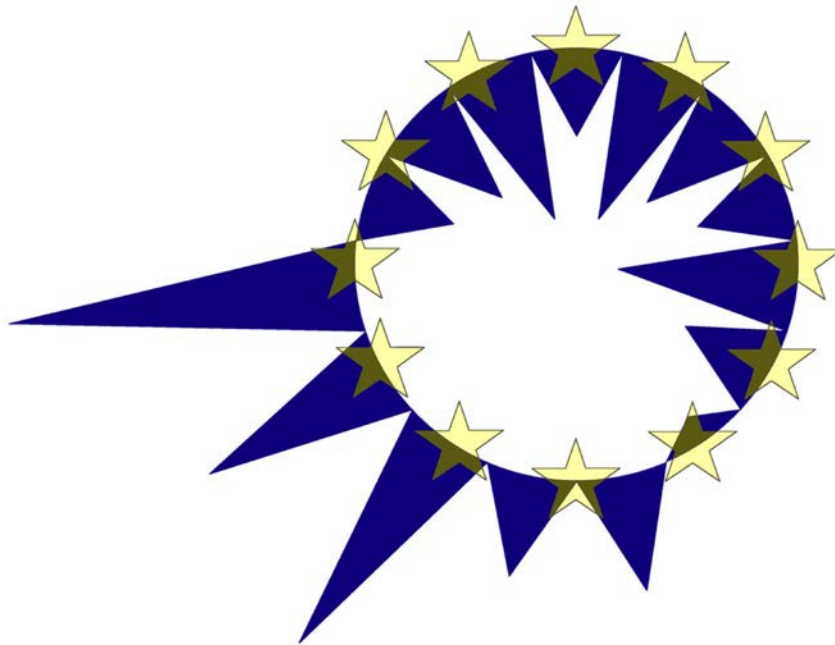


EUROMOD

COUNTRY REPORT



HUNGARY (2009-2012)

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with contribution from Paola De Agostini

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

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

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

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This report accompanies the release of EUROMOD G1.0. There may be minor differences between the results presented here and those obtained with G1.0 due to further improvements since the report was prepared.

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

This document is supported by the European Union Programme for Employment and Social Solidarity – PROGRESS (2007-2013).

This programme is managed by the Directorate-General for Employment, Social Affairs and Inclusion of the European Commission. It was established to finally support the implementation of the objectives of the European Union in the employment and social affairs area, as set out in the Social Agenda, and thereby contribute to the achievement of the Lisbon Strategy goals in these fields.

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

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

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

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



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1. BASIC INFORMATION

1.1 Basic figures

Table 1. Basic figures

	Pop.	pop. < 14 (%)	pop. ≥ 65 (%)	Life expect. (years)	Fertili ty Rate	Unemp rate ^[1]	GDP per head (PPS) ^[2]	Currency Name	exch. rate ^[3]
[2009]	10,030,975	18.0	17.0	73.97	1.33	10.3	15 200	HUF	272.43
[2010]	10,014,324	14.7	16.6	74.31	1.26	11.2	15 800	HUF	286.46
[2011]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
[2012]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

^[1] Unemployment rate of population aged 15–74

^[2] Gross domestic product at market prices; at current prices; Purchasing Power Standard per inhabitant.

Source: Eurostat

^[3] Euro exchange rate on 30th of June. Source: Hungarian Central Bank. These exchange rates are not equal to the SILC UDB rates.

Source: Hungarian Central Statistical Office (2009; 2010)

1.2 The tax-benefit system

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 ^[1] % of GDP**
[2009]	46.1	9.9	50.5	14.7
[2010]	45.2	8.0	49.5	14.8
[2011]	n.a.	n.a.	n.a.	n.a.
[2012]	n.a.	n.a.	n.a.	n.a.

Source: ^[1]Eurostat; 2012 - <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

Note: * Total tax receipts % of GDP: Current taxes on income, wealth, etc. - Most current taxes on income, wealth, etc consist of taxes on the incomes of households or profits of corporations and taxes on wealth that are payable regularly every tax period (as distinct from capital taxes levied infrequently).

**Social benefits (other than social transfers in kind) paid by government (ESA95 code D.62) are transfers to households, in cash or in kind, intended to relieve them from the financial burden of a number of risks or needs (by convention: sickness, invalidity, disability, occupational accident or disease, old age, survivors, maternity, family, promotion of employment, unemployment, housing, education and general neediness), made through collectively schemes, or outside such schemes by government units. Source: Eurostat - short description of the indicator



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
[2009]	24.7	9.1	39.6	5.9	13.2	4.2	2.7	0.6
[2010]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
[2011]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
[2012]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Yearbook of Welfare Statistics HCSO, 2010

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		
[2009]	19.2	4.0	8.3	24.0	43.8	0.7
[2010]	17.0	3.2	9.5	22.8	45.1	0.7
[2011]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
[2012]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

* Corporate income and dividend tax

** Includes self-employed

***Taxes on production and import

Source: National Accounts Hungary 2007-2009; 2008-2010 HCSO 2009; 2011

1.2.1 Basic information about the tax-benefit system, 2009-2012

- The Hungarian tax-benefit system is a unified national system where there are no policy differences across regions.
- In Hungary, the “tax year” runs from January 1 to December 31. The tax system generally changes in January each year. Mainly, benefits changes happen at the same time, but modifications may also occur during the year. In January of 2010 the personal income tax system was changed significantly (see page 21)
- Year by year gradual increase on the old age pension’s age limit had been applied so that pension age raises to 65 years old in 2010 for both men and women.
- The minimum school leaving age is 16; dependent children are defined as age under 16 or under 25 if the child is in full-time education and not married. The regulations exclude the people with their own children or cohabiting partner being a dependent child. In the case of the regular child protection benefit dependent children are defined in the tax unit as aged 17 or younger or 23 or younger if they are in full-time secondary education, not married and not cohabiting or 25 or younger if they are in full-time tertiary education, not married and not cohabiting.
- For benefit purposes a lone parent is not legally married to anyone and is a parent of a dependent child (regardless of cohabitation, if he/she declares him/herself alone). If the parent declares him/herself as not married, he/she has the right not to share child related tax credit with the other parents.



- The income tax system is an individual (personal) system.
- Income tax withholdings are collected on a cumulative basis, i.e., the system tries to ensure withholding the exact amount due in the financial year. Only individuals paying tax on trading income (e.g. self-employed people) or who earn from different sources must file a tax return for income tax.
- The means-tested benefit system assesses entitlement according to benefit unit income. The benefit unit is the household - the couple (cohabiting or married) and other adult person(s) or single adult plus any dependent children.
- The monthly minimum wage in the four years is:

2009	2010	2011	2012
71500 HUF	73500 HUF	78000 HUF	93000 HUF

1.3 Social Benefits

Old age benefits

The pension system was reformed in 1997, to establish three main pillars. A significant change happened in 2011:

- First Pillar: mandatory, state pension, which is publicly-managed and financed on a PAYG basis. It is financed by employer and employee contributions, supplemented from state budget if needed.
- Second Pillar: mandatory, privately-run pension funds and fully funded. This compulsory pension scheme is administered by several independent pension funds, which are authorised and supervised by the state. It is financed by employer and employee contributions. This pillar was practically terminated in 2011, cumulated funds were nationalised.
- Third pillar: voluntary, privately-run pension funds.

Table 5. Retirement age in the past and after 01/01/2010

Year of birth	Retirement age		Retirement year	
	Men	Women	Men	Women
1945	62	60	2007	2005
1946	62	61	2008	2007
1947		62		2009
1948		62		2010
1949		62		2011
1950		62		2012
1951		62		2013
1952		62,5		2014-2015
1953		63		2016
1954		63,5		2017-2018
1955		64		2019
1956		64,5		2020-2021
1957		65		2022
1958		65		2023
1959		65		2024
1960		65		2025

Source: Central Administration of National Pension Insurance; 2011



Old age benefit (*öregségi nyugdíj*): The amount of pension depends on the average monthly income and the insurance period. 20 years of contribution payment is required for a full old age pension, and 15-19 years for a partial pension. Retirement age is 62 for men and for women from 2009 to 2012. The minimum pension amount is 28,500 HUF per month in each year from 2008 to 2012. The minimum pension level was frozen at that amount.

In 2009 a measure was taken for further increase of age limits of both sexes up to 65 years in a mid-term period (see Table 5 above). The amount of the minimum pension is also a reference eligibility threshold for several social benefits (e.g. regular social support, home maintenance, etc.).

Early and Advanced Pension (*előrehozott, karkedvezményes nyugdíjak*): Early Retirement Pension (*karkedvezményes öregségi nyugdíj*) is available to those involved in jobs resulting in increased physical load or jobs implying hazardous to health (such as soldiers, policemen, fire-fighters, etc.). Entitlement to pension starts 2 years earlier for those who have worked in such activities for at least 10 years (men) or 8 years (women), and retirement age is further reduced by 1 year for every additional working period of 5 years (men) or 4 years (women) in such conditions. Advanced Pension (*előrehozott öregségi nyugdíj*) is paid no earlier than five years before the retirement age. Those who need no more than 5 years of service period are entitled to the Advanced pension at reduced rate (*csökkentett összegű előrehozott öregségi nyugdíj*) From January 1, 2012 all type of early and advance pensions were terminated, instead of these the *early retirement benefits* were created.

Survivors benefits

Survivors benefits is paid to the surviving partner even if the couple was not married (either widowed, divorced or cohabitant), the surviving dependent children and other surviving persons (i.e. parents, grandparents, and foster parents). This is a not means tested benefit. It corresponds to 60% of the deceased person pension and it is paid even though the surviving spouse has a pension by his own. Therefore, the surviving spouse can be entitled for a permanent or a temporary widow(er)s pension if his/her deceased spouse was a receiver of old age or invalidity pension or got the necessary service period.

Temporary Widow(er)'s Pension (*ideiglenes özvegyi nyugdíj*) is paid to the surviving spouse for 12 months, or until the common child reaches 18 years of age. After the termination of the temporary widow(er)'s pension the widow(er) is entitled to a Permanent Widow(er)'s Pension.

Permanent Widow(er)'s Pension (*özvegyi nyugdíj*): The surviving spouse/partner is entitled to a permanent widow pension if he/she is above retirement age, or invalid or has at least two minor children. The amount of the pension is 50% of the old age pension or 50% of the invalidity pension to which the deceased person would have been entitled to. This is reduced to 30%, if the widow(er) receives old age or invalidity pension on his/her own right.

Parental Pension (*szülői nyugdíj*) is paid to those (grand)parents, who are disabled or 65 years old or more, who were dependant upon their (grand)child throughout the preceding year, and whose deceased (grand)child was entitled to old age or invalidity pension at the time of death. The amount of the parental pension is equal to the amount of the permanent widow(er)'s Pension.

Orphan's Allowance (*árvaellátás*): Orphans having lost one parent are entitled to 30% of the deceased parent's pension as Orphan's Allowance. Those orphans having lost both parents are



entitled to 60% of the higher pension of the two parents. Survivors of a person died in a work-related accident are entitled to Work Accident-related Survivors' Benefits. They can be entitled to Temporary and Permanent Widow(er)'s Pension, Parental Pension and Orphan's Allowance according to the above rules with the exception that in this case the length of the deceased person's service period is not a condition.

Sickness benefits

Two kinds of sickness benefits are paid by social insurance.

Sick-leave (*betegszabadság*) is entitled to the sick employee for up to 15 working days per calendar year. The employer pays the expenses of sick-leave.

Sickness Benefit (*táppénz*) is paid by the Health Insurance Fund for a maximum of one year during employment or for 90 days after the termination of employment. If the previous insurance period is at least two years, the amount of sickness benefit is 70% of the daily average gross earning over the previous calendar year, while if the previous insurance period is less than 2 years, the amount is 60% of the daily average earnings. (These rates was decreased to 60 and 50% on 01.08.2009)

Parents can be entitled for Sickness Benefit in order to nurse their children as follows:

- Until the child reaches 1 year of age,
- For 84 days per child if the child is between 1-3 years,
- For 42 days per child if the child is between 3-6 years and for 84 days for a lone parent,
- For 14 days per child if the child is between 6-12 years and for 28 days for a lone parent.

Disability benefits

In Hungary disability benefits are heterogeneous; there are both insurance-based and non-contributory benefits among them. The system of the disability benefits was changed at the end of 2011. Since 1st of January 2012, the disability benefit was introduced to replace the invalidity pension, the work Accident-related disability pension, the temporary invalidity annuity and the regular social annuity. .

Invalidity Pension (*rokkantsági nyugdíj*) is due to those persons whose working capacity has been reduced by at least 67% and no improvement is expected in his/her health for at least 1 year, therefore the recipient does not work regularly or his/her wage is substantially lower than before becoming invalid.

There are three classes of invalidity pension:

- Class III: at least 67% reduction in working capacity but not totally incapacitated for work;
- Class II: 100% reduction of working capacity but no need of permanent care by others;
- Class I: 100% reduction of working capacity and need of permanent care by others.

Eligibility for invalidity pension starts from the day on which a medical committee diagnoses the invalidity. The invalidity pension is not replaced by an old age pension, but covers also the period after the retirement age. Eligibility terminates if the pensioner is no longer invalid, or works on a regular basis. Eligibility criteria for invalidity pension depend on the age and the length of the insurance period of the insured. The minimum invalidity pension for Class III is equal to the



minimum old age pension. From January 1 2012, the invalidity pension was terminated and replaced by the *invalidity benefit*. The transition between the Invalidity Pension system and the Invalidity Benefit system requires a revision of the process mainly based on a medical check up. No data are available yet.

Other disability benefits are non-contributory benefits and paid by the central budget:

Invalidity Annuity (*rokkantsági járadék*) is paid to individuals above 18 years old who lose 80% of their working capacity before reaching the age of 25. Its monthly amount is 28,630 HUF in 2006; 30,130 HUF in 2007, 32,610 HUF in 2008 and it increased to 33,330 HUF from 2009 to 2012. Those adult persons that are not eligible for invalidity annuity, but their working capacity has decreased under the minimum 67% and that get a Disability benefit or Annuity for the Blind, are eligible for Regular Social Support (*Rendszeres szociális segély*).

