapl_cz	BEN parental allowance	bfapl_s
bch00_cz	BEN child allowance	bch00_s
bchmt_cz	BEN social allowance	bchmt_s
bchba_cz	BEN Birth grant	bchba_s
bho_cz	BEN housing benefit	bho_s
bsa_cz	BEN social assistance	bsa_s

2.3 Social benefits

Social benefits can be broken down into the following categories:

- Social insurance benefits
 - Unemployment benefits
 - Sickness benefits
 - Pensions
- State social support
 - Means-tested: child allowance, social allowance, housing benefit
 - Non-means tested: parental allowance, foster care benefit, funeral grants, birth grants
- Social assistance
 - Social necessity benefits
 - Social care benefits.

The system is organized around a key parameter — the so-called minimum living standard (MLS)¹. This amount is calculated at the personal and household 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.

Minimum Living Standard (MLS)

The law defines the MLS as a sum of two elements. The first element (the personal part of MLS) is per each person in the household and is defined with respect to age of the person. The second part (the household part of MLS) depends on how many people live in the household, and reflects living expenses. The following table summarises the monthly amounts of the MLS for both:

¹ 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. These amounts are: 2005 – 9,000 CZK; 2006 – 9,500 CZK; 2007 – 10,100 CZK; 2008 – 10,800 CZK.



MLS – 2005

Age	Personal MLS (CZK)	Number of household members	Household MLS (CZK)
0-6	1,720	1 member	1,940
6-10	1,920	2 members	2,530
10-15	2,270	3-4 members	3,140
15-26	2,490	5+ members	3,520
Adults	2,360		

Changes in MLS – 2006

New MLS in 2006

Age	Personal MLS (CZK)	Number of household members	Household MLS (CZK)
0-6	1,750	1 member	2,020
6-10	1,950	2 members	2,630
10-15	2,310	3-4 members	3,260
15-26	2,530	5+ members	3,660
Adults	2,400		

New construction of living and subsistence minimum

Changes in MLS – 2007

Amounts of Living Minimum are different for single person, first adult in family, another adult in family and for children (three categories according to age).

MLS (CZK)

- Single 3,126
- First person in household 2,880
- Second and other persons who are not a dependant child 2,600
- Dependant child aged
 - under 6 years 1,600
 - 6 - 15 years 1,960
 - 15 - 26 years 2,250
- Subsistence Minimum (CZK) 2,020

Changes in MLS – 2008

No changes.

2.3.1 Social Insurance

2.3.1.1 Unemployment Benefits

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.

A person is entitled to unemployment benefit if he or she was employed for at least six months since the end of the previous unemployment spell. If a person was not receiving unemployment benefits for the whole six months because he or she found a job, he or she is eligible for another six months of unemployment benefit only if she worked for more than three months. If he or she worked less than three months, she continues to receive unemployment benefits up to six months. An unemployed person registered with the labour office may have monthly income from work up to half of the statutory minimum wage per month.²

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 unemployment benefit is determined as 50% of the previous income in the first three months and 45% in the following three months of unemployment spell, but not more than 2.5 times the MLS of an adult one-member household (i.e. a maximum of 10,750 CZK per month in 2005).

When unemployed persons participate in retraining sponsored by a district labour office, their unemployment benefit equal 60% of the average net wage in the last employment, while the maximum benefit amount is then 2.8 times MLS of an adult person. **This element is not simulated in EUROMOD.**

The benefit entitlement is 3+6 months for persons aged between 50 and 55 and with at least 25 years of social insurance contributions and 3+9 months for those unemployed above 55 who have at least 30 years of social insurance contributions.

- *Changes in 2006*

No changes.

- *Changes in 2007*

The maximum amount of unemployment benefit was increased to 58% of the economy-wide average wage in the first three quarters of the preceding year, i.e. 11,722 CZK, while it was 11,050 CK in 2006. The minimum amount is 12% of the average wage in the first three quarters of the preceding year.

- *Changes in 2008*

The maximum amount of unemployment benefit was increased to 58% of the economy-wide average wage in the first three quarters of the preceding year, i.e. 12,250 CZK. The minimum amount is 12% of the average wage in the first three quarters of the preceding year.

The amount of benefit is in the first 3 months equal 50% of the average net wage in the last employment, next months it is 45%.

The benefit entitlement for people less than 50 years is 6 months; from 50 to 55 years are 9 months and over 55 years, 12 months.

2.3.2 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

² The monthly minimum wage stood at 7,185 CZK in 2005.



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.

2.3.2.1 Child Allowance

Child allowance is targeted at families with children if their net household income is less than $3 \times MLS$ of the family. 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 is provided per each dependent child in the following amount:

$$ChildAllowance = A \times Child' sMLS$$

where

A=0.32 if the net household income is lower than 1.1 x MLS,

A=0.28 if the net household income is between 1.1 x MLS and 1.8 x MLS,

A=0.14 if the net household income is between 1.8 x MLS and 3 x MLS.

- **Changes in 2006**

No changes.

- **Changes in 2007**

The coefficients in the formula for child benefit were adjusted to reflect the changes in the MLS. Child benefit is provided in the following amounts:

$$ChildBenefit = A \times Child' sMLS$$

where



A = 0.36 if the net household income is lower than 1.5 x MLS,

A = 0.31 if the net household income is between 1.5 x MLS and 2.4 x MLS,

A = 0.16 if the net household income is between 2.4 x MLS and 4 x MLS.

- **Changes in 2008**

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 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

2.3.2.2 Social Allowance

A social allowance is available to families with at least one dependent child if their net income was less than $1.6 \times MLS$ in the previous quarter. 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

$$SocialAllowance = \sum Children'sMLS - \frac{\sum Children'sMLS \times \max\{NetIncome, TotalMLS\}}{TotalMLS \times 1.6}$$

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 2006**

No changes.

- **Changes in 2007**

Parameter A in the formula for social supplement was increased to 2.2.

- **Changes in 2008**

Parameter A in the formula for social supplement was decreased to 2.0.



2.3.2.3 Housing Benefit

Housing benefit is available to families who own or rent a flat and whose net income was below $1.6 \times \text{MLS}$ in the previous quarter. The unit of assessment is the household, defined as all persons residing at the same domicile address. The household may thus contain, for example, non-relative persons such as tenants.

Net household income for the purpose of the income test for housing benefit is the same as for social allowance, i.e. the net household income relevant for the child allowance income test plus child allowance. The relevant period for the income test is also the same as for social allowance, i.e. the calendar quarter before the income is tested.

The amount is calculated using the following formula:

$$\text{Hous.Benefit} = \text{Household's MLS} - \frac{\text{Household's MLS} \times \max\{\text{NetIncome}, \text{TotalMLS}\}}{\text{TotalMLS} \times 1.6}$$

- *Changes in 2006*

No changes.

- *Changes in 2007*

The structure of housing benefit was changed to account for housing costs. 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)

Normative costs of housing in rental housing (CZK)

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	3,339	2,893	2,659	2,518	2,460
2	4,926	4,233	3,913	3,721	3,640
3	6,764	5,858	5,440	5,188	5,083
4 and more	8,545	7,453	6,948	6,644	6,517

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	2,236	2,236	2,236	2,236	2,236
2	3,362	3,362	3,362	3,362	3,362
3	4,730	4,730	4,730	4,730	4,730
4 and more	5,978	5,978	5,978	5,978	5,978

- *Changes in 2008*

New monthly normative costs (in 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	4,182	3,383	3,155	2,895	2,747
2	6,091	4,998	4,686	4,331	4,128
3	8,401	6,971	6,563	6,099	5,834
4 and more	10,549	8,824	8,332	7,772	7,453

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	2,653	2,653	2,653	2,653	2,653
2	4,055	4,055	4,055	4,055	4,055
3	5,763	5,763	5,763	5,763	5,763
4 and more	7,385	7,385	7,385	7,385	7,385



2.3.2.4 Parental Allowance

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-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 amount of the parental allowance is $1.54 \times MLS$ of an adult person (3,634 in 2005).

- *Changes in 2006*

No changes. However, amount changed in line with increase in MLS.

- *Changes in 2007*

The amount of parental allowance has increased substantially to 40% of the average wage in the non-profit sector two years before. In 2007 it is equal to 7,582 , while it was 3,696 in 2006.

- *Changes in 2008*

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) until the child is 24 months old; only parents who are entitled to MB of at least 380 per calendar day may request this form of draw down;
- standard draw-down – after MB at the basic rate (7,600) 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) until the child is 21 months old and after it at the reduced rate (3,800) 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) 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) 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.