Temporary Invalidity Annuity (*átmeneti járadék*) and **Regular Social Annuity (*Rendszeres szociális járadék*)** are due to invalid persons, whose working capacity is reduced by 50%, who cannot find a rehabilitation workplace, and who are not entitled to old age, invalidity or work accident-related disability pension, nor to unemployment benefit, sickness benefit, work accident sick pay or maternity allowance. The Temporary Invalidity Annuity can be paid also to those people who are five years from retirement age and have completed the necessary contribution payment period. The annuity amounts to 75% of the old age pension that he/she would be entitled to upon reaching retirement

The Regular Social Annuity is paid to those people who are eligible and have not yet reached retirement age, but have contributed for at least half of the contribution payment periods necessary for receiving an invalidity pension. The Regular Social Annuity is 27,000 HUF per month in 2009, 2010 and 2011. From January 1 2012, both of the temporary invalidity annuity and the regular social annuity were terminated, instead of these the invalidity benefit was introduced and linked to these.

Disability Benefit (*fogyatékosági támogatás*) is paid to those persons above the age of 18 whose severe disability (visual, hearing, mental, physical or multiple impairment or autism) is permanent and that are unable to live independently. It is a flat-rate benefit. It amounts to 80% of the minimum old age pension in case of multiple disadvantages or a severe disadvantage that makes any kind of self-help impossible; in any other cases it amounts to 65% of the minimum old age pension.

People with severe disabilities can also apply for specific transport allowances:

- Transportation support (*közlekedési támogatás*) for transportation costs of disabled people;
- Support for car purchase (*személygépkocsi szerzési támogatás*);
- And Support to make a car barrier-free (*személygépkocsi átalakítási támogatás*).

Employment injuries and occupational diseases

Contributory benefits for employed people in case of work-related injuries or occupational diseases.

Work Accident Sickness Benefit (*baleseti táppénz*) is payable for a maximum of one year with the possibility of an extension for a further year. Its amount is 100 per cent of the previous average income.



Work Accident Annuity (*baleseti járadék*) is payable to a person who lost his/her working capacity by 15-67% as a consequence of an employment injury. Its amount depends on the degree of invalidity. Its amount is expressed as a percentage of monthly average. If the reduction of the working capacity does not exceed 25 per cent the annuity is payable for a maximum of two years, while if it exceeds 25 per cent then there is no time limit.

Work Accident-related Disability Pension (*baleseti rokkantsági nyugdíj*) is paid if the capacity for work is more than 67% reduced as a consequence of a work accident, or at least 50% reduced due to silicosis. It is paid according to the similar three classes used in the determination of Invalidity Pension. The Class I is the 70%; the Class II is the 65% and the Class III is the 60% of the monthly average earnings, and the minimum benefit amount is changed year by year. This pension was terminated from the beginning of 2012, and new special entitlement hasn't been designed for them yet, but covered by invalidity benefit.

Unemployment benefits

Unemployment Benefit¹, Job-Seekers Benefit (*munkanélküli járadék; álláskeresési járadék*): Employees and self-employed persons having lost their job are entitled to Unemployment Benefit if they have been employed for at least 200 days during the previous 4 years, if they became involuntarily unemployed, have no entitlement for pension, get no sickness benefit and seek a job and co-operate with the labour centre. It is paid from employee and employer contributions paid to the Labour Market Fund. From 1st of November 2005 the benefit duration has two parts. The first term is maximum 91 days, the second term is max 179 days. In the first term the amount of the benefit is 60% of the previous wage (the lower limit in this term is the 60% of the minimum wage, the upper limit is 120% of the minimum wage) and in the second term it is a fix amount: the 60% of the minimum wage.

At the beginning of 2012 the regulation of the Job-Seekers Benefit was changed too. In 2012 the benefit has one period with 90 days maximum, and the maximum of the amount is the 100% of the minimum wage, and the unemployment person is entitled if he/she has been employed for at least 360 days during the previous 3 years.

Minimum and maximum of the unemployment benefit in the first term from 2009 to 2011 and in 2012:

	2009	2010	2011	2012
Minimum	42,900 HUF	44,100 HUF	46,800 HUF	55,800 HUF
Maximum	85,800 HUF	88,200 HUF	93,600 HUF	93,000 HUF

Pre-retirement Unemployment Assistance (*nyugdíj előtti munkanélküli segély*): Unemployed persons may apply if they are within five years of reaching retirement age, received unemployment benefit for at least 140 days and have exhausted the entitlement for unemployment benefit, have a sufficient contribution period for retirement (normally 20 years), have no prospect of finding a suitable job, and co-operate with the Labour Centre.

The pre-retirement unemployment assistance was replaced by the job-seekers allowance since November 2005. In 2012 the pre-retirement unemployment assistance was introduced again, the

¹ After 1st of November 2005 the official name of unemployment benefit was changed to 'job-seekers benefit' (*álláskeresési járadék*)



amount is the 40% of the minimum wage. If the entitled person's average wage is lower than this amount, the amount of the pre-retirement unemployment assistance is the average wage

Job-seekers Allowance (*álláskeresési segély*): Received by job seekers who have used up all their entitlement period (180 days) of job-seeking benefit, but have not found a job. The duration time of the allowance is 90 days or 180 days depending on the job-seeker age being, respectively, lower or greater than 50. The second type of jobseeker's allowance benefits those job-seekers that are not entitled to job-seekers benefit, but they had spent 200 days in employment in the last four years. The third type of job-seekers allowance is entitled to job-seekers who are within maximum 5 years from reaching the retirement age.

The amount of this allowance for all three types of Job-seeker allowance is the 40% of the minimum wage. If the job-seekers average wage is lower than this amount, the amount of the job-seekers allowance is the average wage.

Maternity benefits

Maternity Allowance (*terhességi-gyermekágyi segély*): Mothers giving birth to a child are entitled to two types of benefits depending on their previous employment situation. If they are insured for at least 180 days during the last two years before delivery they are entitled to maternity allowance. It is paid for 24 weeks (4 weeks before and 20 weeks after the planned date of birth, or 24 weeks after the date of birth, depending on the mothers' choice) and its amount is 70% of the daily average gross earnings of the previous year.

Maternity Grant (*anyasági támogatás*): Resident women who give birth, had previously participated in prenatal care at least 4 times, and have no insurance are entitled to a one-off lump-sum payment of 225% of the minimum old age pension or 300% in case of twins (64,125 and 85,500 HUF from 2009 to 2012).

Child Care Allowance (*gyermekgondozási segély*): This is a universal entitlement financed by the state budget that provides a flat-rate benefit to parents who stay away from work to care for their children under the age of 3 (under age of 10 in case of permanently ill or severely disabled children) or for grandparents who care for their grandchildren aged between 1-3 years in the household of the parent. In case of twins the allowance is paid until the children reach the compulsory schooling age (usually 6 years). The monthly amount is equal to the minimum old age pension (28,500 HUF). In case of twins the amount is doubled. From 2006 to 2010 the mothers may have gainful activity after the 1st year of age of the child (She may have full time job as well). In 2009, the period of CCA was reduced to 2 years, effective from mid-2010. (New government terminated this measure at spring of 2010.)

Child Care Fee (*gyermekgondozási díj*): is a contributory benefit, which is paid after the expiry of Maternity Allowance until the child reaches 2 years of age if the parent(s) does not work. The eligibility criterion is at least 180 days of insurance during the last two years before delivery of the parent who wants to take care of the child at home. Its amount is 70% of the daily average gross earnings of the previous year with a maximum of the 70% of the twice of the minimum wage (100,100 HUF in 2009; 102,900 HUF in 2010; 109,200 HUF in 2011 and 130,200HUF in 2012).

Child Raising Support (*Gyermeknevelési támogatás*): It is a universal benefit financed by the state budget for parents who raise three or more children in their own home, if the youngest child is between 3 and 7 years old. The monthly amount is equal to the minimum old age pension, irrespective of the number of children.



Child benefits

In Hungary a well-developed child benefit system is in operation consisting of universal and means-tested benefits.

Family Allowance (*családi pótlék*) is a universal benefit financed by the state budget. It is paid to the parent from the birth of the child to the termination of studies in the compulsory education system (usually 0-16 years), and then during secondary school education or vocational training of the child (up to 20 years of age). Its amount depends on the number of children in the family, whether a single-parent family or not and whether the child is disabled. In the month of July double amounts are paid in order to support schooling.

The monthly amounts of the family allowance differ by number of children and family composition as shown below. The amounts were the same for these years.

2008-2012:

1 child in the family: HUF 12,200,
1 child, single parent: HUF 13,700,
2 children in the family: HUF 13,300 per child,
2 children, single parent: HUF 14,800 per child,
3 or more children in the family: HUF 16,000 per child,
3 or more children, single parent: HUF 17,000 per child,
permanently ill or severely disabled child in the family: HUF 23,300,
permanently ill or severely disabled child, single parent: HUF 25,900,
child in foster home/at foster parent: HUF 14,800.

Regular child protection allowance (*rendszeres gyermekvédelmi kedvezmény*): From 2006 the local government provides regular benefit for the child if the per capita income of the family caring for him or her is less than the current minimum old age pension (this limit is 120%; 125% and 130% of the minimum old age pension in 2007; 2008 and 2009) and remaining in the family is not against the interests of the child. From 2006 the regular child protection benefit was included into the family allowance. The entitlement for benefit in kind, related to the previous regular child protection benefit, has remained (free dining, free school-books) but the name of support has changed to **regular child protection allowance**. For those who are entitled to this allowance it is granted a 5 800 HUF support in cash for two times a year.

Social assistance

The specific forms of social allowances are means-tested. They are provided by local governments, which have some competence in specifying the eligibility criteria. The financing of these benefits comes from the central budget by 90%, while local authorities pay the rest.

Regular social benefit (*rendszeres szociális segély*): This is a social assistance scheme to ensure a minimum standard of living. People can be eligible to this benefit, if:

- they have lost at least 67% of their working capacity or are entitled to a blind person's allowance or disability benefit, or
- they are at least 55 years old (this part of the regulation was changed to “5 years before retirement age” form 2012) and



- raise minimum one child who is younger than 14 and the family doesn't get child raising support or child care fee or maternity allowance and the child care in day-care centre is not ensured.

Only one person in a family is entitled to this support. Since 2007, the assessing of the entitlement and the amount of the assistance are based on the income projected to the consumer unit instead of the previous income per capita. Each member of the consumer unit is weighted by a rate which shows the structure and consumption of a family: the first adult member of the family and the disabled child's rate is 1,0, the ratio of the spouse and other adults is 0.9 while each child is given a weight equal to 0.7. The amount of support is variable and supplements the family's effective total income to the limit of the entitlement (this limit is the 90% of the minimum pension). The maximum of the monthly support is 57,815 HUF in 2009; 60,236 HUF in 2010; 60,600 HUF in 2011 and 52,326 HUF in 2012.

Stand-by allowance (2009-2010); Wage Supplement Support (2011); Employment Supply Support (2012) (*rendelkezésre állási támogatás; bérpótló juttatás; foglalkoztatást helyettesítő támogatás*): Mainly replacing regular social benefit, this new benefit was introduced on 1 January 2009 called "stand-by allowance" (*rendelkezésre állási támogatás*) for persons up to 55 years of age who has no children or for whom day-care of the children is not sufficient. Local government authorities re-classify persons/cases by 1 April 2009; the scheme was fully effective since that time. The benefit amount was higher than former regular social benefit (equal to minimum pension) and it is given to eligible persons (not household as before). This is a conditional benefit on availability of accepting public employment offer on a mandatory basis.

From January 2009 more than one member per family is eligible for the stand-by allowance, but after 15th of November 2009 this can be paid only to one member in the family. After this date, two persons in one family could be eligible for the support of these two types of benefit at the same time, only if someone is entitled to the regular benefit while the other member of the family is entitled to the stand by allowance.

The name of the stand by allowance was changed to wage supplement support in 2011 and employment supply support in 2012. In 2012 the amount of this benefit was decreased to the 80% of the minimum old age pension.

Nursing Fee (ápolási díj): Paid to people who provide permanent care to a disabled relative:

- to a severely disabled or a permanently ill person under the age of 18. At least the minimum amount of old age pension (in 2008 and 2009) if the claim is based on the own right of the claimant, this normal amount of the allowance is higher than the minimum old age pension in 2011 and 2012: 29,500 HUF per month.
- to a severely disabled person in need of increased care. Those who nurses disabled persons needed increased nursing are provided by a higher amount of nursing allowance, its amount is higher by 30 per cent than the normal nursing allowance.
- to a permanently ill person above 18. In case of nursing a permanently ill person above 18 years of age, the nursing fee is provided by the local government on a discretionary basis, in this case, the amount is fully financed by the local government's budget. In this case the amount is the 80% of the normal nursing fee allowance.



Old age Allowance (*időskorúak járadéka*): This is a social assistance scheme to ensure a minimum income during old age in the absence of an old age pension. The amount of the benefit is determined by the income of the person (and his/her partner or spouse).

Conditions of eligibility:

- Reaching retirement age for both men and women, and
- income combined with his/her spouse or partner is below 80% of the minimum old age pension, or in case of a single person, below 95% of the minimum old age pension.

The amount payable varies in such a way that it supplements the actual income to reach 80% of the minimum old age pension per person for a couple or 95% for a single person.

Until 31 December 2005 the old age allowance is payable by local government to a person who is over the applicable retirement age and neither his own monthly income nor the monthly per capita income - calculated by taking his own together with that of his spouse - exceed 80 per cent of the current minimum old age pension or 95 per cent in the case of a person living alone. From 1 January 2006 the amount of this allowance is differentiated by the law according to the marital status and age. Higher amount of old age allowance is provided for persons 75 years of age and more and living alone if the person's total income is lower than 130% of the minimum old age pension.

Home Maintenance Support (*lakásfenntartási támogatás*): This is a means-tested benefit provided by the local government for a family or individual who lives in a home not exceeding a specified size, provided that there is no income from the use of that home. People can be eligible to this benefit by three rights:

- a) Normative home maintenance support according to the rules of the Act on Social benefits;
- b) If they participate in a debt-management procedure;
- c) Local home maintenance support according to the conditions specified by the local authority in a local decree.

A normative home maintenance support is provided if:

- the monthly income per person in a household does not exceed 150% the minimum amount of the old age pension (this limit decreased to 250% of the minimum pension from September 1 2011); and
- the acknowledged costs of home maintenance are equal to 20% or more of the total monthly income of the household.

The acknowledged size of the flat is maximum

- 35 m² in case of one-person households,
- 45 m² in two-person households,
- 55 m² in three-person households,
- 65 m² in four-person households,
- if more than four people are living in the household then 65 m² plus 5 m² for each additional person but maximum the real size of the flat.

The minimum amount of the benefit is 2,500 HUF per month. The local authority can depart from these minimum rules and can specify more favourable conditions.

- *Scope and scale*

The following tables provide an indication of the relative scale and coverage of each benefit by showing the number of recipients and the expenditure on each benefit.