2.3.2.5 Birth Grant

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.

The amount is 5×MLS of a child younger than six (8,600). If twins are born, the amount is 6×MLS of a child younger than six per each child born (20,640 for twins). If three children are born, the amount is then 10×MLS of a child younger than six per each child born (51,600 for all three children).

- *Changes in 2006*

New amount - 17 500

- *Changes in 2007*

New amount - 17 760

- *Changes in 2008*

New amount – 15 000

2.3.3 Social Assistance

2.3.3.1 Social Necessity Benefits

Social necessity benefit serves 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 calculated as

$$\text{SocialNecessityBenefit} = \text{MLS} - \text{NetIncome}$$

Net household income is defined as the average monthly income, net of income tax or the net profit of entrepreneurs plus unemployment benefit, sickness benefit, pensions and state social support. The net profit from entrepreneurial activity is included at the level of at least the MLS of a one-person household (including the personal and household part of MLS). The tax bonus is not considered.

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.



Social necessity benefit may be increased to account for the cost of housing or costs related to health, etc. Conversely, it can be lowered if the person is not actively searching for a job or active in improving his or her own financial situation, etc.

Social necessity benefit is increased by 600 if the person is disabled. Furthermore, the benefit may include the difference between alimony and the income of a child, given that the child lives in the same household as the recipient benefit. The income of a child is defined as a ratio of the net household income and the number of family members. This supplement may not be higher than the child's MLS.

- *Changes in 2006*

No changes.

- *Changes in 2007*

The benefit was replaced by new benefits of social assistance.

- *Changes in 2008*

No changes.

2.3.3.2 Social Care Benefits

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.

Note: due to lack of information in the data about this type of expenditures, EUROMOD simulations don't include the 2005 benefit. However, they do include the 2007/2008 supplement for housing (see below).

- *Changes in 2006*

No changes.

- *Changes in 2007*

New structure and construction of social assistance benefits (benefits of material needs). 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

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

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, i.e. up to 46,890 .
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, i.e. to an amount of 31,260 .
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 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, i.e. the amount of 12,504 .

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

- ***Changes in 2008***

No changes.

2.4 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

2.4.1 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

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).

- *Changes in 2006*

No changes.

- *Changes in 2007*

No changes.

- *Changes in 2008*

A maximum contributory base was introduced (1 034 880 CZK per year).

2.4.2 Employer social contributions

Social insurance and state employment policy contributions

Contributory base is the same as in the case of employee.

Contributions for Public Health Insurance

Contributory base is the same as in the case of employee.

- *Changes in 2006*

No changes.

- *Changes in 2007*

No changes.

- *Changes in 2008*

A maximum contributory base was introduced (1 034 880 CZK per year).

2.4.3 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. The business activity is the main source of income, if the year income from wages and salaries is lower than 12*minimum wage. 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.

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

For entrepreneurs, the base is 45% of net income (gross income minus costs) in the last year, but not more than 486,000. This is then reduced by 40,500 for each month in which entrepreneurs did not conduct any business activities. There is a year minimum contribution base of 48 288.

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

If the year gross income minus costs is lower than 42 922 , there is no obligation to pay social insurance. In other cases the participation in the social insurance is compulsory and the contribution base is 45% of net income in the last year, but not more than 486,000 . This is then reduced by 40,500 for each month in which entrepreneurs did not conduct any business activities.

Contributions for public health insurance

For entrepreneurs, the base is 45% of net income in the last year, but not more than 486,000. If the income from business activity is the main source of income, the year contribution base cannot be lower than 101 520 .

The contribution rates described in this subsection may be summarized as follows:

	Employee	Employer (per employee)	Entrepreneur
Social Insurance	8.0%	26.0%	34.0%
Of which: Pension	6.5%	21.5%	28.0%
Employment	0.4%	1.2%	1.6%
Sickness	1.1%	3.3%	4.4%*
Health Insurance	4.5%	9.0%	13.5%
Total	12.5%	35.0%	47.5%

Note: * paid on a voluntary basis.

- *Changes in 2006*

Social insurance and state employment policy contributions

For entrepreneurs, the base is 50% of net income (gross income minus costs) in the last year.

New year minimum contribution base is equal to 56 508 . If the income from business is not the main source of income and if the year gross income minus costs is lower than 45 200 , there is not obligation to pay social insurance.

Contributions for public health insurance

For entrepreneurs, the base is 50% of net income (gross income minus costs) in the last year.

If the income from business activity is the main source of income, the year contribution base cannot be lower than 108 210 .

- *Changes in 2007*

Social insurance and state employment policy contributions

New year minimum contribution base is equal to 60 420 . If the income from business is not the main source of income and if the year gross income minus costs is lower than 48 334 , there is not obligation to pay social insurance.



Contributions for public health insurance

If the income from business activity is the main source of income, the year contribution base cannot be lower than 120 834.

- *Changes in 2008*

Social insurance and state employment policy contributions

New year minimum contribution base is equal to 64 680. If the income from business is not the main source of income and if the year gross income minus costs is lower than 51 744 , there is not obligation to pay social insurance.

The maximum contribution base is valid for employee as well. It is 1 034 880 per year. If the person has both types of income (job and business), the contribution bases are summed.

Contributions for public health insurance

If the income from business activity is the main source of income, the year contribution base cannot be lower than 129 360 .

The maximum contribution base is valid for employee as well. It is 1 034 880 per year. If the person has both types of income (job and business), the contribution bases are summed.

2.5 Personal income tax

2.5.1 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.

The income tax system is an individual system; however married couples with at least one child all living in the same household may choose to fill out a joint tax return (see more in 2.5.5).

- *Changes in 2006*

No changes

- *Changes in 2007*

No changes

- *Changes in 2008*

Option for joint taxation is eliminated.

2.5.2 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 162,000 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, social insurance contributions paid 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, winnings in state lotteries, income from appreciation of currency, and income taxed according to a separate tax scheme.

- ***Changes in 2006***

The maximum amount of pensions, which are not taxed, was changed from 162,000 to 198,000 per year

- ***Changes in 2007***

No change

- ***Changes in 2008***

No change

2.5.3 Tax allowances

Taxpayers may deduct the following allowances from their tax base:

- *Personal exemption* for each taxpayer (38,040). If the taxpayer was collecting an old-age pension throughout the year, he or she may not apply this exemption if his/her yearly pension was higher than 38,040. For amounts lower than this figure, the taxpayer may deduct the difference between 38,040 and the amount of the pension. Finally, if the taxpayer started to collect an old-age pension later than January, he or she may deduct 38,040 independently of the amount of the pension.
- *Spouse exemption* (21,720) applies if a spouse lives with the taxpayer in the same household and does not have a yearly income higher than 38,040. If the spouse is disabled, the exemption rises to 43,440. 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.
- *Disability exemption* (7,140) may be deducted if the taxpayer receives a part-invalidity pension. If the taxpayer receives a full invalidity pension, he or she may deduct 14,280. If the taxpayer is especially heavily disabled, he or she may deduct 50,040.
- *Student exemption* (11,400) may be deducted 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.
- *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.

³ Furthermore, 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.



- *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.
- *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 2006*

The “standard” tax allowances (persona, spouse, disability and student exemptions) were replaced by tax credits. See more in 2.5.6.

- *Changes in 2007*

No changes

- *Changes in 2008*

No changes

2.5.4 Tax base

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

1. wages and salaries;
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

Gross wages and salaries reduced by social and health insurance contributions paid by the employee. If the amount of wages and salaries is less than 5,000 per month and the character of the job is occasional, it is taxed by a separate tax rate (15 %).

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 (the amount of costs include the social and health insurance contribution). Instead of deducting the amount of actual costs, a



taxpayer may replace it by 50% of revenues from agriculture, forestry and fishery, 30% of revenues of copyright or 20% of rental revenues. In this case it is possible to reduce the tax base by the amount of social and health insurance contribution as well.

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 per year (or 45,000 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 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.

There is a minimum tax base for entrepreneurs who had income of more than 15,000 in a year, which is set at 50% of the general personal base (to be defined for pensions in subsection 2.2.1.) for the previous two years. The minimum tax base is not compulsory for entrepreneurs paying lump-sum income tax, entrepreneurs who started their activity in the current or previous year, or ended business activity this year, entrepreneurs receiving parental allowance from state social support, old-age pensions, invalidity pensions, part invalidity pension for at least one month in the year, benefit for treatment of a family member, and students under 26.