Table 6. Social benefits: recipients (as % of population)

	2009	2010	2011	2012
Old age benefit	17.25%	17,09%	n.a.	n.a.
Widow(er)'s Pension	1.34%	1,30%	n.a.	n.a.
Parental Pension	0.00%	0,00%	n.a.	n.a.
Orphan's Allowance	1.00%	0,96%	n.a.	n.a.
Invalidity Pension	7.49%	7,34%	n.a.	n.a.
Invalidity Annuity	0.32%	0,32%	n.a.	n.a.
Temporary Invalidity Annuity	0.22%	0,20%	n.a.	n.a.
Disability Benefit	1.12%	1,14%	n.a.	n.a.
Unemployment Benefit	1.62%	1,16%	n.a.	n.a.
Job-seekers allowance	0.53%	0,62%	n.a.	n.a.
Maternity Allowance	0.29%	0,27%	n.a.	n.a.
Maternity Grant	0.95%	0,87%	n.a.	n.a.
Child Care Allowance	1.74%	1,78%	n.a.	n.a.
Child Care Fee	0.95%	0,95%	n.a.	n.a.
Child Raising Support	0.40%	0,39%	n.a.	n.a.
Family Allowance	12.44%	12,22%	n.a.	n.a.
Regular Child Protection Allowance	5.53%	5,98%	n.a.	n.a.
Family tax credit	11.39%	n.a.	n.a.	n.a.
Regular social benefit	0.72%	0,42%	n.a.	n.a.
Nursing Fee	0.55%	0,57%	n.a.	n.a.
Home Maintenance Support	2.49%	2,50%	n.a.	n.a.

Source: Yearbook of Welfare Statistics HCSO, 2010



Table 7. Social benefit: expenditure*

	2009	2010	2011	2012
Annual expenditure (million HUF)	4,449,989	4,114,192	n.a.	n.a.
as % of total expenditure				
Pension above retirement age	49.14%	54,68%	n.a.	n.a.
Pensions below retirement age	7.06%	7,22%	n.a.	n.a.
Allowances for survivors	7.53%	8,39%	n.a.	n.a.
Maternity allowance	0.88%	0,93%	n.a.	n.a.
Child-care fee	2.50%	2,78%	n.a.	n.a.
Sickness benefit	2.43%	1,93%	n.a.	n.a.
Benefit related to sickness	0.23%	0,26%	n.a.	n.a.
Unemployment benefit	3.48%	3,79%	n.a.	n.a.
Other benefits related to pension	0.81%	0,83%	n.a.	n.a.
Benefits of persons with reduced working ability	2.57%	2,67%	n.a.	n.a.
Family allowances	8.25%	8,86%	n.a.	n.a.
Child-care allowances, child-care-assistance benefits	2.15%	2,36%	n.a.	n.a.
Other benefits related to maternity	0.45%	0,47%	n.a.	n.a.
Regular and non-regular assistance benefits	3.19%	3,56%	n.a.	n.a.
Scholarship and other grants	1.17%	1,27%	n.a.	n.a.

Notes: *Social benefits at current prices; in this table we use the National Accounts classifications
Source: National Accounts Hungary 2007-2009, HCSO 2009; National Accounts Hungary 2008-2010, HCSO 2011.

- **Further benefits (not simulated)**

Advance on maintenance payments (*tartásdíj megelőlegezése*): This benefit is paid to the parent who takes care of the child if the child maintenance is temporarily irrecoverable by/from the other parent obliged to maintain the child. If the person who takes care of the child cannot maintain the child and the income per person in the applicant's family does not exceed three times the current minimum amount of old age pension the caring parent is entitled to advance maintenance payment. Its amount is equal to the amount of child maintenance decided by the court.

Irregular Child Protection Benefit (*rendkívüli gyermekvédelmi támogatás*) is paid to families with temporarily cash flow problems or facing emergency situations that seriously threaten their standard of living. The amount is designated by decree of the respective local government.

Debt-management Benefit (*adósságcsökkentési támogatás*): beside the home maintenance support, people with overdue debts can receive a cash benefit, transferred by local governments to the creditor. The amount of debt-management benefit is the result of an agreement between the local authority, the creditor and the beneficiary. The other pillar is debt management counselling, which is mandatory for beneficiaries.

Public Health Benefit (*közgyógyellátás*): Socially disadvantaged people may receive a Public Health Card by which he/she can obtain specific medicine and therapies free of charge.

Temporary Benefit (*átmeneti segély*): This is a means-tested benefit provided by the local government and regulated by a local government decree. It can be provided to persons whose



subsistence is occasionally or long-lastingly endangered. It can be provided occasionally or monthly. The local government can regulate the entitlement conditions, but the household income per person taken into account during the judgement of the claim cannot be lower than the old age pension minimum, or 150% of it in case of a one-person household

Funeral Support (*temetési segély*): This is a means-tested benefit provided by the local government and regulated by a local government decree. Somebody may receive a funeral support if he/she provided for the funeral of somebody although it was not his/her duty, or if it were his/her duty but bearing the funeral costs would endanger his/her existence. The local government can regulate the entitlement conditions, but the household income per person taken into account during the judgement of the claim cannot be lower than the old age pension minimum, or 150 per cent of it in case of a one-person household. The amount of the funeral benefit cannot be lower than 10 per cent of the locally usual cheapest funeral. The local authority, in its local decree, can complete the benefits defined in the Act on Social benefits or can define other kinds of cash benefits as well. The local authority, in its local decree, can complete the benefits defined in the Act on Social benefits or can define other kinds of cash benefits as well.

Examples of other social benefits provided by local governments:

- Home renting support (lakbértámogatás),
- Interest-free social loan (kamatmentes szociális kölcsön),
- Meals support (étkezési támogatás),
- Local transportation support (helyi utazási támogatás).

1.4 Social contributions

In Hungary, social insurance can be divided into two large categories: pension scheme and health insurance.

Since 1 January 1998, the Hungarian pension scheme has been financed jointly by the compulsory pension scheme of social insurance and, in addition, by private pension insurance (till 2011). It is also possible to complete a social insurance pension through voluntary pension funds. In the case of voluntary pension funds, payment is unsolicited, there are no provisions of the law concerning the minimum or maximum amount, and the minimum amount is defined by the statutes of the funds. Membership fees can be assumed by the employers.

In this sense, health insurance is not financed jointly, but through voluntary health funds, beside the compulsory social insurance, there is still an opportunity to obtain additional health provision.

Participation in the system of social insurance is compulsory, if legal relations provided by the law are established, the compulsory contractual insurance relations come into being. Both employers and employees, and also joint and private companies, and entrepreneurs have to make contributions both to the pension insurance and to the health insurance funds. The amount of contribution payable by both parties is calculated on the basis of the gross – before taxation – wages, income.

Employee social insurance contribution

In 2009 the rate of contribution payable by employees, if they are members of the compulsory pension scheme of social insurance only, is 9.5%; if they are also members of one of the private pension funds, then 0.5%. Members of private pension funds are obliged to pay 9% member fee to



the private pension fund, above the 0.5% compulsory pension contribution. In 2010 the private pension funds part of the system was demolished, from then all of the pension insurance contribution pay to the state pillar of the system.

There is an upper limit of pension contribution paid by employees, which equals the contribution payable after the gross average income threefold, in 2009 20,400 HUF/day. The pensioners who have employee income at the same time have to pay pension insurance contribution too.

Health insurance contribution separated in two parts: 'in-kind' and 'monetary'. For example the monetary part of the employees health insurance contribution is 2% and the in-kind part is 4 % in 2009. The pensioners who were working and had old-age pensions too had to pay the in-kind part of the health insurance contributions. In 2009 the rate of contribution was 2% up to 143,000 HUF/month and 6% above this amount in the case of employees in 2009.

Pensioners employed in their own right, pay neither pension nor health contribution. If a pensioner, apart from the pension, receives income subject to contribution payment (as an employee or an entrepreneur), contributions payable by employees do not need to be paid, but he/she is still obliged to fulfil obligations of employers. (Reasonably, as an employee the employer and as a partner or private entrepreneur, the entrepreneur.)

Employer social insurance contribution

In 2009 the rate of pension insurance contribution payable by employers is 24%. The rate of contribution was 2% up to 143,000 HUF/month and 5% above this amount in the case of employers in 2009. Joint and private entrepreneurs are obliged to pay both the 2 (or 5) % payable by employers and the 6% payable by employees in 2009.

From 2012, the employer part of the health insurance and pension insurance (with the labour market contributions) were erased; instead, 27 % social contribution tax was introduced.

Self-employed social insurance contribution

Joint and private entrepreneurs are obliged to pay both the 24% pension contribution payable by employers and the 9.5% pension contribution payable by employees in 2009. Joint and private entrepreneurs are obliged to pay both the employers and the employee's part of the health insurance contribution too.

In the case of joint businesses and entrepreneurs, health insurance contribution is calculated on the basis of the income paid to the entrepreneur as personal agency, but at least the amount of the minimum wage. In the case of private entrepreneurs, contribution is calculated on the basis of the entrepreneurial withdrawal, in the case of presumptive taxpayers, the income presumptive tax is based on at least the amount of the minimum wage. The regulation changes concern to the joint and private entrepreneurs, so they pay the 27% social contribution from 2012.

For those who pay simplified business tax (EVA) contribution payable is calculated on the basis of the minimum wage, but they can choose to declare higher income. If apart from having a partnership or a private enterprise, someone has another legal relation providing social insurance (employee, full-time student etc.), social contribution is calculated on the basis of income actually received. In the case of EVA, contributions do not need to be paid. Joint and private entrepreneurs are exempt from paying contributions if they receive sick-pay, maternity allowance, child-care



allowance, child rising support, child-care fee, nursing fee, except if they personally continue their activities during this time. Contributions are not to be paid for tax-exempt payment in kind.

The following table shows the changes of the pension and the health insurance contribution year by year.

Pension insurance contribution from 2009 to 2012

		2009	2010	2011	2012
Pension insurance contribution (nyugdíjjárulék)	Employees	9.5%	9.5%	10%	10%
	Employers	24%	24%	24%	*
	Upper limit	20,400 HUF	20,420 HUF	21,000 HUF	21,700 HUF
	Self employment	33.5%	33.5%	34%	10%+ *

* Replaced by the 27 % social contribution tax

Health insurance contribution from 2009 to 2012

			2009	2010	2011	2012
Health insurance contribution (egészségbiztosítási járulék)	Employees	In-kind	4%	4%	4%	4%
		Monetary	2%	2%	2%	3%
	Employers	In-kind	1,5% / 4,5%	1,5%	1,5%	*
		Monetary	0,5% / 0,5%	0,5%	0,5%	*
	Self employment		8% / 11%	8%	8%	7% + *

*Replaced by 27 % social contribution tax

Flat rate health contribution (tételes egészségügyi hozzájárulás): Fixed health contributions are payable by employers. The private entrepreneurs, those subject to EVA also included, by those having a legal relation of member, elected functionaries, outworkers, agents, assisting family members and by those receiving income substituting benefit for the unemployed, but only on the basis of one legal relation at a time. It is not payable during the time one receives sick pay, maternity allowance, child-care fee, child-care allowance, child raising support, during the time of unpaid holiday and detention and in the case of private entrepreneurs who receive widows' pension or a pension in their own right. It amounted to 1 950 HUF/month in 2009. In the case of part-time employment, the amount of contribution to be paid has to be made proportionate, but is at least 50%.

In 2010 the flat rate health contribution was abolished.



Other income related contributions

Employee contribution is calculated on the basis of gross wages received from the employer. Exempted are those who receive or become entitled to receive old age pension, disability pension or pension for work accident related disability, while being in employment. Employees are obliged to pay the contribution. Its rate is 1,5% after 1st of September 2006. The pensioners who are employees at the same time do not have to pay this employee contribution.

Employer contribution is calculated on the basis of the gross wage – before taxation – accounted and paid to the employee with regard to his/her employment, including severance pay, jubilee reward, fees paid during the time of sick-leave, taxable payment in kind, meal contribution, holiday contribution and 25% of the tax payable for a company car provided with regard to employment. The employer contribution is payable by the employer. In 2009 the rate of contribution was 1% up to 143,000 HUF/month and 3% above this amount.

Entrepreneurial contribution is paid by joint business on the basis of the income paid to the entrepreneur with regard to his/her personal assistance, by private entrepreneurs on the basis of the entrepreneurial withdrawal and by private entrepreneurs subject to presumptive taxation on the basis of the minimum wage. The minimum of the contribution base is always the amount of the minimum wage provided by the law. Exempted are those who receive or become entitled to receive old age pension, disability pension or pension for work accident related disability and those who are employed at the same time and work at least 36 hours a week. In 2009 the contribution rate is 2,5% (0-143000 HUF) and 4% (above 143 000 HUF) of contribution base. If in receipt of old age pension this contribution does not have to be paid.

From 2010 these separate contributions (the employee, the employer and the entrepreneurial) was left off, in place of these the employer pay 1%, the employee pay 1,5% and the self-employment pay 2,5% of the contribution base and this have been called '**labour market contribution**' (munkaerő-piaci járulék). From 2012 the employer part of the labour market contributions were erased, this is part of the 27 % social contribution tax (see above).

Vocational training contribution is payable by every economic society and private entrepreneur, except for those paying EVA or flat-rate tax. Contribution is calculated on the basis of expenditure on wages, its rate is 1.5%. from 2008 to 2012.

1.5 Taxes

Direct taxes

Personal income tax (*személyi jövedelemadó*): The system of personal income tax was introduced in 1988. The system in itself has basically remained unchanged but several simplifications were carried out over the years (out of the eleven originally introduced tax rates, by 2012 there remained only one). However, it is still typical of the system that types of incomes are differentiated in detail; there are tax credits of several kinds and members of certain sectors, primarily those working in the field of agriculture (primary producers, small-scale producers, assisting family members) enjoy differential treatment.

The personal income tax is the second most important source of revenue for the budget. Every active citizen is obliged to file a tax return at the end of the tax year, which can be done in three



different ways: either by self-assessment or, if one has a workplace and has other income only from very few and well defined sources, one can ask the workplace to fill in and file a tax return for him/her, and thirdly tax authority fills the form. As it will turn out below, the Hungarian tax regulations are rather complex, so there is an option of filling in a detailed data sheet and asking the tax authorities to calculate the amount of tax to be paid. Small-scale producers who work in the field of agriculture and whose yearly revenue is between 600,000 and 3,000,000 HUF can also make a simplified declaration of tax return, which substitutes for the filing of the personal tax return.

Incomes to be consolidated are taxed according to the tax table. Tax credits are only demandable on the basis of the amount of tax calculated this way. (Earlier, in certain cases, allowances were deductible from the taxable income, but this has disappeared from the prevailing regulations.) Incomes taxed separately can be divided into two groups. In the first group there are income sources of different kinds, in this case separate tax rates apply. In the second group, we talk about flat rate taxation. This is only a choice in the case of certain activities and even then there are further conditions to be fulfilled.