Lump-sum tax is paid by entrepreneurs with no employees with a yearly taxable income of less than 1,000,000 in the last three years, and is designed to help them reduce costs for book-keeping and accounting. The minimum lump-sum tax is 600 per year, and the amount depends on forecasted income as agreed with the tax authority. Tax rates are the same as in the case of income taxation. The only difference is that lump-sum tax is paid in advance, and the taxpayer may use basic accounting procedures. Lump-sum tax may only be applied in the case of specific entrepreneurial activities.

Honorariums of less than 3,000 per month are taxed at a separate tax rate (10 %) (described below).

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 per year, income from the transfer of own real estate (with exemptions described below), nourishments, pensions exceeding 162,000 per year, winnings in lotteries exceeding 10,000 .

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 2006*

Minimum taxable income for income from business increased from 107,300 to 112,950.



- *Changes in 2007*

Minimum taxable income for income from business increased from 112,950 to 120,800.

- *Changes in 2008*

There is no minimum taxable income for income from business.

Social and health insurance contribution is not tax deductible item. Moreover, the social and health insurance contribution paid by employer is a part of the partial tax base of “Wages and salaries”.

2.5.5 Tax schedule

The income tax is paid from the net tax base which is the tax base minus social and health insurance contributions and other tax exemptions, according to the following scheme:

Net Tax Base Over	But not over	Tax Tax	+ (%)	On amount over
0	109,200	0	15	0
109,200	218,400	16,400	20	109,200
218,400	331,200	38,200	25	218,400
331,200	...	66,420	32	331,200

Married couples with at least one child all living in the same household may choose to fill out a joint tax return. They may do so if they are eligible at least on the last day of the year. The tax base of the couple is the sum of their personal tax bases (which are reduced by all possible exemptions). The base is split evenly for both taxpayers, and the tax is determined separately for each. The aim of joint taxation is to reduce the tax duty caused by progressive taxation, primarily for families with children if there is a large income difference between spouses. In particular, joint taxation reduces their tax duty, because the income of the spouse with higher earnings is taxed at a lower marginal tax rate as his or her income falls into a lower tax bracket. Joint taxation may not be applied if either person is bound by the minimum tax base or pays lump-sum personal income tax.

The following income is not included in the regular tax base but taxed under *separate tax schemes*. These taxes are paid the following.

10% tax rate

- Income of authors publishing in newspapers or other media if this income is less than 3,000 per month.

15% tax rate

- Dividends from bonds and drafts.
- Interest from current personal accounts.
- Income from complementary pension insurance with state support (state support is not taxed) and income from life insurance (except income when the contract is terminated; in that case, the income is taxed using the regular tax scheme).
- Income from occasional work totalling less than 5,000 per month.
- Income from the liquidation of company.

20% tax rate

- Winnings in lotteries (with the exception of state lotteries).



- *Changes in 2006*

New tax rates

Net Tax Base		Tax		
Over	But not over	Tax	+(%)	On amount over
0	121,200	0	12	0
121,200	218,400	14,544	19	121,200
218,400	331,200	33,012	25	218,400
331,200	...	61,212	32	331,200

- *Changes in 2007*

No changes.

- *Changes in 2008*

Joint taxation is eliminated

Just one rate – 15 %.

2.5.6 Tax credits

2.5.6.1 Refundable child tax credit

Persons with children whose taxable income is at least six times the minimum wage (7185 in 2005) may deduct 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 6,000 per child, up to a maximum of five children. 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. If the tax duty is higher than the tax credit, the taxpayer pays the difference between the two.

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. If a parent, grandparent or spouse of a parent does not have his or her own taxable income so that a tax bonus cannot be paid to him or her, then the bonus is paid to another person who lives in the same household with the child and has taxable income.

- *Changes in 2006*

The "standard" tax allowances were replaced by tax credits:

- *Personal tax credit* for each taxpayer (7,200). If the taxpayer was collecting an old-age pension throughout the year, he or she may not apply this tax credit if his/her yearly pension was higher than 38,040 . If the pension is lower than 38,040, the taxpayer can use whole tax credit (7,200).
- *Spouse tax credit* (4,200) applies if a spouse lives with the taxpayer in the same household and does not have a yearly income higher than 38,040 . 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 (8,400) if the spouse is disabled.

- *Disability tax credit* (1,500) if the taxpayer receives a part-invalidity pension. If the taxpayer receives a full invalidity pension, he or she may deduct 3,000. If the taxpayer is *heavily disabled*, the tax credit is 9,600 .
- *Student tax credit* (2,400) 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.
- In the case of other allowances, the system is the same as in 2005.

Minimum wage in 2006 = 7,955

- ***Changes in 2007***

Minimum wage in 2007 = 8,000

- ***Changes in 2008***

The “standard” tax credits were changed:

- *Personal tax credit* for each taxpayer (24,840).
- *Spouse tax credit* (24,840) applies if a spouse lives with the taxpayer in the same household and does not have a yearly income higher than 68,000 . 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) if the spouse is disabled.
- *Disability tax credit* (2,520) if the taxpayer receives a part-invalidity pension. If the taxpayer receives a full invalidity pension, he or she may deduct 5,040.
- *Student tax credit e* (4,020) 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.
- Persons with children may deduct from their income tax a tax *credit* per child (10,680). 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. If the tax duty is lower than the tax allowance, the difference is called a tax bonus and is paid to the taxpayer, while the taxpayer’s tax duty is then 0 . If the tax duty is higher than the tax allowance, the taxpayer pays the difference between the two. But it is (tax bonus) possible just in the case, that the gross tax base of the person is at least six times the minimum wage. The maximum amount of tax bonus is 52,200 per year.

Minimum wage in 2008 = 8,000



3. DATA

3.1 General description

Table 15. EUROMOD database description

EUROMOD database	CZ_2006_a1
Original name	EU-SILC and Životní podmínky (SILC) 2006
Provider	Eurostat and Czech Statistical office
Year of collection	2006
Period of collection	Feb – Apr 2006
Income reference period	Year 2005
Sampling	Two stage random sampling
Unit of assessment	HH[1]
Coverage	Private households[2]
Sample size	17,793 IND 7,483 HH
Response rate	75,8%

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 new 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 2006 sample has two parts: part of households surveyed already in year 2005 (2nd wave) and newly selected households (1st wave). The survey was carried out on the whole territory of the Czech Republic. 5,750 new dwellings entered the survey (1st wave) and 4,406 dwellings were revisited – 4,286 at the last year's address and 120 were tracked to their new home. The sample was allocated proportionally into 14 administrative regions (NUTS3 regions). Municipality size (4 categories) was used as an additional stratification variable. Dwellings were selected using two-stage design – small geographical areas (CEUs - census enumeration districts) were first sampled as primary sampling units with probability proportional to their size. At the second stage, 10 dwellings were sampled in each sampled CEU.

Before drawing of 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 this larger merged CEU entered the first stage of sampling. In some cases, the 10 dwellings sampled in the second stage belong to two, in exceptional cases even more, real administrative CEUs.

Sampling unit was the dwelling, i.e. all persons with usual residence in that dwelling (their only place of residence or their main place of residence) were included in the survey. This includes also foreign nationals and sub-tenants living in the selected dwelling.

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 (rodpl) - Parental Allowances (rodičovský příspěvek);
- bfafp (pestp) - Foster Care Benefits (dávky péstounské 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_pensioent (duch) - Total amount received in pension benefits according to Czech types in cz_pensiontype (důchod).

Number of household members at 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.

3.2 Sample quality and weights

3.2.1 Non-response

The fieldwork revealed that among the total of 10,156 dwellings in the sample there were 394 dwellings (4 %) unoccupied, unlocated or ineligible because the households had moved. Since there was no substitution for these ineligible units, the survey was conducted in 9 762 dwellings and 9 875 households (in some of the dwellings there is more than 1 household).

The total response rate was 75.8% (65.5% and 89.0% in the 1st and the 2nd wave, respectively). Response rates on regional (NUTS3) level differ from the national average by approximately \pm 10 percentage points.

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 misuse 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.

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



3.2.2 Weights

The subsample of new dwellings (wave 2) was designed as self-weighting probability sample. However, non-ignorable level of non-response (the 2nd wave was affected by response in 2005) biased the structure of the sample of achieved interviews. In LC 2006 it was dealt with in a reliable, standard way - by comparing selected characteristics with administrative data or data from other surveys.

Standard methods are utilized to identify the best way to gross up data - in our case iterative calibration method was used minimizing the difference between known (estimated) values of selected characteristics and values of these characteristics calculated from the sample.

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

Number of inhabited dwellings in each NUTS3 region, subdivided into family houses (detached and semi-detached houses) and flats, based on the 2001 Census continuously updated from administrative sources of construction authorities

Population characteristics: 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 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 were adjusted by subtracting institutionalised population (from social security administrative data) and persons in prisons.

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.



Table 16. Descriptive Statistics of the Grossing-up weight

Number	2005
Mean	569.94
Median	520.55
Maximum	2600
Minimum	100
Max/Min	26.00
Decile 1	312.38
Decile 9	874.80
Dec 9 / Dec1	2.80

3.2.3 Item non-response and under-reporting

Data on income obtained during interviews with household members have the tendency to underestimate certain sources of income or data on some components is missing (item non-response). Situation of missing income data for one of the household members was relatively rare (18 cases). For these persons, the income was imputed by the simple hot-deck method (using randomly chosen person with similar characteristics from another household). Underestimation of income is a natural consequence of the fact that respondents either tend to report lower than actual values or simply do not recall certain irregular or small incomes. It is, more or less, a non-sampling error, affected substantially by the incomes themselves and by their source. The possibilities to eliminate this underestimation of the survey data are limited. In the SILC survey, only such adjustments were done, where there was sufficiently reliable external statistical source or which can be based on the legislation.

Data on gross income from employment were compared with corresponding data from wage statistics broken into sectors of activity (NACE). Different from the last year's survey and in accordance with experience from other income surveys, income from work was underestimated (roughly by 5.4 %). Primarily, this underestimation concerned those incomes that were recorded as yearly lump sums. Such incomes were moderately boosted so that the average monthly gross pay by sectors approached the data from wage statistics. There was no need for corrections with income from private enterprise.

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

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

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

Comparison of the aggregated income from this survey with the household sector aggregates of the national accounts (even after their modification taking into account the items, which are not



covered by household income surveys) is relatively difficult. Concerning its aggregated value the income obtained by direct questioning in the households will always be lower. The more important fact for evaluation of their credibility is that the trend in development of household income is in line with the trends in the national accounts. From this viewpoint, the presented results of LC 2006 are in full agreement with data from the previous year and with related statistics from developed nations of the European Union.

3.3 Data adjustment

See above

3.4 Imputations and assumptions

3.4.1 Time period

The household definition is based on the sharing of expenditures concept based on the declaration of the persons in sampled dwelling unit that they permanently live together and finance together expenditures to cover their needs. Reference periods are:

- Age: December 31st, 2005
- Other demographic variables: marital status, education: at the date of the interview
- Economic activity is based on the prevailing status during the year 2005. In case of equal duration of two statuses, the status at the end of the year had the preference. For persons finishing their education in 2005, their prevailing status in the second half of the year.
- Current employment variables (current employment status, occupation, ...): at the date of the interview
- Income data: calendar year 2005
- Housing, consumer durables, financial and social situation of household: at the date of the interview, unless the question specifically refers to some other reference period

3.4.2 Gross incomes

Collected at the household level: social benefits targeted at households, rental income and independent sources of income of children below 16, 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. Rental income was collected either gross or net, based on what information were respondents 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 than forms the main national indicator – net monetary income of household, fully comparable with previous national Microcensus income surveys.

Besides national indicator of household income, 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).

The value of income in kind was an estimate of the household based on the amount of consumed food and other goods, own production and goods from own business during the year 2005 (for example food and animals from own small-scale non-commercial farming activity, value of meals from own restaurant, bread from own bakery and the like). Also included is the value of company car for private use (as non-monetary income of employees). In this case, the lowest possible amount applicable for taxation in the tax law is added to the non-monetary income of the employee (1000/month = 40 Euro/month).

In 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 Other imputed variables

3.5 Updating

Table 17. Updating factors

Variable	2005 to 2006	2005 to 2007	2005 to 2008	Index Source
def_factor	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
yds	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
yem	1.065109696	1.145789101	1.236376504	Eurostat / Labour market / Labour costs
yy	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
yot	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
ypp	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
ypr	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
yprrt	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
ypt	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
yse	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
bch00	1.01583961	0.992063329	1.136553586	Ministry of Labour and Social Affairs;
bchmt	1.029978866	1.329472727	1.328485327	Ministry of Labour and Social Affairs;
bed	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
bfa	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
bfafp	1.37	1.64	1.66	Ministry of Labour and Social Affairs;
bfaot	1.36	1.55	1.29	Ministry of Labour and Social Affairs; average of indices for birth and funeral grant
bfapl	1.021518925	1.961771037	1.833901257	Ministry of Labour and Social Affairs;
bhl	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
bho	1.050128844	1.464335173	2.032319947	Ministry of Labour and Social Affairs;
bsa	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
bun	1.11	1.2	1.29	Ministry of Labour and Social Affairs - Employment Services;
kfb	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
kivho	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
pdi	1.06	1.13	1.24	Ministry of Labour and Social Affairs;

Continued...



Variable	2005 to 2006	2005 to 2007	2005 to 2008	Index Source
poa	1.06	1.13	1.24	Ministry of Labour and Social Affairs;
psu	1.06	1.14	1.25	Ministry of Labour and Social Affairs;
tin	1.065109696	1.145789101	1.236376504	Eurostat / Labour market / Labour costs
tis	1.065109696	1.145789101	1.236376504	Eurostat / Labour market / Labour costs
tpr	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
tscee	1.065109696	1.145789101	1.236376504	Eurostat / Labour market / Labour costs
tscer	1.065109696	1.145789101	1.236376504	Eurostat / Labour market / Labour costs
tscse	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
xhc	1.099	1.126	1.218	Czech statistical office, Household budget surveys, item no.4. Housing related costs including rents, energy, water, and fuels
xhcmomi	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
xhcot	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
xhcert	0.977	1.073	1.206	Czech statistical office, Household budget surveys, item no.4.1. Apartment rents, data indicate decline in 2006
xmp	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
xpp	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)
afc	1.021	1.051	1.117	Eurostat / Harmonized Indices of Consumer Prices (HICP)



4. VALIDATION

4.1 Aggregate Validation

4.1.1 Validation of 2005 input data

Table 18 shows the number of recipients and the total amount of different income sources available in EUROMOD's input data. These incomes are used by the model but are not simulated.

Due to rounding differences the average amount of income sources in EUROMOD's input database are slightly different from those in the original EU-SILC. This is the case, for example, for employment and self-employment income. The number of recipients is different in the case of 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.

Table 19 shows the number of recipients and total amount of pensions and benefits from EUROMOD's input database. Some of these benefits are simulated and the results from their simulation are presented in Table 23.

- Pensions: in aggregate terms, pensions seem to be well represented in the EU-SILC and EUROMOD input data.
- Sickness benefits: Sickness benefits depend on previous wages of the employee, appear in the total monthly pay-check and are not well recognised by employees. Therefore, it is understood that the amount of sickness benefits is largely underreported in the SILC data.
- Child allowances, social allowance and foster care benefits: the number of recipients in data and external sources are not comparable. The first are computed per recipient (usually household) while the second are per child. However, comparing the overall expenditure shows that in fact results are close.
- Unemployment benefit: again results are not strictly comparable to official statistics. While EUROMOD computes the annual number of recipients, external sources show the average number of recipients at any given month during the year. As a result, it is not surprising that data results show a larger number of recipients.
- Housing benefits: are well reported in the EU-SILC and EUROMOD data. The number of recipients in the EUROMOD data is larger than in the EU-SILC because the benefit amount is split among those identified in the EU-SILC as “responsible for the accommodation”.
- Social assistance: the total expenditure on social assistance reported in data is slightly lower than that in official statistics.

Table 20 shows the number and amount of social contributions and income tax in EUROMOD's input database, EU-SILC and official statistics. EU-SILC reports income tax and employee social contributions in a single variable (hy140g) and final income tax adjustment in another variable (hy145n). Both variables are reported at the household level, and in order to compute results were assigned to one individual in each household. The national version of the SILC provides individual information on income tax and employee social insurance contributions (variables dan and pojis, respectively).



- Social contributions and income tax: results suggest that the SILC data captures quite well the number and amount of contributions and the overall amount of income tax.
- Ministry of Finance does not publish the number of property taxpayers.

Validation of 2005-2008 input data

Table 21 and Table 22 show, respectively, the number and amount of incomes, benefits and taxes in EUROMOD input data in comparison to external sources for 2005 to 2008. As commented in section 3, the EUROMOD input data is adjusted for each policy year by updating factors that take into account the average changes of each income source. Therefore, the number of recipients/payers of each income/benefit/tax is held constant in the EUROMOD input data.