The simplified business tax (EVA), as a form of taxation was introduced on 1 January 2003 and started from 2004. EVA addresses small-scale enterprises, not only with the aim of reducing tax burdens but also in order to simplify administration. This form of taxation provides an opportunity for the legal transformation of revenues into freely utilizable income, it is easy to calculate and there are relatively less rates and taxes to be paid.

The main characteristics of those belonging to EVA are made quite clear by the provisions of the law. EVA, as a form of taxation, can be chosen by private entrepreneurs, unlimited partnerships, deposit companies, limited liability companies, co-operatives, lawyers' offices etc. If the taxpayer carried out its activities in the previous tax year continuously, without transformation and its revenues in the two previous tax years and, as reasonably expectable, in the current tax year are not more than 25,000,000 HUF. The tax rate is 25% in 2009 and 30% in 2010-2011 and 37% in 2012. In 2012 the amount of the maximum revenue was increased to 30,000,000 HUF per year.

Income-types to be consolidated:

- Wage income from employment
- Social security benefits with regard to employment, like sick pay, child-care fee, maternity allowance
- Income originating from casual work
- Income received in return for foreign service
- Unemployment benefit, incentive benefit for job seekers, complementary wages, wage substituting benefit, work accident allowance, compensation substituting wage income from employment
- Income originating from being an elected functionary, a member of Parliament or a Local Government, subsidies received in connection with these activities (meal, clothing, holiday, housing contributions), taxable insurance fees due to these activities, income originating from securities.
- Income originating from refund of expenses above the amount of certified expenses.
- Part of severance pay (for the tax year or earlier) concerning the year 2005.
- Withdrawal of a private entrepreneur
- Income gained by an assisting family member in a joint business.
- Income originating from activity of agricultural primary producers. This kind of income needs to be declared only if it is more than 600,000 HUF.
- Income originating from intellectual activities; that is income received for a composition that enjoys legal protection of copyright and that was earned outside of employment or enterprise.



– Other income originating from independent activities (not carried out as a private entrepreneur), not intellectual income.

Non-taxable emoluments (Incomes of this kind are to be consolidated, which means that they are part of the tax base, but tax can be reduced by the amount of tax calculated for this kind of income.): child-care allowance; child raising support; foster parent fee; nursing fee as determined by the act on social provisions. From 2007 the old age pension is part of the non-taxable emoluments too; the family allowance and the maternity grant was part of the non-taxable emoluments too in 2010. From 2011 tax credit for non taxable emolument was terminated from the tax system.

The tax base is made up of the incomes to be consolidated (including non-taxable emoluments to 2010). Tax is calculated on the basis of the tax base, according to the tax table. From 2007 a 4% additional tax was inducted at the upper income bracket. This limit has increased to 7,446,000 at 2009. This additional tax was abolished in 2010.

Tax table in 2009: 0 – 1,900,000 HUF 18 %; above 1,900,000 HUF 36%

In 2010 a new tax base calculation was introduced, applying a coefficients of 1.27 on the gross income (the previous tax base), and parallel the tax table was changed to: 0 – 5,000,000 HUF 17 %; above 5,000,000 HUF 36%

In 2011 the tax system changed to a sort of flat tax system where everybody pays a tax rate of 16% on the tax base defined by multiplying it by 1.27.

In 2012 the use of a coefficient to define the tax base was partially terminated (up to 2,424,000 annual HUF). Practically, with this regulation the flat tax system become a flat tax with two rates, because from 0 to 2,424,000 HUF the tax rate is 16% of the tax base, from 2,424,000HUF the tax rate is 20.32% on tax base multiply by 127% (taxbase*1.27).

Tax credits:

Tax credit on income from wages (*adójóvátírás*): Tax refund calculated on the bases of income from wages². Tax refund is due to a person whose total income, i.e. types of income to be consolidated, together with the income that is taxed separately, but without income originating from the selling of real-estate, is not more than 2,762,000 HUF in 2009 The tax refund is 18% of the income from wages but at maximum 11,340 HUF a month. In the case of income between 1,250,000 and 2,762,000 HUF, the maximal tax refund decreases linearly. The tax refund of the income from wages was decreased to 17 % in 2010.

Tax credit on income from wage was terminated from the 2012 tax system, to increase tax revenue and make further simplification on the system.

² Income from wages includes the following: income from wages due to employment, social security provisions due to employment, like sick pay, child-care fee, maternity allowance, income received for foreign service, income originating from refund of expenses above the amount of certified expenses, unemployment benefit, incentive benefit for job seekers, complementary wages, wage substituting benefit, work accident allowance, compensation, substituting wage-like income from employment, wage-like income to be declared, raised abroad

Tax credit on income from wages ³

	2009	2010	2011	2012
Maximum monthly amount	11,340 HUF	15,100 HUF	12,100 HUF	-
Income lower limit	1,250,000 HUF	3,188,000 HUF	2,750,000 HUF	-
Income higher limit	2,762,000 HUF	4,698,000 HUF	3,960,000 HUF	-

Family tax credit (*családi adókedvezmény*): In 2009 144 000 HUF yearly ($3 \times 4000 \text{ HUF} \times 12$) may be brought into the tax calculation of a families with three children, where all three children are qualified as dependents. In the case of consorts and common-law wives and husbands, family allowances can be shared because, in this way, more allowance can be claimed. Family allowance can be claimed in full up to 8,000,000 HUF total income, whilst on the income exiting the 8,000,000 HUF limit, only 20% can be claimed. Hence tax credit = tax credit – ((total income – 8 mln) * 20%).

In 2011 the regulation of the family tax credit was changed, while until then the family tax credit was deducted from the tax base and not from the tax, in 2011-12 it is a real tax allowance. At the same time the amount of the tax credit changed too, and amounts for 2011-2012 are: 62,500 HUF monthly amount per child if there are one or two dependent children in the family; and 206,250 HUF monthly amount per child if there are three or more dependent children in the family. No negative tax is allowed. (The possibility of sharing between the parents remained.)

Persons with a disability level of at least 67% are eligible for tax credit for serious disability. The personal income tax amount to be deducted due to **serious disability** is the 5% of the minimum wage per month.

Non-simulated tax credits:

Although the detailed system of tax credits was considerably simplified at 2007, most of the items were terminated, but several allowance stay in the tax system. The most important are: allowance after the amount paid to a **voluntary health fund**; allowance after the income originating from **intellectual activities**; allowance for the amount spent on paying off a **loan for buying accommodation**; allowance for amounts paid towards **tuition fees** in higher and adult education; allowance for **primary producers** in agriculture: this allowance is the amount of tax payable for the income raised by way of primary production or small-scale production; allowance for **payments made towards public interest organisations**, the Church, with the aim of assumption of obligations for purposes of public interest, allowance **for payments made towards public interest organisations of high priority**.

Simplified Business Tax (*egyszerűsített vállalkozói adó*): The simplified business tax (EVA), as a form of taxation was introduced on 1 January 2003. EVA addresses small-scale enterprises, not only with the aim of reducing tax burdens but also in order to simplify administration. This form of taxation provides an opportunity for the legal transformation of revenues into freely utilizable

³ From 2008 together with the additional tax credit on income from wages.



income, it is easy to calculate and there are relatively fewer rates and taxes to be paid. In 2005, 118,800 million HUF was paid as EVA to the budget. In the previous year there were 82,848 private and joint businesses included in EVA, 54% of those are private entrepreneurs, 37% are joint businesses with no legal entity (deposit companies) and 10% are joint businesses with legal entity (limited liability companies).

The main characteristics of those belonging to EVA are made quite clear by the provisions of the law. EVA, as a form of taxation, can be chosen by private entrepreneurs, unlimited partnerships, deposit companies, limited liability companies, co-operatives, lawyers' offices etc., if the taxpayer carried out its activities in the previous tax year continuously, without transformation and its revenues in the two previous tax years and, as reasonably expectable, in the current tax year are not more than 25,000,000 HUF (this maximum amount increase to 30,000,000 HUF by 2012). Economic societies can choose this form of taxation, if every member of the society is a private person and the economic society does not have a share in another economic society. There are some further restrictions ordained by the law, for example, it is only possible to become subject to EVA if tax authorities have not previously imposed a fine due to negligence on the company, if the company does not produce and does not circulate products imposed by excise tax, does not carry out any activities that require the permission of the Hungarian Financial Supervisory Authority or the Gaming Board.

Calculation of EVA is based on the amount of total revenues together with the VAT. The tax rate was 25 in 2009, 30% in 2010 and 2011; and 37% in 2012. Those paying EVA are exempted from paying the VAT, they do not have to pay entrepreneurial personal income tax and if they have no other revenues, they do not have to file a personal income tax return.

From the above, it emerges that the choice of EVA is reasonable for those enterprises that obtain revenues without much expense, or in the case of which the expenses cover partly entrepreneurial and partly household demands. It cannot be precluded, especially within a couple of years of the introduction of a new method of taxation, that certain people chose this opportunity by mistake. Still, we can assume that, in the case of the majority of the companies, the results remaining after taxation can predominantly be considered as incomes of households and EVA can be regarded as a tax payable by households.

Separately taxed income types are the following:

- Flat-rate taxation income of private entrepreneurs: In the case of flat-rate taxation, the accountable cost ratio is fixed, the ratio itself is defined by the law, depending on the type of activity and it varies between 40-87%. Tax is payable for the revenues remaining after the cost ratio was deducted. The amount of tax payable depends on the income: 200,000 HUF 12.5%; 200 000 – 600 000 HUF 25%; 600 000 – 800 000 HUF 30% above 800 000 HUF 35%
- Income of private entrepreneurs, liable to entrepreneurial personal income tax and entrepreneurial dividend tax. The personal income tax of entrepreneurs is 16% of the entrepreneurial tax base. The entrepreneurial tax base basically means the revenues remaining after costs were deducted but the exact system of rules is rather complex. The entrepreneurial dividend base is the entrepreneurial income remaining after taxation. Tax payable for the entrepreneurial dividend base is 20% up to 30% of entrepreneurial withdrawal; above that it is 35%.
- Flat-rate taxation income of small-scale agricultural producers. The accountable cost ratio is fixed, depending on the type of activity; it is between 80-94%. The amount of tax payable is the same as in the case of flat-rate tax of private entrepreneurs.
- Flat-rate taxation income of hosts receiving paying guests The tax amounts to 32,000 HUF a year, out of which 80% is payable in the form of personal income tax and 20% as flat-rate health contribution. The amount of tax payable does not depend on whether guests were received throughout the year or only part of the year.



- Income originating from the sale of real-estate. Tax rate is 20% and it does not need to be declared, if the real-estate was obtained before 1988, or if there was no income originating from it. Allowance for getting an apartment is the duet of those who buy or build real-estate inland for themselves or for near relatives, either within 12 months before the sale or within 60 months afterwards. The amount spent for purchasing it can be deducted from the income originating from sale.
- Income originating from the sale of movable property. Tax rate is 20%., however, if the income originating from the sale of movable property is not more than 200 000 HUF, the sale is exempt from taxes. If it is more than 200 000 HUF, it needs to be declared but 40 000 HUF can be deducted from the tax.
- Income originating from life-annuity contract. Tax needs to be paid if the life-annuity contract was made after 1996 and life-annuity is received without compensation. The tax rate is 35%. It is tax-exempt: 1) if the contract ensuring support for life, the testamentary contract or the life-annuity contract was made with a private person; 2) if the contract ensuring support for life, the testamentary contract or the life-annuity contract was signed between a pensioner and an organisation financed by the state budget or a local government; 3) if life-annuity was received in return for real estate, right of property or movable property.
- Income originating from rate of exchange gain. Tax rate is 25%.
- Income originating from securities lending. Tax rate is 20%.
- Income raised by right of dividends Tax rate is 20% up to 30% of the financial deposit of the person entitled to receive the dividend. Above that it is 35%.
- Income raised by right dividend, taxable abroad. Tax rate is 20%. Tax justifiably paid abroad can be deducted, but if Hungary does not have a convention ruling out double taxation, at least 5% of the tax has to be paid in Hungary. etc.

Tax liability is the total of the amount of tax payable for incomes to be consolidated reduced by allowances and the amount of tax payable for incomes taxed separately. Tax return does not need to be filed by those who only have tax-exempt income. Tax-exempt incomes are the following:

- pensions
- severance pay received with regard to the cessation of the right for widow's pension
- supplementary income
- income substitution for the unemployed
- subsidy received prior to beginning independent activities, joining an economic society or founding an economic society, based on provisions of the law or international contracts
- maternity benefit given by the state, with regard to social considerations or within the system of social security
- social benefits
- temporary benefits
- funeral support given in accordance with the provisions of the social law by the local government, by an interest organisation or by the employer
- home maintenance support, subsidy for rental of accommodation
- orphans' allowance
- foster-parent fee, special provision due to foster parents
- after-care provision
- old age allowance
- personal allowance of the blind
- disability allowance, travelling support for seriously disabled private persons as provided by the law
- family aid for the relatives of conscripts and those carrying out civil service, monetary supply to disabled serviceman, national fee for care as provided by the law
- income of interest payment received from a private person or from a pay-office, if it is maximum 5% more than the base rate of the central bank interest
- debt management service



Among tax-exempt incomes, payment in kind supplementing wages also needs to be mentioned. One of the most frequently used forms is the provision of lunch on vouchers. The regulation of this was changed year by year. Another significant item is the provision of holiday contributions. These can be given for free, either in the form of holiday services or in the form of holiday checks and can also be used by close relatives, either together with or separately from the employee. Its limit is the amount of the minimum wage, in 2010 73,500 HUF. Schooling support can also be provided tax-exempt for the parents at the beginning of the school year, up to 22,500 HUF in 2010. Finally, so-called “presents of little value” can also be given to employees, up to 10% of the minimum wage.

Local taxes (*helyi adók*): Problems of local taxes are the result of territorial division. There are more than 3 100 local governments in Hungary, all of which might have their own provisions concerning tax types below. They have a legal right to levy taxes and even though there is a maximum limit, the actual regulations are framed by the local governments.

Indirect taxes

Value Added Tax: In Hungary, VAT was introduced in 1988. VAT is to be paid after each and every product and service sold inland and after the import of products. VAT is payable both by private persons and by legal entities, which means that there are only estimates available concerning the size of VAT paid by the population. VAT revenues form the major source of income for the state budget. The general rate of VAT is increased from 25 to 27% in 2012, with the exception of the products and services listed in the regulation (more details in the Feasibility Study).

There are further indirect taxes and levies collected by the National Tax and Customs Administration. They play a minor role relative to VAT, but as an example they are as follows: excise tax; environmental protection; charge for environmental load; gambling tax; registration tax; energy tax.

- *Scope and scale*

The following tables show the number of taxpayers and the composition of taxes, including social contributions, as a percentage of overall tax revenue.



Table 8. Taxes: taxpayers (as % of population)

	2009	2010	2011	2012
Direct taxes				
Personal income tax			n.a.	n.a.
Corporate tax			n.a.	n.a.
Simplified business tax			n.a.	n.a.

Source: Hungarian Tax and Financial Control Administration, 2010

Table 9. Taxes: revenue

	2009	2010	2011	2012
Annual revenue (million HUF)	4 735 401	4 637 188	n.a.	n.a.
Direct taxes				
Personal income tax	40,1%	37,4%	n.a.	n.a.
Corporate tax	8,4%	7,0%	n.a.	n.a.
Simplified business tax	3,6%	3,9%	n.a.	n.a.
Indirect taxes				
Value Added Tax	46,3%	50,2%	n.a.	n.a.
Environmental protection fee	0,2%	0,1%	n.a.	n.a.
Gambling tax	1,4%	1,4%	n.a.	n.a.

Source: National Accounts Hungary 2008-2010; HCSO 2011



2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Not all the taxes and benefits mentioned in the previous section are simulated by EUROMOD. Some are beyond its scope entirely and are neither included in the EUROMOD database nor in the output income variables (e.g. Value Added Tax). Others are not possible to simulate accurately with the available data (old age benefits and unemployment benefits). They are included in the database and may be chosen as components of output variables, but the rules governing them may not be changed in the model. Table 10 and Table 11 classifies each of the main tax-benefit instruments (and some minor ones introduced above) into one of these groups and provides a brief explanation as to why the instrument is not fully simulated if this is the case.



Table 10. Simulation of benefits in EUROMOD

	2009- 2012	2009-2012	Why not fully simulated?
Old age benefit	POA	I	No data on contribution history
Early Retirement Pension	POA	I	No data on contribution history
Advanced Pension	POA	I	No data on contribution history
Temporary Widow(er)'s Pension	PSU	I	No data on contribution history
Permanent Widow(er)'s Pension	PSU	I	In the EU-SILC database if the survivor's benefits paid after the standard retirement age these benefits are included under the old age benefits.
Parental Pension	PSU	I	No data on contribution history
Orphan's Allowance	PSU	I	No information about the eligibility conditions
Absence Fee	BHL	I	Data available is not sufficient to simulate all eligibility conditions
Sickness Benefit	BHL	I	Data available is not sufficient to simulate all eligibility conditions
Invalidity Annuity	PDI	I	No information on disability
Temporary Invalidity Annuity	PDI	I	No information on disability
Disability Benefit	PDI	I	Data available is not sufficient to simulate all eligibility conditions
Work Accident Sickness Benefit	BHL	I	No information about the sickness
Work Accident Annuity	BHL	I	No information about the sickness
Work Accident-related Disability Pension	PDI	I	No information about the sickness
Unemployment Benefit	BUN	S	No data on contribution history (coded (PS) but currently switched off)
Pre-retirement Unemployment Assistance	BUN	I	No data on contribution history
Incentive Benefit for Job-seekers	BUN	I	No data on contribution history
Maternity Allowance	BMACT	I	No data on contribution history
Maternity Grant	BMANC _c	S	
Child Care Allowance	BCCNC _c	S	
Child Care Fee	BCCCT	I	No data on contribution history
Child Raising Support	BCCLT	S	
Family Allowance	BCHNM	S	
Regular Child Protection Allowance	BCHMT	S	
Old age allowance	POAMT	S	
Regular benefit	BSA00	S	
Home maintenance support	BSAHO	PS	No information about the size of flat
Nursing fee	-	I	No information about the eligibility conditions

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 11. Simulation of taxes and social contributions in EUROMOD

	2009- 2012	2009- 2012	Why not fully simulated?
Personal income tax	tin	PS	No information about all of the tax credits
Corporate tax	-	E	No information available
Simplified business tax	tbs	S	No information about the type of the self-employment, but we estimate the number of the tax payers. Every eighth self-employment choosed this type of tax paying in 2006. (~100 000 person or firm)
Local taxes	-	E	No information available
Value Added Tax	-	E	No information available
Excise tax	-	E	No information available
Environmental protection fee	-	E	No information available
Charge for environmental load	-	E	No information available
Gambling tax	-	E	No information available
Registration tax	-	E	No information available
Energy tax	-	E	No information available
Employee Social Insurance Contributions	tscee	S	
Employer Social Insurance Contributions	tscer	S	
Self-employed Social Insurance Contributions	tscse	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

The model allows simulating changes in the tax rates and contribution rates, changes in tax deductions and allowances, family benefits, and major rules for social assistance benefit. 2005 is the first simulated year of the Hungary's policies in EUROMOD. The order of simulation is reported below.

2.2.2 Order of simulation and interdependencies

The following table shows the order in which policies of the Hungarian fiscal system are simulated. This table is extracted from the EUROMOD parameter sheets *Spine_HU*.

Table 12. EUROMOD Spine: order of simulation, 2006-2010

Policy	Description	Main output
Bun_hu	Unemployment benefit (munkanélküli járadék), currently switched off for all years	Bunct_s
Bmanc_hu	Maternity grant (anyasági támogatás)	Bmanc_s
Bccnc_hu	Child care allowance (gyermekgondozási segély)	Bccnc_s
Bcclt_hu	Child raising support (gyermeknevelési támogatás)	Bcclt_s
Bchnt_hu		
Tscee_hu	Employee social insurance contributions	Tscee_s
Tscer_hu	Employer social insurance contributions	Tscer_s
Tscse_hu	Self-employed social insurance contributions	Tscse_s
Tin_hu	Personal income tax (személyi jövedelemadó)	Tin_s
Tbs_hu	Simplified business tax (egyszerűsített vállalkozói adó)	Tbs_s
Bchmt_hu	Regular child protection allowance (rendszeres gyermekvédelmi kedvezmény)	Bchmt_s
Bsa_hu	Social assistance (szociális segélyek)	Bsa_s

In the Hungarian system there are four means-tested benefits that can be simulated. Their amounts are calculated within two policies: regular child protection allowance and social assistance (including old age allowance, regular benefit and home maintenance support). They all depend on income after income tax and employee and self-employed contributions have been deducted. They are therefore simulated after the simulation of income taxes and contributions.

The other four simulated benefits are non means-tested benefits. These are: maternity or child related benefits that depend on the age of the child or the number of the dependent children in the household. So these non-means-tested benefits must be simulated first.

2.3 Social benefits

2.3.1 Maternity grant (*Bmanc_hu*)

Resident women who give birth, having previously participated in pre-natal care at least 4 times and having no insurance, are entitled to a one-off lump-sum payment of 225% of the minimum



old age pension or 300% in case of twins in 2009. (In EUROMOD the twins regulation is not implemented because of the lack of data.)

- **Definitions**

The unit of analysis is the family (TU: `cbfam_hu`). This comprises the head, his spouse or partner (TU: `cbfam_hu/ Partner & OwnDepChild`) and their own children. Dependent children are defined in the tax unit as aged 16 or younger or 24 or younger if they are in full-time secondary education, not married and not cohabiting (TU: `cbfam_hu/ !{IsParent} & ({dag<=15} | ({dag<=24} & {dec>=3} & {dec<=4})) & !{IsWithPartner} & !{IsMarried}`)).

- **Eligibility conditions**

This benefit is paid if at least one one-year old child lives in the family. (Mod: `co_elig / {dag=0}`)

- **Income test**

This benefit does not depend on other incomes. Income test is not necessary.

- **Benefit amount**

The maternity grant is a lump-sum payment of 225% of the minimum old-age pension, i.e. in Euromod monthly output it is divided by 12) (`$MinPension_m/12 * 2.25`)

2.3.2 Child care allowance (*Bccnc_hu*)

A flat-rate benefit to parents who stay away from work to care for their children under the age of 3 (under age of 10 in case of permanently ill or severely disabled children) or for grandparents who care for their grandchildren aged between 1-3 years in the household of the parent. The monthly amount is equal to the minimum old age pension.

- **Definitions**

The unit of analysis is the family (TU: `ccfam_hu`). This comprises the head, his spouse or partner, grandparents and their own children (TU: `ccfam_hu / TU: ccfam_hu`). Dependent children are defined in the tax unit as age<=2 or age<=9 if disabled (`!{IsParent} & ({dag<=2} | ({dag<=9} & {IsDisabled}))`), grandparents are defined as parents of the child's mother or father.

- **Eligibility conditions**

Eligible are units where at least one adult person is caring for a 0-2 years old child if the person is the parent, or a 1-2 year old child if the person is the grandparent (`!{IsParent} & ({dag<=2} | ({dag<=9} & {IsDisabled}))`).

Since 2008, the caring parent of children under 1 year of age cannot pursue a gainful activity, while above 1 year of age parent can be gainful without restriction.



- **Income test**

Income test is not applicable

- **Benefit amount**

The monthly amount is equal to the minimum old age pension ($\$MinPension_m$).

2.3.3 Child raising support (*Bcclt_hu*)

Benefit for parents who raise three or more children in their own home, if the youngest child is between 3 and 8 years old. The monthly amount is equal to the minimum old age pension, irrespective of the number of children.

- **Definitions**

The unit of analysis is the family (TU: *cbfam_hu*). This comprises the head, his spouse or partner (TU: *cbfam_hu/ Partner & OwnDepChild*) and their own children. Dependent children are defined in the taxunit as aged 16 or younger or 24 or younger if they are in full-time secondary education, not married and not cohabiting (TU: *cbfam_hu/ !{IsParent} & ({dag<=16} | ({dag<=24} & {dec>=3} & {dec<=4}) & !{IsWithPartner} & !{IsMarried}))*).

- **Eligibility conditions**

Eligible are families where parent(s) work maximum 4 hrs per week in order to take care of at least 3 dependent children where there is at least one child with age between 3 and 7 years-old (included) and no child age 0 to 2 (i.e. a 3-7 year old child is the youngest) ($\{nDepChInTu>=3\} & \{nDepChInTu>0\}\#1 & \{nDepChInTu=0\}\#2$).

- **Income test**

Income test is not applicable

- **Benefit amount**

The monthly amount is equal to the minimum old age pension ($\$MinPension_m$).

2.3.4 Family allowance (*BCHNM_HU*)

It is paid to the parent from the birth of the child to the termination of studies in the compulsory education system (usually 0-16 years), and then during secondary school education or vocational training of the child (up to 20 years of age). Its amount depends on the number of children in the family, whether a single-parent family or not and whether the child is disabled. In the month of July double amounts are paid in order to support schooling (But the monthly simulation cannot be implemented).



- **Definitions**

The unit of analysis is the family (TU: cbfam_hu). This comprises the head, his spouse or partner and their own children (TU: cbfam_hu/ Partner & OwnDepChild).

Dependent children are defined in the tax unit as aged younger than 16; or 24 if they are in full-time secondary education, not married and not cohabiting (!{IsParent} & ({dag<=17} | ({dag<=25} & {dec=6}) | ({dag<=23} & {dec>=3} & {dec<=4}))) & !{IsWithPartner} & !{IsMarried})

- **Eligibility conditions**

Family Allowance is a universal benefit. This benefit is paid if at least one dependent child lives in the family.

- **Income test**

Income test is not necessary

- **Benefit amount**

The monthly amounts for lone parents (IsLoneParentOfDepChild) depends on the number of children :

1 child (nDepChInTu=1): HUF 13,700 in 2009,
 2 children (nDepChInTu=2): HUF 14,800 per child (IsDepChild),
 3 or more children (nDepChInTu>2): HUF 17,000 per child (IsDepChild),
 permanently ill or severely disabled child (IsDisabled): HUF 25,900.

The monthly amounts for other families (co_bchnm = 0) are:

1 child (nDepChInTu=1): HUF 12,200,
 2 children (nDepChInTu=2): HUF 13,300 per child (IsDepChild),
 3 or more children (nDepChInTu>2): HUF 16,000 per child (IsDepChild),
 permanently ill or severely disabled child (IsDisabled): HUF 23,300, by 2009.

The amounts in these four years:

	2006	2007	2008	2009	2010
1 child in the family	11,000	11,700	12,200	12,200	12,200
1 child, single parent	12,000	12,700	13,700	13,700	13,700
2 children in the family	12,000	12,700	13,300	13,300	13,300
2 children, single parent	13,000	13,800	14,800	14,800	14,800
3 or more children in the family	14,000	14,900	16,000	16,000	16,000
3 or more children, single parent	15,000	15,900	17,000	17,000	17,000
permanently ill or severely disabled child in the family	21,000	22,300	23,300	23,300	23,300



permanently ill or severely disabled child, 23,000 24,400, 25,900, 25,900, 25,900,
single parent

The special amount for foster children cannot be simulated.

2.3.5 Regular child protection allowance (*Bchmt_hu*)

This benefit is paid to the family if the income per person in the family does not exceed the amount of the defined percentage of the minimum old age pension.

- *Definitions*

The unit of analysis is the family (TU: `cpfam_hu`), which comprises the head, his spouse or partner and their own children (TU: `cbfam_hu/ Partner & OwnDepChild`).

Dependent children are defined in the tax unit as aged 17 or younger, or under age 23 (included) if they are in full-time secondary education, not married and not cohabiting or 25 or younger if they are in full-time tertiary education, not married and not cohabiting (TU: `cbfam_hu/ !{IsParent} & ({dag<=17} | (({dag<=25} & ({dec=6} | ({dag<=23} & {dec>=3} & {dec<=4}))) & !{IsWithPartner} & !{IsMarried})))`).

- *Eligibility conditions*

Eligible are families where per capita monthly income (as defined in `il_meanstestY`) is below the amount of the 120% in 2006 and 2007, 125% in 2008 and 130% in 2009 and 2010 of the minimum old age pension (`{sin01_s < $MinPension_m*1.30}`)

- *Income test*

The `il_meanstestY` is defined as disposables income (`std_dispy`) with the exception of this benefit and social assistance (as they are not yet calculated)

- *Benefit amount*

While in 2005 the benefit was paid to families with children in proportion to the number of dependent children, from 2006 the benefit became a fixed amount paid per year to families with children. It amounts to 10 000 HUF per year (`10000#y`) in 2006 and 2007; 11 000 HUF in 2008 and 11 600 HUF in 2009 to 2012.