Table 21 shows that for most income sources where external data is available the evolution of these numbers is relatively stable. However, there are a few exceptions mainly due to tax-benefit reforms. Hence, the number of recipients of family and social allowance fell about 50% between 2005 and 2008. On the other hand, the number of parental allowances increased by 23%. Similarly, the number of unemployment, housing and social assistance benefits fell by 18%, 67% and 49%, respectively. As a result of this trend, the EUROMOD input data tends to overestimate more the number of recipients in 2008 than in 2005. With regard to the overall amount, Table 22 shows a similar story, with aggregates based on EUROMOD input data (particularly benefits) getting more different from external statistics for later years.

Table 18. Input data validation: income sources used by the model but not simulated: original and in-kind income

Description	Number (thousands)			Ext. Source	ratio	Total amount (millions of Euro)				
	EUROMOD	EU-SILC	ratio			EUROMOD	EU-SILC	ratio	Ext. Source	ratio
Original income										
Employment income	4,117	4,117	100%			26,735	26,958	99%	32,303	83%
Self-employment income	828	828	100%			6,583	6,638	99%		
Investment income	1,051	626	168%			411	415	99%		
Property Income	281	165	170%			152	154	99%		
Private pension income	46	46	100%			46	47	99%		
Private transfers	312	312	100%			272	275	99%		
Other income	0	0								
Severance payments										
In-kind income										
Fringe benefits	135	135	100%			50	50	99%		
Imputed housing income	0	0								

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006.



Table 19. Input data validation: income sources used by the model but not simulated: pensions and benefits

Description	Number (thousands)			Ext. Source	ratio	Total amount (millions of Euro)			Ext. Source	ratio
	EUROMOD	EU-SILC	ratio			EUROMOD	EU-SILC	ratio		
Pensions	2,690			2,645	102%	8,161			8,113	101%
Disability pension (Plny a castecny invalidni duchod).	612	612	100%			1,414	1,426	99%		
Old age pension (Starobni duchod)	2,053	2,053	100%			6,281	6,333	99%		
Survivors pension (vdovsky duchod)	566	566	100%			466	470	99%		
Benefits										
Sickness benefits (Nemocenska)	624	624	100%	3,029	21%	481	485	99%	1,054	46%
Child Allowances (Pridavky na deti)	1,112	1,112	100%	1,805	62%	372	372	100%	373	100%
Social Allowance (Socialni priplatek + Zaoopatrovaci prispevek till 2004)	247	247	100%	330	75%	135	135	100%	159	85%
Foster Care Benefits (Davky pestounske pece)	6	6	100%	7	79%	12	12	100%	16	80%
Other Social Benefits (Ostatni davky SSP - porodne a pohrebne)	121	121	100%			30	30	100%		
Parental Allowances (Rodicovsky prispevek)	323	323	100%	291	111%	394	394	100%	420	94%
Unemployment benefit (Prispevek v nezamestnanosti)	364	364	100%	127	287%	243	245	99%	234	104%
Housing benefit (Prispevek na bydleni)	378	258	147%	262	145%	78	79	99%	82	95%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	220	220	100%	x		276	279	99%		
Education related allowances (studentske socialni davky)	51	51	100%			14	14	99%		

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Table 5 and Table 6.



Table 20. Input data validation: income sources used by the model but not simulated: social contributions and direct personal taxes

Description	Number (thousands)					Total amount (million Euro)				
	EUROMOD	EU-SILC	ratio	Ext. Source	ratio	EUROMOD	EU-SILC	ratio	Ext. Source	ratio
Social contributions										
Employee contributions	4,057	4,057	100%	4,085	99%	3,335	3,335	100%	3,607	92%
Self-employed contributions	0			911	0%				2,156	
Employer contributions	0								10,270	
Direct personal taxes										
Income tax	4,935	4,935	100%	0		4,363	4,363	100%	4,542	96%
Income tax adjustment		0								
Property tax	2,341	2,341	100%			40	41	99%		
Income tax + contributions	2,920	2,920	100%			7,698	7,762	99%	8,149	94%

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Table 7, Table 8, Table 9 and Table 10



Table 21. 2005-2008 input data validation: income sources used by the model but not simulated, number of income recipients (thousands)

	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Original income												
Employment income	4,117	4,117	4,117	4,117								
Self-employment income	828	828	828	828								
Investment income	1,051	1,051	1,051	1,051								
Property Income	281	281	281	281								
Private pension income	46	46	46	46								
Private transfers	312	312	312	312								
Other income	0	0	0	0								
In-kind income												
Fringe benefits	135	135	135	135								
Pensions	2,690	2,690	2,690	2,690	2,645	2,684	2,719	2,754	102%	100%	99%	98%
Disability pension (Plyň a castečný invalidni duchod).	612	612	612	612								
Old age pension (Starobni duchod)	2,053	2,053	2,053	2,053								
Survivors pension (vdovsky duchod)	566	566	566	566								
Benefits												
Sickness benefits (Nemocenska)	624	624	624	624	3,029	2,707	2,727	2,222	21%	23%	23%	28%
Child Allowances (Pridavky na deti)	1,112	1,112	1,112	1,112	1,805	1,760	1,670	888	62%	63%	67%	125%
Social Allowance (Socialni priplatek + Zaopatrovaci prispevek till 2004)	247	247	247	247	330	297	241	166	75%	83%	103%	149%
Foster Care Benefits (Davky pestounske pece)	6	6	6	6	7	n.a.	n.a.	n.a.	79%			
Other Social Benefits (Ostatni davky SSP - porodne a pohrebne)	121	121	121	121								

Continued...



	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Parental Allowances (Rodicovsky prispevek)	323	323	323	323	291	307	339	358	111%	105%	95%	90%
Unemployment benefit (Prispevek v nezamestnanosti)	364	364	364	364	127	119	103	104	287%	307%	353%	350%
Housing benefit (Prispevek na bydleni)	378	378	378	378	262	234	115	86	145%	162%	329%	441%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	220	220	220	220	x	169	97	87		130%	227%	253%
Education related allowances (studentske socialni davky)	51	51	51	51								
Social contributions												
Employee contributions	4,057	4,057	4,057	4,057	4,085	4,162	4,287	4,250	99%	97%	95%	95%
Self-employed contributions	0	0	0	0	911	904	918	938	0%	0%	0%	0%
Employer contributions	0	0	0	0	4,085	4,162	4,287	4,250	0%	0%	0%	0%
Direct personal taxes												
Income tax	4,935	4,935	4,935	4,935	0	0	0	0				
Income tax adjustment												
Property tax	2,341	2,341	2,341	2,341								

Sources: EUROMOD simulation results and official statistics from Table 5, Table 7 and Table 9



Table 22. 2005-2008 input data validation: income sources used by the model but not simulated, total amount (millions of euro per year)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Original income												
Employment income	26,735	27,297	28,099	29,863								
Self-employment income	6,583	6,721	6,919	7,353								
Investment income	411	420	432	459								
Property Income	152	156	160	170								
Private pension income	46	47	48	52								
Private transfers	272	278	286	304								
Other income												
In-kind income												
Fringe benefits	50	51	52	56								
Pensions	8,161	8,333	8,578	9,116	8,113	8,707	9,420	10,174	101%	96%	91%	90%
Disability pension (Plny a castecny invalidni duchod).	1,414	1,444	1,487	1,580								
Old age pension (Starobni duchod)	6,281	6,412	6,601	7,015								
Survivors pension (vdovsky duchod)	466	476	490	521								
Benefits												
Sickness benefits (Nemocenska)	481	491	505	537	1,054	1,091	1,155	1,062	46%	45%	44%	51%
Child Allowances (Pridavky na deti)	372	380	391	415	373	367	341	208	100%	103%	115%	200%
Social Allowance (Socialni priplatek + Zaopatrovaci prispevek till 2004)	135	138	142	151	159	147	153	106	85%	94%	93%	143%
Foster Care Benefits (Davky pestounske pece)	12	13	13	14	16	19	25	28	80%	65%	51%	50%
Other Social Benefits (Ostatni davky SSP - porodne a pohrebne)	30	31	32	34								
Parental Allowances (Rodicovsky prispevek)	394	402	414	440	420	450	955	942	94%	89%	43%	47%

Continued...



Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Unemployment benefit (Prispevek v nezamestnanosti)	243	249	256	272	234	243	234	237	104%	102%	110%	115%
Housing benefit (Prispevek na bydleni)	78	80	82	87	82	76	52	54	95%	105%	157%	162%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	276	282	291	309	319	283	104	88	87%	100%	280%	350%
Education related allowances (studentske socialni davky)	14	14	15	16								
Social contributions												
Employee contributions	3,335	3,405	3,505	3,726	3,607	3,881	4,251	4,439	92%	88%	82%	84%
Self-employed contributions					2,156	2,512	2,873	2,824				
Employer contributions					10,270	10,967	11,971	12,501				
Direct personal taxes												
Income tax	4,363	4,455	4,586	4,874	4,542	4,549	5,107	4,955	96%	98%	90%	98%
Income tax adjustment												
Property tax	40	41	42	45								

Sources: EUROMOD EUROMOD simulation results and official statistics from Table 6, Table 8 and Table 10

4.1.2 Simulated pensions and benefits

Table 23 shows the number of recipients and amount of social benefits simulated by EUROMOD.

- Child and social allowance: as already commented, the number of recipients in EUROMOD is not strictly comparable to the external sources as the unit of analysis is different. However, the comparison of the total expenditure (which is not sensitive to the unit of analysis) shows that in fact aggregate results for these simulated benefits are very close to official statistics.
- Birth grant: the number of recipients and overall amount is slightly underestimated in comparison to the external statistics. This is an universal benefit for newborn children and the number of newborns is slightly underestimated in the data (compare 101.5 th. benefits paid in 2005 while the number of newborn reported by the CSO was 102.5 th).
- Unemployment benefit: as already commented the methods to count the number of recipients in EUROMOD and in the external are not comparable. However, the comparison of the total expenditure shows that in fact aggregate results for these simulated benefits are very close to official statistics.
- Housing benefit: the number of recipients of housing benefit simulated in EUROMOD is overestimated when compared to those reported in the input data and in external statistics. After detailed checks it has been concluded that the benefit rules are correctly simulated in EUROMOD. Hence, the reason for the difference is due to a considerable discrepancy between the number of households that are theoretically eligible for housing benefit (that is what EUROMOD simulates) and the number of households that actually claim or receive this benefit (that is what is reported in the EU-SILC and external statistics). Future analysis will focus on the causes of this discrepancy and potential ways of taking them into account in EUROMOD simulations. For year 2005, reporting Tables of the ministry do not provide information on the number of recipients (households).
- Social assistance: in comparison to the EU-SILC data and the external statistics, EUROMOD simulations underestimate the number of recipients and the overall expenditure amount. Being a last resort benefit, it is quite possible that this underestimate is partly due to the overestimation of the housing benefit mentioned above.

Table 23. Baseline validation: simulated pensions and benefits

Description	Number (thousands)					Total amount (millions of Euro)				
	EUROMOD	Input data	ratio	Ext. Source	ratio	EUROMOD	Input data	ratio	Ext. Source	ratio
Child Allowances (Pridavky na deti)	1,197	1,112	108%	1,805	66%	371	372	100%	373	100%
Birth grant	83	116	72%	102	81%	24	872		895	
Social Allowance (Socialni priplatek + Zaopatrovaci prispevek till 2004)	425	247	172%	330	129%	155	135	115%	159	98%
Parental Allowances (Rodicovsky prispevek)	323	323	100%	291	111%	470	394	119%	420	112%
Unemployment benefit (Prispevek v nezamestnanosti)	364	364	100%	127	287%	243	243	100%	234	104%
Housing benefit (Prispevek na bydleni)	619	378	164%	262	237%	156	78	201%	82	191%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	160	220	73%	x		238	276	86%		

Notes:

Sources: EUROMOD results based on simulations, EUROMOD's input data and official statistics from Table 5 and Table 6.

Validation of 2005-2008 simulations: simulated pensions and benefits

Table 24 and Table 25 present the number of recipients and the amount of 2005-2008 social benefits simulated in EUROMOD.

- Child allowances: results are good for 2005 to 2007. Although EUROMOD's simulation captures the fall in recipients and amount in 2008, the scale of such fall is lower than observed in the external statistics.
- Birth grant:
- Social allowance: results are good for 2005 and 2006. EUROMOD's simulation doesn't capture the fall in the number of recipients in 2007 and 2008 observed in the external statistics.
- Parental allowances: although EUROMOD doesn't capture the increase in the number of recipients, it does increase expenditure in line with external statistics.
- Unemployment benefit: overestimation of the number of recipients increases as they remain constant in EUROMOD and fall in the external statistics. Overall expenditures become slightly overestimated in later years.
- Housing benefit: overestimation of the number of recipients and expenditure worsens, particularly in 2008 as EUROMOD doesn't capture an important fall. Probably the problem is in the big change in unemployment rate between 2005 and 2008. In 2005 there were almost 514 th. of unemployed people (8,97 %) and in 2007 only 393 th. (6,62 %). This big change significantly affected the income situation of households and of course the volume of social transfers. Moreover, the national microsimulation model confirm, that in the case of housing benefit there is a problem with non-take-up.
- Social assistance: results are fair for 2005 and 2006. EUROMOD's simulation doesn't capture the fall in the number of recipients in 2007 and 2008 observed in the external statistics. Probably the problem is in the big change in unemployment rate between 2005 and 2008. In 2005 there were almost 514 th. of unemployed people (8,97 %) and in 2007 only 393 th. (6,62 %). This big change significantly affected the income situation of households and of course the volume of social transfers.

Table 24. 2005-2008 simulation validation: simulated pensions and benefits, number of recipients (thousands)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Child Allowances (Pridavky na deti)	1,197	1,188	1,112	670	1,805	1,760	1,670	888	66%	67%	67%	76%
Birth grant	83	83	83	82								
Social Allowance (Socialni priplatek + Zaopatrovaci prispevek till 2004)	425	421	442	335	330	297	241	166	129%	142%	183%	202%
Parental Allowances (Rodicovsky prispevek)	323	323	323	323	291	307	339	358	111%	105%	95%	90%
Unemployment benefit (Prispevek v nezamestnanosti)	364	364	364	364	127	119	103	104	287%	307%	353%	350%
Housing benefit (Prispevek na bydleni)	619	609	292	342	262	234	115	86	237%	261%	254%	399%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	160	163	235	220	x	169	97	87		96%	242%	253%
Main part	0	0	192	178	n.a.	169	72	66		0%	266%	270%
Housing supplement	0	0	223	212	x	0	25	21			890%	1008%

Sources: EUROMOD simulation results and official statistics from Table 5.

Table 25. 2005-2008 simulation validation: simulated pensions and benefits, total amount (millions of euro per year)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Child Allowances (Pridavky na deti)	11,154	11,181	10,359	7,868	11,195	11,033	10,236	6,232	100%	101%	101%	126%
Birth grant	716	1,461	1,483	1,067								
Social Allowance (Socialni priplatek + Zaopatrovaci prispevek till 2004)	4,662	4,681	5,689	4,276	4,779	4,418	4,607	3,174	98%	106%	123%	135%
Parental Allowances (Rodicovsky prispevek)	14,101	14,342	29,421	29,491	12,627	13,526	28,690	28,294	112%	106%	103%	104%
Unemployment benefit (Prispevek v nezamestnanosti)	7,309	7,462	8,055	8,165	7,013	7,308	7,016	7,115	104%	102%	115%	115%
Housing benefit (Prispevek na bydleni)	4,699	4,793	3,132	4,550	2,459	2,287	1,565	1,619	191%	210%	200%	281%
Social assistance benefits (Pravidelne davky socialni potrebnosti "dav_sp")	7,134	7,288	8,129	7,975	9,575	8,500	3,117	2,649	75%	86%	261%	301%
Main part			4,974	4,784	9,575	8,500	2,593	2,176			192%	220%
Housing supplement			3,155	3,191	x	0	524	473			602%	675%

Sources: EUROMOD simulation results and official statistics from Table 6.

4.1.3 Simulated social contributions

Table 26 shows the number of contributions and amount of social insurance contributions simulated by EUROMOD.

- Employee and employer contributions: according to results, the number of contributions simulated by EUROMOD is about right and the amount is slightly underestimated. This is due to some unknown statistical discrepancy.
- Self-employed contributions: the number and amount of contributions simulated by EUROMOD are lower than official statistics. As for the number of contributions this may be due to some self employee failing or refusing to report their earnings. The fact that the average contribution is lower in EUROMOD is consistent with the fact that in the simulation it is assumed that all self-employed opt for paying the minimum contribution.

Validation of 2005-2008 simulations: simulated social contributions

Table 27 and Table 28 show the number of payers and amount of 2005-2008 social contributions simulated in EUROMOD.

- Employee and employer social contributions: EUROMOD doesn't capture the increase in the number of employees and therefore in each subsequent year it underestimates a little bit more the number and amount of employee and employer social contributions.
- Self-employed social contributions: EUROMOD also doesn't capture the increase in the number of self-employed and therefore in each subsequent year it underestimates a little bit more the number and amount of self-employed social contributions.

Table 26. Baseline validation: simulated social contributions

Description	Number (thousands)				Total amount (millions of Euro)					
	EUROMOD	EU-SILC	ratio	Ext. Source	ratio	EUROMOD	EU-SILC	ratio	Ext. Source	ratio
Employee contributions										
Employee contributions	4,117			4,085	101%	3,366			3,607	93%
pension insurance	4,117					1,738				
unemployment insurance	4,117					107				
other insurances										
Self-employed contributions										
Self-employee contributions	828			911	91%	1,363			2,156	63%
pension insurance	754					767				
disability insurance										
health insurance	828					432				
Employer contributions										
Employee contributions	4,117			4,085	101%	9,357			10,270	91%
pension insurance	4,117					5,748				
unemployment insurance	4,117					321				
other insurances										

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Table 7 and Table 8.



Table 27. 2005-2008 simulation validation: simulated social contributions, number of payers (thousands)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Employee contributions												
Employee contributions	4,117	4,117	4,117	4,117	4,085	4,162	4,287	4,250	101%	99%	96%	97%
pension insurance	4,117	4,117	4,117	4,117								
unemployment insurance	4,117	4,117	4,117	4,117								
other insurances												
Self-employed contributions												
Self-employee contributions	828	828	828	828	911	904	918	938	91%	92%	90%	88%
pension insurance	754	754	753	752								
disability insurance												
health insurance	828	828	828	828								
Employer contributions												
Employer contributions	4,117	4,117	4,117	4,117	4,085	4,162	4,287	4,250	101%	99%	96%	97%
pension insurance	4,117	4,117	4,117	4,117								
unemployment insurance	4,117	4,117	4,117	4,117								
other insurances												

Notes:

Sources: EUROMOD simulation results and official statistics from Table 5.



Table 28. 2005-2008 simulation validation: simulated social contributions, total amount (millions of euro per year)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Employee contributions												
Employee contributions	101,092	103,477	106,430	112,105	108,317	116,556	127,661	133,300	93%	89%	83%	84%
pension insurance	52,186	53,282	54,848	57,873								
unemployment insurance	3,211	3,279	3,375	3,561								
other insurances												
Self-employed contributions												
Self-employee contributions	40,937	45,618	47,361	52,077	64,757	75,445	86,262	84,800	63%	60%	55%	61%
pension insurance	23,040	25,858	26,601	29,755								
disability insurance												
health insurance	12,959	14,218	15,060	15,946								
Employer contributions												
Employer contributions	281,002	286,903	295,333	311,624	308,418	329,335	359,493	375,400	91%	87%	82%	83%
pension insurance	172,615	176,240	181,419	191,426								
unemployment insurance	9,634	9,837	10,126	10,684								
other insurances												

Sources: EUROMOD simulation results and official statistics from Table 6.

4.1.4 Simulated taxes

Table 29 shows the number of taxpayers and amount of taxes simulated by EUROMOD.

Income tax: results suggest that EUROMOD captures correctly the number of taxpayers. However, the amount of simulated taxes is lower than reported in the EU-SILC and official statistics. Our interpretation is that individuals underreport their income and properly report paid taxes in the SILC. Moreover, some time inconsistency may be present since self-employed pay monthly tax advances based on previous years tax obligations and accounts are rendered year later.

Validation of 2005-2008 simulations: simulated taxes

Table 30 shows the total amount of income tax in 2005 to 2008.

As already seen in section 4.1.4, the amount of income tax simulated by EUROMOD for 2005 is considerably lower than that in external statistics. The result worsens in the following years.

The external statistics contains the whole revenue of income tax. There is a part of income taxed by “separate” tax rate, which cannot be simulated (e.g. income from profit of business bodies). The amount of this part of income tax is in following table:

Year	2005	2006	2007	2008
Millions of CZK	6,420	7,432	8,583	10,378

Table 29. Baseline validation: simulated taxes

Description	Number (thousands)				Total amount (in million Euro)						
	EUROMOD	EU-SILC	ratio	Ext. Source	ratio	EUROMOD	EU-SILC	ratio	Ext. Source	ratio	
Income tax											
Total Income tax	5,100	4,935	103%	0		3,752	4,363	86%	4,542	83%	
Progressive income tax	4,735					3,683					
Proportional income tax	1,082					69					

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Table 9 and Table 10.

Table 30. 2005-2008 simulation validation: simulated taxes, total amount (millions of Euro per year)

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Income tax	112,674	98,467	104,063	85,933	136,390	136,618	153,374	148,800	83%	72%	68%	58%

Sources: EUROMOD simulation results and official statistics from Table 10

4.2 Income distribution

4.2.1 Income Distribution

Table 32 provides the following indicators of income distribution: mean and median equivalised income⁵ 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.

According to results, the mean and median equivalised disposable income in EUROMOD are slightly larger than in the original EU-SILC data among men and lower among women. Three reasons may be lie beneath this difference: a) inclusion of different sources in the definition of household disposable income (see Table 31 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.

However, what it is more surprising is the difference between the mean and median equivalised disposable income reported in Eurostat’s website and computed using the EU-SILC data. In principle, these figures are based on exactly the same data. Further analysis and contacts to Eurostat will be carried out to find the cause of such difference.

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 particular case of the Czech Republic, the larger number of recipients of housing benefit (which is basically concentrated among lower income families) is likely to be one of the factors reducing income inequality.

⁵ Using the OECD modified equivalence scale.



Table 31. Components of disposable income in EUROMOD and EU-SILC

	EUROMOD ils_dispy	EU-SILC HY020
Employee cash or near cash income	+	+
Employer's social insurance contribution	.	.
Contributions to individual private pension plans	-	.
Cash benefits or losses from self-employment	+	+
Pension from individual private plans	+	.
<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>	+	+
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>	-	-
<i>Tax on income and social contributions **</i>	-	-
<i>Repayments/receipts for tax adjustment **</i>	+	.

Notes: “+” indicates that component is added to disposable income. “-“ indicates that component is subtracted from disposable income. “.” indicates that component is not included. Text in red highlights conceptual differences between EUROMOD and EU-SILC’s disposable income definitions. Text in italics denotes components that are partially or fully simulated in EUROMOD. ** EUROMOD’s simulated tax on income component includes tax adjustment, EU-SILC’s doesn’t.

Sources: Eurostat (2009) Description of SILC User Database Variables: Cross-sectional and Longitudinal

Table 32. Baseline validation: income distribution

Description	EUROMOD	EU-SILC	ratio	Ext. Source	ratio
Mean income (equivalised)					
total population	5,306	5,403	98%	4,838	110%
males	5,396	5,312	102%	4,953	109%
females	5,219	5,499	95%	4,729	110%
Median income (equivalised)					
total population	4,709	4,797	98%	4,233	111%
males	4,799	4,687	102%	4,329	111%
females	4,613	4,895	94%	4,150	111%
Income quintile ratio (S80/S20)	3.275	3.516	93%	3.700	89%
Gini Coefficient	0.242	0.253	96%	0.260	93%

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Eurostat’s website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/databa se

Validation of 2005-2008 simulations: income distribution

Table 33 shows that EUROMOD underestimates the increase in disposable income in 2006 and 2007 and overestimates income in 2008 (probably due to variations in the koruna/euro exchange rate).

As for income inequality, similarly to the external statistics, EUROMOD results suggest a small reduction in the amount of the Gini coefficient and the income quintile ratio.