2.3.6 Social assistance (*BSA_HU*)

2.3.6.1 Old age allowance

This is a social assistance scheme to ensure a minimum income during old age in the absence of an old age pension. The amount of the benefit is determined by the income of the person (and his/her partner or spouse).



- **Definitions**

The unit of analysis is the ‘couple’ (TU: couple_hu). This comprises the head, his spouse or partner (TU: cbfam_hu/Partner). Taxunit comprises only head and his/her partner, i.e. income of other household members is not taken into account.

- **Eligibility conditions**

Eligible are people who have reach the pension age (respectively 60 for women and 62 for male in 2006, 62 for everybody from 2009) or those living in a couple (nPersInUnit=2) where at least one person is older than the pension age. $\{IsWithPartner\} \& ((\{dgn=1\} \& \{dag>=\$PenAge\} \& \{GetPartnerInfo\#1=0\} \& \{GetPartnerInfo\#2>=\$PenAgeFem\}) \mid (\{dgn=0\} \& \{dag>=\$PenAgeFem\} \& \{GetPartnerInfo\#1=1\} \& \{GetPartnerInfo\#2>=\$PenAge\})) \& \{il_meanstestY1 < (\$MinPension_m*0.80*2)\}$

- **Income test**

(il_meanstestY1) is defined as disposables income with the exception of regular child protection benefit (bchmt_s) and social assistance (bsa_s) (as they are not yet calculated).

- **Benefit amount**

For couples the maximum benefit amounts to 80% of the minimum old age pension ($\$MinPension_m*0.8$) per person.

For singles the maximum benefit amounts to 95% of the minimum old age pension ($\$MinPension_m*0.8$) or 130% if the person is older than 75 years old ($\$MinPension_m*0.8$). Income of the couple/single (as defined in il_meanstestY) is withdrawn completely from maximum benefit (withdraw_rate=1'); comp2_cond: $!\{IsWithPartner\} \& ((\{dgn=1\} \& \{dag>=\$PenAge\}) \mid (\{dgn=0\} \& \{dag>=\$PenAgeFem\})) \& \{dag < 75\} \& \{il_meanstestY1 < (\$MinPension_m*0.95)\}$.

2.3.6.2 Regular benefit

This is a social assistance scheme to ensure a minimum standard of living. From 2006/7 to 2012 the assessing of the entitlement and the amount of the assistance based on the income projected to the consumer unit instead of the previous income per capita. The consumer unit is the rate which shows the structure of consumption within a family. The first major member of the family and the disabled child's rate is 1,0 while the ratio of the companion (spouse) and a child is lower (0,9-0,7) $(1 + ((nAdultsInTu-1)*0.9) + (nDepChInTU*0.7))$.

- **Definitions**

The unit of analysis is the family (TU: tu_asfam1_hu). From 2006 by the new terms for the support only one person is entitled in a family (TU: tu_asfam1_hu).

Dependent children are defined in the taxunit: $\{dag < 16\} \mid ((\{dag <= 20\} \& (\{yem <= 0\} \mid \{yse <= 0\})) \mid ((\{dag <= 24\} \& \{dec >= 3\} \& (\{yem <= 0\} \mid \{yse <= 0\}))) \& !\{IsWithPartner\} \& !\{IsMarried\}$



- **Eligibility conditions**

Eligible are persons who are 18 years or older ($\{DAG \geq 18\}$) or have a disability degree of at least 67% ($\{DDI=1\}$) or are non-employed, i.e. unemployed ($\{yem=0\}$ & $\{yse \leq 0\}$) and their income is smaller than the 90% of the minimum pension ($\{ \$MinPension_m * 0.9 \}$).

In 2009 the regular benefit was replaced by the stand-by allowance for people age 18-55 without children. The regular benefit remains available for disable people, or those older than 55 years old or those with dependent children who are not entitled to unemployment benefit and has low income (as defined by $il_sareexclY$ in the income list) and does not get the benefits.

- **Income test**

$il_meanstestY1$ is defined as disposable income with the exception of regular child protection benefit and social assistance.

- **Benefit amount**

From 2006 to 2012 the maximum benefit amounts to 90% of the minimum old age pension. The payable amount is the difference between the means tested income and the income calculated with the per compulsory unit. The lower and upper limit of the benefit is 0 and the minimum wage.

2.3.6.3 Stand-by allowance (in the year 2009 and 2012)

This is a social assistance scheme to ensure a minimum standard of living. The assessing of the entitlement and the amount of the assistance based on the income projected to the consumer unit instead of the previous income per capita. The consumer unit is the rate which shows the structure of consumption within a family. The first major member of the family and the disabled child's rate is 1,0 while the ratio of the companion (spouse) and a child is lower (0,9-0,7) ($1 + ((nAdultsInTU - 1) * 0.9) + (nDepChInTU * 0.7)$).

- **Definitions**

The unit of analysis is the family ($TU: tu_asfam1_hu$).

Dependent children are defined in the taxunit: $! \{IsParent\} \& ! \{IsWithPartner\} \& ! \{IsMarried\} \& (\{dag < 16\} | (\{dag \leq 20\} \& \{dec > 0\} \& (\{yem\#1=0\} | \{yse\#1=0\}))) | (\{dag < 24\} \& \{dec \geq 3\} \& (\{yem\#1=0\} | \{yse\#1=0\}))$).

- **Eligibility conditions**

Eligible are persons between 18 and 55 years old and have a disability degree of at least 67% or do not receive unemployment benefit and are non-employed, i.e. unemployed and do not have income as defined in $il_sareexclY$ and do not received regular social benefit.



- ***Income test***

`il_meanstestY1` is defined as disposables income with the exception of regular child protection benefit and social assistance (as they are not yet calculated).

- ***Benefit amount***

The maximum benefit amounts to the minimum old age pension.

2.3.6.4 Home maintenance support

This is a means-tested benefit provided by the local government for a family or individual who lives in a home not exceeding a specified size, provided that there is no income from the use of that home.

- ***Definitions***

The unit of analysis is the household (TU: `tu_household_hu`) i.e. all individuals in the household are members of the same unit.

- ***Eligibility conditions***

Eligible are households where per capita income does not exceed 150% (increased to 250% in 2012) of the minimum old age pension and home maintenance costs are 20% of household income or above. The condition that the size of the flat must not exceed an acknowledged size cannot be simulated as no variable for the size of flat is available.

- ***Income test***

`il_meanstestY1` is defined as disposables income with the exception of regular child protection benefit and social assistance (as they are not yet calculated).

- ***Benefit amount***

The benefit amounts to monthly 2500 HUF. In EUROMOD we can use the average monthly amount calculate with the official statistic amount (if it is available) because of the closer results to the external statistics.

<code>sys_par-name</code>	HU_2009	HU_2010	HU_2011	HU_2012
<code>compl_perTU</code>	5900#m	5900#m	5900#m	5900#m
<code>lowlim</code>	2500#m	2500#m	2500#m	2500#m

2.4 Social contributions

In Hungary, the social insurance system has two large parts: the pension scheme and health insurance.



2.4.1 Employee social contributions (TSCEE_HU)

Pension insurance contributions amount to 8.5% in 2006 and 2007; 9.5% from 2008 to 2010; 10% from 2011 (MOD: `co_ArithOp / formula`) of employment income (MOD: `co_ArithOp / coYEM`) with a daily upper limit (`co_ArithOp / uplim_amount`)

Employees pay 4% in 2006, 7% in 2007, 6% (from 2008 to 2011), 7% in 2012 health insurance contribution (MOD: `co_ArithOp / formula`) and general employee insurance contributions amounts to 1% in 2006 and 1,5% of employment income (MOD: `co_ArithOp / formula`) in the following years.

No employee social insurance contributions are paid if in receipt of old age pension. The assessment unit is the `individual_hu`.

2.4.2 Employer social contributions (TSCER_HU)

Pension insurance contributions amount to 18% in 2006, 21% in 2007, 24% of employment income from 2008. The health insurance contributions are 11% in 2006, 8% in 2007, 5% in 2008. In 2009 the health insurance contributions amount to 2% (0-143000 HUF) or 5% (143000 HUF -) of contribution base, has to be paid. From 2010 the amount of the health insurance contributions is 2% in all income categories.

Until 2009 employers used to pay a fixed health contributions of a monthly amount of 1 950 HUF for their employees. Fixed health contributions are counted as employer social insurance contributions if the person is "mainly employee" (i.e. employment income > self-employment income) otherwise as self-employed social insurance contributions.

General insurance contributions amount to 3% from 2006 to 2008. In 2009 it amounts to 1% (0-143000 HUF) or 3% (for the part above 143000 HUF -) ($(\$MinWage_m * 2 * 0.01) + ((yem - \$MinWage_m * 2) * 0.03)$). From 2010 it amounts to 1%.

From 2012 a new "social contribution" is added to the employer social contributions: which amounts to 27% of employment income.

The assessment unit is the individual (`tu_individual_hu`).

2.4.3 Self-employed social contributions

Entrepreneurs $\{y_{se}=0\}$ and EVA (simplified business tax) payers ($1_{se00} = 1$) pay self-employed contributions.

Contribution base for entrepreneurs is self-employment income ($y_{se}>0$) but at least the amount of the minimum wage. In the case of EVA payers contribution base is the amount of the minimum wage. EVA payers do not pay self-employed health insurance contributions if they are at the same time employees.

The 1_{se00} has been generated to identify the EVA payers $\{1_{se00}=1\}$. This variable is created from the self employment income variable following this method: if self-employment income ($py050g$) < 25 000 000 HUF - $\{1_{se00}=1\}$. Because of the low estimate of self-employment



income this causes a very large number of individual in the sample to be classified as EVA payers. In order to avoid this, a correction has been adopted: one case every eight self-employed is categorized back to a 'normal' tax payers.

Pension insurance contributions amount to 18% + 8,5% in 2006, 21% + 8,5% in 2007, 24% + 9,5% of employment income in 2008 and 2009. In 2006 pensioners who are also working only pay the 18% of the income. The health insurance contributions are 11% + 4% in 2006, 8% + 7% in 2007, 5% + 5% in 2008. In 2009 the health insurance contributions amount to 2% + 6% (0-143000 HUF) or 5% + 6% (143000 HUF -) of contribution base, has to be payed $((\$MinWage_m*2*(0.06+0.02))+((yem-\$MinWage_m*2)*(0.06+0.05)))$. If the recipient gets pension she/he pays smaller health insurance contribution.

General insurance contributions amount to 1% + 3% in 2006-2008 and it amounts to 1% (employee-part) + 1,5% (0-143000 HUF) or 3% (143000 HUF -) employer part of contribution base. If in receipt of old age pension or have employer income $\{POA>0 \mid \{TSCEE_s>0\}\}$ the general insurance contribution is 0.

Fixed health contributions of a monthly amount of 1 950 HUF are counted as employer social insurance contributions if the person is "mainly self-employed" (i.e. self-employment income > employment income) otherwise as employer social insurance contributions.

2.5 Personal income tax (TIN_HU)

The main tax simulated for Hungary is personal income tax (`tin_hu`). Every citizen is obliged to file a tax return at the end of the tax year if their annual income comprises taxable income.

2.5.1 Tax Unit

Personal income tax is individual (`TAX_UNIT=individual_hu`). However, there is a partial exception to this rule: family tax credit are jointly assessed (`TAX_UNIT=cb_fam_hu`). In this case the unit of analysis is the family (`TU: cbfam_hu`). This comprises the head, his/her spouse or partner and their own dependent children (`TU: cbfam_hu/Partner & OwnDepChild`). Dependent children are defined as aged 16 or younger or aged 24 or younger if they are in full-time secondary education. Children cannot be married or cohabiting ($!(\{IsParent\} \ \& \ (\{dag\leq 16\} \mid (\{dag\leq 24\} \ \& \ \{dec\geq 3\} \ \& \ \{dec\leq 4\})) \ \& \ !\{IsWithPartner\} \ \& \ !\{IsMarried\}))$).

2.5.2 Exemptions

Some income components do not have to be declared to the tax authorities, and thus are not included in the concept of taxable income (pensions, child and family benefits).

2.5.3 Tax base

The tax base is defined as taxable income (`IL: taxableY`) minus EVA payers' (`\{lse00=1\}`) self-employment income. Their self-employment income is stored in `YSE` and used for calculating SIC, but not for tax calculation.



Taxable income includes all sources of income. More specifically, the definition of taxable income is as follows:

```
IL: taxableY
taxableY= child raising support (gyermeknevelési támogatás, bcclt) + child
care allowance (gyermekgondozási segély, bccnc) + child care fee
(gyermekgondozási díj, BCCCT) + sickness benefits (táppénz, távolléti díj,
BHL) + maternity allowance (terhességi-gyermekágyi segély, BMACT) +
unemployment benefits (munkanélküli ellátások, BUN) + employment income, YEM)
+ property income (YPR) + self-employment income (YSE)+ old-age income (poa)
```

2.5.4 Tax schedule

Income taxation is graduated, with progressively higher marginal tax rates applying to higher income brackets.

In 2006 the upper limit of the first tax bracket (18%) is 1,550,000 HUF, this amount is 1,700,000 HUF in 2007 and 2008. An additional income tax applied from 2007 at the upper income bracket (4%). In 2009 the annual income up to 1,900,000 HUF is taxed with a rate of 18%, 1,900,000-7,446,000 HUF 36%, and income above of this amount is 40%, because of the separate income tax. From 2010 a new tax base was introduced, this is the 127% of the previous tax base, and the tax table was changed too: `band1_uplim - 5000000#y; band1_rate - 0,17; band2_rate - 0,32`. In 2011 a flat tax of 16% on the 127% of the previous tax base was introduced. In 2012, annual income up to 2,424,000 HUF is taxed with a 16% rate of the tax base, whilst income above 2,424,000 HUF is taxed 16% of the $(\text{taxbase}+(\text{taxbase}*0.27))$.

2.5.5 Tax credits

Tax credits are defined as deductions from tax due. These tax credits are non-refundable. In other words, final tax is calculated as the amount of tax resulting from the tax schedule minus the sum of all tax credits, subject to a minimum of 0.

A considerable number of tax credits cannot be simulated, because of the missing variables or missing relevant information in the database. The model contains most of these tax credits but these are switched off. In this chapter we listed only the simulated tax credits.

2.5.6.1. Tax credit for non taxable emolument (progression proviso)

Tax on income as defined in `incomelist il_taxprogY` is deducted from tax (i.e. this income is not taxable, but moves actually taxable income up in the schedule). From 2007 the old age pension is also part of this income list.

2.5.6.2. Tax credit on income from wages

The refund amounts to 18% of income from wages (as defined in `il_wageY`) with a maximum as described above.

In 2006 the maximum for the refund is 9,000 HUF/monthly but the maximum tapers off if total income (as defined in `il_totalY`) is between 1,500,000 HUF annual amount and 2,100,000 HUF annual amount ($\text{formula}/9000\#m-(9000\#m/(2100000\#y-1500000\#y))*((\text{il_totalY}<\text{max}>1500000\#y)-1500000\#y)$). The limits changes in the following years as shown below:



2006	2007	2008	2009	2010
				15100#m-
		11340#m-	11340#m-	(15100#m/(4698000#y
9000#m-	9000#m-	(11340#m/(2670000#y	(11340#m/(2670000#y	-
(9000#m/(2100000#y-	9000#m/(2100000#y-	-	-	3188000#y))*(((il_t
1500000#y))*((il_to	1500000#y))*((il_to	1250000#y))*((il_to	1250000#y))*((il_to	totalY * 1.27)
totalY<max>1500000#y)	totalY<max>1500000#y)	totalY<max>1250000#y)	totalY<max>1250000#y)	<max>3188000#y)-
-1500000#y)	-1500000#y)	-1250000#y)	-1250000#y)	3188000#y)

In 2011 tax refund is due to a person whose total income is not more than 3,960,000 HUF. The tax refund is 16% of the income from wages but at maximum 12,100 HUF a month. In the case of income between 2,750,000 and 3,960,000 HUF, the maximal tax refund decreases linearly. (If the income is higher than 2,750,000, the tax refund decrease with the 12% of the difference of the income and 2,750,000). In 2012 this tax credit was terminated.

2.5.6.3. Additional tax credit on income from wages

The refund is only available for those with positive wage income ($il_wageY > 0$). In 2006 and 2007 the refund amounts to 18% of income from wages (as defined in il_wageY) minus a monthly amount of 50,000 HUF ($0.18 * (il_wageY - amount\#1)$). Maximum for the refund is 2,340 HUF (monthly) but the maximum tapers off if total income (as defined in il_totalY) is between 1,000,000 HUF (annual) and 1,561,600 HUF (annual) in 2006.

The additional tax credit was eliminated from the tax system in 2008.

2.5.6.4. Tax credit for serious disability

Eligible are persons with a disability level of at least 67% ($DDI=1$). The tax credit amounts to 2,000 HUF monthly amount

2.5.6.5. Family tax credit

The family tax credit amounts to 4,000 HUF monthly amount if there are three dependent children in the family ($nDepChInTu=3$)

Tax credit is granted fully if total household income is below 8,000,000 HUF annual amount, if total income is above, for each HUF above, 20% are deducted from tax credit
(formula/sin02_s(as temporary variable) - ((il_totalY-8000000#y)<max>0)*0.2).

The tax credit is shared (proportionally to tax after deduction of other tax credits) among parents to make the maximum use of it ($TU: couple_hu$).

2.6 Simplified Business Tax (TBS_HU)

Calculation of EVA ($\{lse00=1\}$) (Egyszerűsített Vállalkozói Adó – Simplified Business Tax) is based on the amount of total revenues together with the VAT. The tax rate is 15% in 2006 and 2007, this increased to 25% in 2008 and 2009, and 30% in 2010 and 2011. The tax rate increased to 37% in 2012. Those paying EVA are exempted from paying the VAT, they do not have to pay entrepreneurial personal income tax and if they have no other revenues, they do not have to file a personal income tax return.



3. DATA

3.1 General description

The Hungarian database is drawn from the Community Statistics on Income and Living Conditions (EU-SILC). EU-SILC is expected to become the EU reference source for comparative statistics on income distribution and social exclusion at European level, particularly in the context of the 'Programme of Community action to encourage cooperation between Member States to combat social exclusion' and for producing structural indicators on social cohesion for the annual spring report to the European Council.

The instrument aims to provide two types of data:

- Cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions
- Longitudinal data pertaining to individual-level changes over time, observed periodically over, typically, a four year period.

Social exclusion and housing condition information is collected at household level while labour, education and health information is obtained for persons aged 16 and over. The core of the instrument, income at very detailed component level, is mainly collected at personal level but a few components are included in the household part of SILC.

The Statistics on Income and Living Conditions is conducted by the Central Statistics Office (HCSO).

The 2010 EU-SILC sample in Hungary was selected by a stratified two-stage sampling design in a part of the population and by stratified one-stage design in the other part. The final sampling units are the dwellings and, in each of them, every household is observed.

Localities were stratified by General Election Districts and size (in terms of number of dwellings). In the first part, one locality was selected with probability proportional to the number of dwellings. Within each selected locality, a systematic selection of dwellings was done. As for the other part of the population, a systematic selection of dwellings was done in each stratum.



Table 13. EUROMOD database description

2010	
EUROMOD database	HU_2010_a1.txt
Original name	UDB_c08D_ver2010-1 from 01-03-12
Provider	HCSO; EUROSÍTAT
Year of collection	2010
Period of collection	01/03/2010-01/05/2010
Income reference period	01/01/ to 31/12/ previous year to fieldwork
Unit of assessment	Households*
Coverage	Private household
Sample size	Ind: 20,653 HH: 9,813
Response rate	0,876 (household level)

*Notes: Persons living in collective households and in institutions are generally excluded from the target population. Refers to a non-institutional collective dwelling such as a boarding house, dormitory in an educational establishment or other living quarters shared by more than five persons without sharing household expenses.

3.2 Sample quality and weights

3.2.1 Non-response

We have no information about the “pattern” of the non-response. In general the unit non-response in the EU-SILC refers to absence of information on whole units (households and/or persons) selected into the sample. In EU-SILC, the unit non-response has been normally addressed by re-weighting the responding cases. Some of the information for weighting comes from within the survey, such as information on units’ selection probabilities, and unit non-response rates for different subgroups in the sample. In addition, weighting normally also makes use of external control distributions of population characteristics (e.g. by household size, location, age and sex, activity status) through the use of calibration techniques.

3.2.2 Weights

The original Hungarian SILC wave 1 consisted of 9,813 households and 20,653 individuals. None of the households reported zero incomes from all sources.

The weights provided by the SILC are household weights aiming to correct for selective non-response and panel attrition. In EUROMOD these weights have been scaled up to offset the exclusion of 11 individuals in 3 households from the original sample. No re-weighting was performed. Population estimates were provided by the General Election Districts of Hungary on the basis of the 2001 Population Census. Table 14 presents some basic descriptive statistics for the grossing-up weight.



Table 14. Descriptive Statistics of the Grossing-up weight

	EM_data1
Number	24733
Mean	398,59
Median	348,00
Maximum	1100
Minimum	100
Max/Min	11
Decile 1	203
Decile 9	670,6
Dec 9 / Dec1	3,3

3.2.3 Item non-response and under-reporting

Income and household composition data are collected by interviews with all household members aged 16 or over. The SILC response rules require detailed information on all income components to be provided by direct reporting, but proxy answers are allowed. In the case that a proxy interview is carried out, the identification number of the person who has provided the information has to be recorded. In the Hungarian SILC database there are not person non-response, i.e. if household questionnaire was made, every person in the household answered the personal questionnaire (or proxy answers were asked).

In general the SILC item non-response refers to the situation when a sample unit has been successfully enumerated, but not all the required information has been obtained. Various approaches of imputation can be envisaged (deductive methods, deterministic methods, stochastic methods)

Deductive methods refer to imputation procedures in which the true value of a missing item is logically deduced. This means that the value is either deduced from other variables of the survey or is derived from legal regulations. An example for the first mode of deductions is the net-gross-net conversion, when either the gross value or the net value is given and the corresponding missing value is calculated by applying general rules. An example for the latter mode is when the value of the childcare benefit is missing and the effectual value can be inserted.

The difference between deterministic and stochastic methods is whether the calculation procedure to calculate the missing item produces a random output as, e.g. simulating the error term using a regression approach.⁴

3.3 Data adjustment

Generally we try to keep the original EU-SILC dataset. EUROSTAT applies several processes to validate the database. The validation process contains syntax and a logical check audit. For example the logical check audit the structural coherence of the files (household register, personal register, household data, personal data) and the coherency between different variables of the same record and other records. The detailed description of the process with the Hungarian database is not available.

⁴ Source: EU-SILC User Database Description



3.4 Imputations and assumptions

3.4.1 Time period

In the SILC user database, the income reference period is a 12-month period. Information on earnings refers to the last tax year. Similarly, information about pensions and benefits refers to the calendar year before the interview. Self-employment income is based on this reference period too.

In general: “The interval between the end of the income reference period and the time of the interview for the respondent concerned shall be limited to 8 months as far as possible. This applies both to the household and personal samples, and irrespective of whether the reference period used is fixed in terms of calendar dates for the whole sample or is a moving reference period determined according to the timing of the interview for the household or person concerned.”⁵

All monetary amounts in the SILC are expressed in annual terms. These are converted into average monthly terms (dividing by 12) for the EUROMOD database.

3.4.2 Gross incomes

The Hungarian SILC data include variables on income tax, employee social insurance contributions and other deductions from gross earnings. In general, “gross income means the total monetary and non-monetary income received by the household over a specified ‘income reference period’, before deduction of income tax, regular taxes on wealth, employees’, self-employed and unemployed (if applicable) compulsory social insurance contributions and employers’ social insurance contributions, but after including inter-household transfers received.”⁶

3.4.3 Other imputed variables

Information on simplify taxation for self-employed is not reported in the original SILC UDB. Therefore we impute whether self-employed workers are subject to simplify or full taxation base on whether their self-employment income is less than 25,000,000 HUF. In this case the variable lse00 is set to be 1 to indicate that the person is classified as an EVA payer. However, controlling only for income it is not enough to identify the all EVA payers in Hungary because most of the self-employed in the sample satisfy the income criteria. Hence, to reflect the proportion of EVA payers in the population, one in eighth self-employees are randomly selected to be EVA payers. The others are subject to ‘normal’ taxation.

3.5 Updating

The factors that are used to update monetary variables from the base year are shown in Table 15. No others updating adjustments are employed.

⁵ SILC UDB description

⁶ SILC UDB description



Table 15. Updating factors

Index	Income Source/index type	Year 2009	2010	2011	2012
def_inc_uprate	default uprating factor	1	1,0136	1,0619*	1.019304
inc_uprate	wages and salaries	1	0,9720		
inc_uprate	self-employment income	1	1,0148		
inc_uprate	old age income (öregségi/saját jogú nyugdíj)	1	1,0095		
inc_uprate	survivor benefits (hozzátartozói jogon járó nyugdíj)	1	1,0304		
inc_uprate	total family benefits	1	0,9879		
inc_uprate	unemployment benefits (munkanélküli ellátások)	1	1,3750		
inc_uprate	sickness benefits (táppénz, távolléti díj)	1	0,7118		
inc_uprate	disability benefits	1	1,0222		
inc_uprate	child care fee	1	1,0352		
inc_uprate	maternity allowance	1	0,9749		

Source: Own calculation by the Yearbook of Welfare Statistics, 2010 HCSO; *Estimates/preliminary data in the Inflation Report at 06/2012 by The Hungarian Central Bank

4. VALIDATION

4.1 Aggregate Validation

The table below compares statistics on benefits and taxes that are not simulated by EUROMOD with external sources. This provides an assessment of the quality of the database and also provides some useful background information for the validation of simulated components of income, which may depend on or be associated with the non-simulated components. It calculates the ratio of EUROMOD (weighted SILC) expenditures and numbers of recipients to estimates drawn from administrative statistics for some of the main social security benefits that are not simulated by the model. All important personal income tax and social contributions are simulated, but some of the tax credits cannot be simulated.

4.1.1 Non simulated taxes and benefits

Table 16 shows the benefits that we cannot simulate in EUROMOD, these numbers compare the original information from the SILC UDB and the external statistics provided by the Hungarian Central Statistical Office.

In the case of the sickness benefits there are significant differences between the SILC and the external statistics. The main reason can be found in the different definition used to construct the two results. The sickness benefit has two big parts, the sick leave and the sick pay. An employee is entitled to 15 days' sick leave per calendar year to cover periods of unfitness for work occurring by reason of sickness, and the employer bears the expenses of sick leave (HCSO, 2010). After the first 15 days of sick leave period have been exhausted, the employee gets sick pay. The National Health Insurance Fund Administration data only counts the recipients and expenditures of the sick pay. Therefore it is no surprise that the 'external statistics' reported in Table 16 are much lower than the results produced by EUROMOD, which, instead, contains information about the two types of sickness benefits together (i.e. the sick leave and the sick



pay). On the other hand the respondent may have underestimated the sum of the sickness benefit significantly. For example the expenditure per sick pay *day* is 3,101 HUF in 2009 (In 'Yearbook of Social Statistics 2009'; HCSO 2010) and the average sickness benefit is 8,867 HUF per *month* in the SILC dataset.

In the case of the disability benefits, the external source amount includes the disability pension below retirement age, miners' and early retirement pension, benefits to persons with reduced capacity to work, accident benefits and the disability benefit. The coverage of the SILC and the external data is similar, but not the same, this cause an underestimate effect in the expenditure amounts.

The number of old age income recipients in EUROMOD is similar to the external statistics. However EUROMOD overestimates expenditures. Most likely the amount of old age incomes is over-reported because respondents include every kind of pensions (survivor, disability, etc.) in this category if they get old-age pensions. We think this cause the underestimate effect in the survivor benefits too.

The unemployment benefits statistics produced by EUROMOD contains not all, but most of the ESSPROSS elements, such as the early retirement for labour market reasons, vocational training allowance, etc. However it clearly overestimates the number of recipients and total expenditures. This is not surprise for the number of recipients. Indeed, anyone who is counted within the receivers of unemployment benefit even if only for one month in the all year, is counted by EUROMOD among the receivers. Thus while EUROMOD produces the average amount of a benefit received in a month, the external statistics represent the average number of recipients in one month and corresponding expenditures. Unfortunately, there is no available information directly comparable with our results. In 2010 the ratio get worst than in 2009 (at the moment there are no figures available for other years). Indeed, following the economic crisis, the unemployment benefit system was changed significantly in 2010, however this is difficult to pick up with EUROMOD because this specific benefit is not simulated, but taken as reported in SILC. In fact, EUROMOD is a static microsimulation model, which, in this particular case, simulates the effect that 2009-2012 fiscal policies have got on the 2010 population of Hungary. It does that by assuming that the population does not change, but the tax and benefit system does. Therefore, the number of recipients is constant over time because people observed out of work remain the same (we do not change the input data to take into account demographic variations in the population or labour market changes), expenditures change as an effect of uprating factors, which take forward in time monetary values. However, the big differences observed between EUROMOD results and external values suggest that uprating factors alone cannot take account of the changes introduced on this benefit during the period 2009-2012.