Table 33. 2005-2008 simulation validation: income distribution

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Mean income (equivalised)												
total population	5,306	5,793	5,981	7,803	4,838	5,410	6,148	6,810	110%	107%	97%	115%
males	5,396	5,894	6,082	7,935	4,953	5,506	6,276	6,975	109%	107%	97%	114%
females	5,219	5,697	5,886	7,678	4,729	5,319	6,025	6,652	110%	107%	98%	115%
Median income (equivalised)												
total population	4,709	5,152	5,342	6,974	4,233	4,802	5,423	6,068	111%	107%	99%	115%
males	4,799	5,271	5,454	7,113	4,329	4,900	5,538	6,215	111%	108%	98%	114%
females	4,613	5,057	5,231	6,821	4,150	4,694	5,305	5,892	111%	108%	99%	116%
Income quintile ratio (S80/S20)	3.275	3.251	3.224	3.261	3.700	3.500	3.500	3.400	89%	93%	92%	96%
Gini Coefficient	0.242	0.240	0.237	0.240	0.260	0.253	0.253	0.247	93%	95%	94%	97%

Notes:

Sources: EUROMOD simulation results and official statistics from Eurostat's website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database.

4.2.2 At-risk-of-poverty rates

Table 34 provides at-risk-of-poverty rates using poverty lines based on 40, 50, 60 and 70% of the median equivalised disposable income⁶. As with income inequality indicators, 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.

According to results, at-risk-of-poverty rates are lower in EUROMOD, particularly when using lower poverty lines (40 and 50% of the median). As already suggested above, it is possible that the overestimation of housing benefit is behind this difference.

Table 35 shows the risk of poverty rates (using 60% of the median equivalised disposable income as poverty line) by age groups. In line with previous results, at-risk-of-poverty rates calculated using EUROMOD are lower than using the original data from the EU-SILC. Rates are particularly low among children and adults aged 25 to 49.

Table 34. Baseline validation: at-risk-of-poverty rates at different poverty lines

Description	EUROMOD	EU-SILC	ratio	Ext. Source	ratio
40% of median equivalised income					
total population	0.6	2.3	26%	2.8	21%
males	0.8	2.3	34%	2.9	27%
females	0.4	2.3	18%	2.7	15%
poverty line	1,884	1,919	98%	1,693	111%
50% of median equivalised income					
total population	3.1	4.9	63%	5.5	56%
males	3.2	4.8	66%	5.3	60%
females	3.0	5.0	60%	5.7	53%
poverty line	2,355	2,398	98%	2,116	111%
60% of median equivalised income					
total population	8.7	9.8	89%	10.4	84%
males	8.0	8.9	90%	9.7	82%
females	9.4	10.7	88%	11.0	86%
poverty line	2,826	2,878	98%	2,540	111%
70% of median equivalised income					
total population	16.7	17.9	93%	17.3	96%
males	14.6	16.1	91%	15.8	93%
females	18.6	19.6	95%	18.9	98%
poverty line	3,297	3,358	98%	2,963	111%

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Eurostat’s website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database

⁶ Using the OECD modified equivalence scale.

Table 35. Baseline validation: at-risk-of-poverty rates at different age groups

Description	EUROMOD	EU-SILC	ratio	Ext. Source	ratio
Population					
0-17	12.9	16.4	79%	17.6	74%
18-24	11.2	11.9	94%	10.7	105%
25-49	8.9	9.9	90%	10.9	81%
50-64	5.8	5.5	104%	6.1	94%
65-	5.6	5.8	96%	5.3	105%
Total	8.7	9.8	89%	10.4	84%

Notes:

Sources: EUROMOD results based on input data, own calculations using EU-SILC 2006 and official statistics from Eurostat's website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database

Validation of 2005-2008 simulations: at-risk-of-poverty rates

As already commented in section 4.2.2, EUROMOD underestimates the 2005 at-risk-of-poverty rates when using poverty lines of 40% or 50% of median equivalised income. Table 36 suggests that the same problem persists in 2006, 2007 and 2008. Moreover, while external statistics indicate a declining trend in rates for all poverty lines, in EUROMOD such trend is much weaker and only observed when using poverty lines of 60% or 70% of median equivalised income.

Using 60% of the median equivalised income as poverty line, external statistics in Table 37 indicate a considerable fall in the at-risk-of-poverty rate of children (i.e., those aged 0 to17) and an increase for those aged 50 or more. Although at a different pace and scale, such trend is captured by EUROMOD.



Table 36. 2005-2008 simulation validation: at-risk-of-poverty rates at different poverty lines

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
40% of median equivalised income												
total population	0.6	0.6	0.8	1.1	2.8	2.3	2.3	2.3	21%	27%	37%	49%
males	0.8	0.8	1.0	1.2	2.9	2.3	2.2	2.4	27%	35%	47%	51%
females	0.4	0.4	0.7	1.0	2.7	2.2	2.4	2.2	15%	20%	27%	46%
poverty line	1,884	2,061	2,137	2,789	1,693	1,921	2,169	2,427	111%	107%	99%	115%
50% of median equivalised income												
total population	3.1	3.3	3.7	3.7	5.5	4.9	5.0	4.7	56%	67%	74%	80%
males	3.2	3.3	3.9	3.9	5.3	4.8	4.7	4.8	60%	68%	83%	81%
females	3.0	3.3	3.5	3.6	5.7	5.0	5.3	4.7	53%	65%	66%	77%
poverty line	2,355	2,576	2,671	3,487	2,116	2,401	2,711	3,034	111%	107%	99%	115%
60% of median equivalised income												
total population	8.7	8.6	8.3	8.5	10.4	9.9	9.6	9.0	84%	87%	87%	94%
males	8.0	7.8	7.9	7.8	9.7	8.9	8.7	8.0	82%	87%	91%	97%
females	9.4	9.5	8.8	9.1	11.0	10.8	10.5	10.1	86%	88%	83%	90%
poverty line	2,826	3,091	3,205	4,184	2,540	2,881	3,254	3,641	111%	107%	99%	115%
70% of median equivalised income												
total population	16.7	16.5	16.3	16.0	17.3	18.0	16.8	16.5	96%	92%	97%	97%
males	14.6	14.5	14.2	13.8	15.8	16.2	14.9	14.0	93%	90%	95%	99%
females	18.6	18.4	18.3	18.2	18.9	19.7	18.6	18.8	98%	94%	98%	97%
poverty line	3,297	3,607	3,739	4,882	2,963	3,361	3,796	4,247	111%	107%	99%	115%

Notes:

Sources: EUROMOD simulation results and official statistics from Eurostat's website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database.



Table 37. 2005-2008 simulation validation: at-risk-of-poverty rates at different age groups

Description	EUROMOD				External				Ratio			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Population												
0-17	12.9	12.4	10.5	10.8	17.6	16.5	16.6	13.2	74%	75%	63%	82%
18-24	11.2	11.1	10.9	10.8	10.7	12.0	12.1	11.6	105%	93%	90%	93%
25-49	8.9	8.5	7.8	7.7	10.9	9.9	9.3	8.3	81%	86%	84%	93%
50-64	5.8	6.1	7.3	7.0	6.1	5.6	5.8	6.8	94%	110%	126%	103%
65-	5.6	6.3	6.8	7.9	5.3	5.9	5.5	7.4	105%	106%	124%	106%
Total	8.7	8.6	8.3	8.5	10.4	9.9	9.6	9.0	84%	87%	87%	94%

Notes:

Sources: EUROMOD simulation results and official statistics from Eurostat's website

http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database.



4.3 Summary of “health warnings”

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

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

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

There is a shortfall in people with higher incomes and in self-employment income and investment income. It is likely that the main problem is a shortfall of high income people with these sources of income or an under-recording of these sources for high income people. Incomes of self-employed are in principle not very reliable since some portion of expenditure made by self-employed on their activity effectively adds to living expenditures.

Sickness insurance benefits are substantially underreported in the SILC since people do not recognize them 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 well represented by the SILC data (minorities, foreigners, home-less).

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

5. REFERENCES

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Czech Social Security Administration (pension and sickness insurance)

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

Ministry of Labour and Social Affairs of the Czech Republic

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

<http://www.mpsv.cz/en/>

<http://www.mpsv.cz/en/1603>

Ministry of finance

Tax revenues

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

http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/dane_cla_19068.html

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

State accounts - Státní závěrečné účty

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

- *Sources for tax-benefit descriptions/rules*

On-line legislation (in Czech):

<http://business.center.cz/business/pravo/zakony/>

http://portal.gov.cz/wps/portal/_s.155/716/_s.155/8710?clk=1365&zak=1286&odk=280&ks=1242

Legal acts in English and terminology database:

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

General sources for tax-benefit descriptions/rules

<http://ec.europa.eu/eures/main.jsp?catId=8661&acro=living&lang=en&parentId=7806&countryId=CZ&living=>

http://portal.gov.cz/wps/portal/_s.155/696/_s.155/19101?ks=1691

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>

Unemployment: <http://portal.mpsv.cz/sz/obcane>

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

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