Table 16. EUROMOD validation: taxes and benefits included but not simulated

BENEFIT	Year	Recipients			Expenditure (HUFm/month)		
		EUROMOD database (SILC)	External source	Ratio	EUROMOD database (SILC)	External source	Ratio
Sickness benefits	[2009]	494 105	90 000(1)	5,49	4 243	9 121	0,47
	[2010]	494 105	90 000(1)	5,49	3 021	6 179	0,49
	[2011]	494 105	90 000	5,49	4 506	6 179	0,73
	[2012]	494 105	90 000	5,49	4 325	6 179	0,70
Disability benefits	[2009]	506 955	748 277	0,68	26 473	52 558	0,50
	[2010]	506 955	735 000	0,69	27 061	53 046	0,51
	[2011]	506 955	735 000	0,69	28 111	53 046	0,53
	[2012]	506 955	735 000	0,69	26 984	53 046	0,51
Old age income	[2009]	2 281 838	2 080 527	1,10	198 291	115 899	1,71
	[2010]	2 281 838	2 085 243	1,09	200 174	126 417	1,58
	[2011]	2 281 838	2 085 243	1,09	210 556	126 417	1,67
	[2012]	2 281 838	2 085 243	1,09	202 118	126 417	1,60
Survivor benefits	[2009]	107 304	134 114	0,80	4 087	4 845	0,84
	[2010]	107 304	139 000	0,77	4 211	4 845	0,87
	[2011]	107 304	139 000	0,77	4 340	4 845	0,90
	[2012]	107 304	139 000	0,77	4 166	4 845	0,86
Unemployment Benefits	[2009]	537 085	155 508	3,45	12 162	12 895	0,94
	[2010]	537 085	115 838	4,64	16 723	9 436	1,77
	[2011]	537 085	115 838	4,64	12 914	9 436	1,37
	[2012]	537 085	115 838	4,64	12 397	9 436	1,31

Notes: (1) This number does not contain the sick leave recipients.

Sources: Yearbook of Welfare Statistics, HCSO, 2006-2010

4.1.2 Simulated income tax

The Table 17 shows the personal income tax and the simplified business tax results. The numbers of taxpayers are somewhat under-represented in 2009 and overestimated in 2010 and 2011. The total amount of the personal income tax is also underestimated in all years, with the worst results in 2010. This calls attention to the changes in the personal income tax regulations introduced in Hungary between 2009 and 2012. However, we would expect a large decrease in revenue from personal income tax from 2010 to 2011 because of the enlarging of the family tax allowance and the introduction of a flat tax (that took down the top rate to 20.32%). On the contrary, the simulated results from EUROMOD do not seem to pick this up and they show an increase from 2010 to 2011, although the 2010 ratio between simulated results and external statistics is signalling that EUROMOD represents better 2011 than 2010.

The simplified business tax results picture a rather exceed underestimate in the self-employment income, and this causes a large deviation in the revenue number between the external source and the EUROMOD results. Another reason that could help explaining this underestimation is the lack of information about the simplified business tax payers in the SILC UDB. Indeed, because



of this, we have imputed who are these tax payers among those self-employed included in EU-SILC.

Table 17. EUROMOD validation: income tax

	Year	Taxpayers (person)			Revenue (million HUF)		
		EUROMOD Database	External source	Ratio	EUROMOD Database*	External source	Ratio
Personal Income Tax	[2009]	3 786 934	4 370 204	0,87	108 736	125 231	0,87
	[2010]	5 635 872	4 475 327	1,26	92 256	144 555	0,64
	[2011]	4 772 915	3 805 000	1,25	106 944	115 542	0,93
	[2012]	5 170 114	n.a.	n.a.	105 720	n.a.	n.a.
Simplified Business Tax	[2009]	104 454	97 217	1,07	2 864	14 285	0,20
	[2010]	104 454	97 217	1,07	3 503	15 157	0,23
	[2011]	104 454	n.a.	n.a.	3 683	n.a.	n.a.
	[2012]	104 454	n.a.	n.a.	4 790	n.a.	n.a.

Sources: National Accounts Hungary 2006-2007; HCSO 2008-2010



4.1.3 Simulated social contributions

Both of the employee and the employer social insurance contributors are well represented in EUROMOD. The revenue from the employees are somewhat overestimated in 2009, whilst the employer revenue is underestimated in 2009 and 2010. One of the reasons of this deviation is the double activity economic status. In Hungary there are big differences between persons who have only one economic status (e.g. employee, self-employment) and workers who have more than one status (e.g. pensioner and employee; student and employee, etc.) regarding the social contributions paid. Not all the interviewees mentioned this double status, this causes a relative big difference from the external statistics. The other reason is that the Hungarian official statistics do not collect information that is directly comparable to the number of payers and amounts produced by EUROMOD for self-employment social contributions. Indeed the National Accounts calculations use different classification for self-employments social insurance contributions revenues.

Table 18. EUROMOD validation: social contributions

	Year	Contributors (person)			Revenue (mHUF)		
		EUROMOD database	External source	Ratio	EUROMOD Database	External source	Rati o
Employee Social Insurance Contributi ons	[2009]	3 908 815	3 985 514	0,98	88 563	68 638	1,29
	[2010]	3 908 815	3 985 514	0,98	86 083	80 899	1,06
	[2011]	3 908 815	n.a.	n.a.	96 821	n.a.	n.a.
	[2012]	3 908 815	n.a.	n.a.	98 151	n.a.	n.a.
Employer Social Insurance Contributi ons	[2009]	3 908 815	4 010 599	0,97	155 423	196 908	0,79
	[2010]	3 908 815	4 010 599	0,97	127 209	173 671	0,73
	[2011]	3 908 815	n.a.	n.a.	138 975	n.a.	n.a.
	[2012]	3 908 815	n.a.	n.a.	144 072	n.a.	n.a.
Self- employed Social Insurance Contributi ons	[2009]	727 626	n.a.	n.a.	33 539	n.a.	n.a.
	[2010]	717 709	n.a.	n.a.	40 506	n.a.	n.a.
	[2011]	717 709	n.a.	n.a.	35 683	n.a.	n.a.
	[2012]	851 302	n.a.	n.a.	39 786	n.a.	n.a.

Sources: National Accounts Hungary 2007-2010; HCSO 2011

Notes: *This amount is not part of the official social statistics. The coverage of the external statistic is different from what we use in the Euromod model.



4.1.4 Simulated social benefits

Table 19 to Table 23 show the child and family related benefits. These benefits are usually well estimated in the model, in particularly those cases where the regulations are clear and all the recipients get certain supports (e.g. maternity grant, family allowance). Even so there are some deviations in the child care allowance (Table 20). EUROMOD allocates this amount where a less than 3 years old child is in the family, but in reality not all these families get this benefit (i.e. it may be a problem of take up or who can apply for this benefit: for example grandparents can be entitled to this benefit if parents do not apply), and the model cannot control for these effects. This is true for the child raising support simulation too, but it does not cause huge differences from the external statistics.

The picture of the regular child protection allowance result shows a worse representation than the maternity grant or the child care allowance. This allowance is not a general allowance in the sense that it is not available to everybody, so there may be some problem of take-up that could be partly solved by calculating a take-up correction based on the observed take-up rate. Additionally, the number of recipients depends on the budget of the local governments, which adds another unknown effect. The official statistics coverage is not the same as that of EUROMOD, because this allowance has an in-kind part, and the cost of this is part of the external amount, but it is not included in EUROMOD.

- *Maternity grant*

Table 19. EUROMOD validation: Maternity grant

	Recipients (number)			Expenditure (mHUF)		
	EUROMOD Database	External source	Ratio	EUROMOD database	External source	Ratio
[2009]	76 875	95 303	0,81	411	525	0,78
[2010]	76 875	87 048	0,88	411	479	0,86
[2011]	76 875	84 396	0,91	411	463	0,89
[2012]	76 875	n.a.	n.a.	411	n.a.	n.a.

Sources: Yearbook of Welfare Statistics, HCSO, 2010

- *Child care allowance*

Table 20. EUROMOD validation: Child care allowance

	Recipients (number)			Expenditure (mHUF)		
	EUROMOD database	External source*	Ratio	EUROMOD Database	External source	Ratio
[2009]	190 883	174 797	1,09	5 440	5 340	1,02
[2010]	190 883	178 532	1,07	5 440	5 425	1,00
[2011]	190 883	169 721	1,12	5 440	5 249	1,04
[2012]	190 883	n.a.	n.a.	5 440	n.a.	n.a.

Note:* Average monthly number of recipients

Sources: Yearbook of Welfare Statistics, HCSO, 2006-2010



- *Child raising support*

Table 21. EUROMOD validation: Child raising support

	Recipients (number)			Expenditure (mHUF)		
	EUROMOD database	External source	Ratio	EUROMOD database	External source	Ratio
[2009]	64 148	40 107	1,60	1 828	1 154	1,58
[2010]	64 148	39 275	1,63	1 828	1 118	1,64
[2011]	64 148	37 829	1,70	1 828	1 097	1,67
[2012]	64 148	n.a.	n.a.	1 828	n.a.	n.a.

Sources: Yearbook of Welfare Statistics, HCSO, 2006-2008

- *Family allowance*

Table 22. EUROMOD validation: Family allowance

	Recipients (thousand person)			Expenditure (mHUF)		
	EUROMOD database	External source	Ratio	EUROMOD database	External source*	Ratio
[2009]	1 209 868	1 250 000	0,97	27 014	30 643	0,88
[2010]	1 209 868	1 224 000	0,99	27 014	29 917	0,90
	1 209 868	1 191 000	1,02	27 014	29 206	0,92
	1 209 868	n.a.	n.a.	27 014	n.a.	n.a.

Notes: *The annual expenses on family allowance are divided by 13, because the family allowance amount is a 'double benefit' in august (i.e. this is thirteenth month).

Sources: Yearbook of Welfare Statistics, HCSO, 2007-2010

- *Regular child protection allowance*

Table 23. EUROMOD validation: Regular child protection allowance

	Recipients (person)			Expenditure (mHUF)		
	EUROMOD Database	External source	Ratio	EUROMOD database	External source	Ratio
[2009]	428 051	555 022	0,77	414	3 497	0,27
[2010]	432 034	598 506	0,72 *	418	**	n.a.
[2011]	363 276	592 375	0,61	351	**	n.a.
[2012]	399 896	n.a.	n.a.	387	**	n.a.

**This amount is not part of the official social statistics

Sources: Yearbook of Welfare Statistics, HCSO, 2007-2010



- *Social assistance*

Table 24 shows the results on social assistance. All of these allowances have complicated regulations, moreover there are many missing information in this section that makes the simulation more difficult. In Hungary the assembly of the local government provides these allowances, the amount and the number of recipients depend on the budget of the local government and the number of the entitled persons.

In the case of home maintenance support the EUROMOD grants the average amount per case. Euromod overestimates the number of households receiving this benefit as well as the amount spent on it in all years considered. Although there are not available external statistics to compare to, the trend on number of households entitled/receiving this housing benefit is particularly high in 2012. This is mainly due the policy becoming more generous: the means tested income limit to qualify for this benefit has increased from 150% to 250% of minimum pension. Consequently more households (particularly pensioners') qualify. Nevertheless, these numbers seem particularly high. Possible reasons for these results could be 1) a problem of take-up, which we do not control for at the moment (we assume full take-up) or 2) a greater impact of conditions on housing characteristics. Indeed, currently we cannot control for housing size. If a high number of people who qualify by income to the home maintenance support would not qualify by housing size, the number of receivers and total expenditures on home maintenance support could partly be reduced⁷. Finally, the base of this simulation in EUROMOD is the normative support, maybe the differences between the central and the local government regulations cause this relatively worse ratio.

⁷ We will try to get some extra information on this for the following years.



Table 24. EUROMOD validation: Social assistance

	Year	Recipients (person)			Expenditure (mHUF)		
		EUROMOD database	External source	Ratio	EUROMOD database	External source	Ratio
Old age allowance	[2009]	7 139	6 049	1,18	62	161	0,39
	[2010]	6 867	5 802	1,18	65	159	0,41
	[2011]	12 560	5 907	2,13	94	159	0,59
	[2012]	14 518	n.a.	n.a.	109	n.a.	n.a.
Regular benefit	[2009]	27 041	71 807	0,38	340	1 925	0,18
	[2010]	27 041	41 968	0,64	340	961	0,35
	[2011]	27 041	50 647	0,53	340	1 318	0,26
	[2012]	27 041	n.a.	n.a.	340	n.a.	n.a.
Stand by allowance	[2009]	189 927	167 287	1,14	4 498	3 867	1,16
	[2010]	166 376	174 539	0,95	4 506	4 813	0,94
	[2011]	165 196	209 918	0,79	4 506	5 277	0,85
	[2012]	163 097	n.a.	n.a.	4 506	n.a.	n.a.
Home maintenance support	[2009]	656 615	214 550	3,06	3 596	968	3,71
	[2010]	663 704	222 671	2,98	3 637	1 028	3,62
	[2011]	575 182	262 146	2,19	3 155	990	3,19
	[2012]	2 008 056	n.a.	n.a.	10 686	n.a.	n.a.

Sources: Yearbook of Welfare Statistics, HCSO, 2007-2010

** Number of individuals.



4.2 Income distribution

All income distribution results presented here are computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions. The weights in the OECD equivalence are: first adult=1; additional people aged 14+ = 0.5; additional people aged under 14 = 0.3.

4.2.1 Poverty

Table 25 to Table 28 introduce the poverty rates, calculated with 40%, 50%, 60% and 70% of the median equivalent income. We can find higher deviation between the original SILC dataset and the EUROMOD results at 40% of the median in 2009 (for other years official statistics are not available yet), in this lower poverty rate zone a smaller differences can cause a worse ratio results. In the other results the EUROMOD well estimates the poverty rates.

Table 25. EUROMOD validation: poverty rates at different poverty lines, [2009]

percentage of individuals below:	EUROMOD	External source*	Ratio
40% of median equivalent	3,00	2	1,50
Males	3,20	2,2	1,45
Females	2,80	1,9	1,47
50% of median equivalent	7,40	6	1,23
Males	7,80	6,4	1,22
Females	7,10	5,7	1,25
60% of median equivalent	12,90	12,3	1,05
Males	13,30	12,6	1,06
Females	12,60	12	1,05
70% of median equivalent	20,40	19,80	1,03
Males	20,60	19,60	1,05
Females	20,30	19,90	1,02

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

* Sources: ‘Own calculation using by the ‘EU-SILC 2008 UDB’.



Table 26. EUROMOD validation: poverty rates at different poverty lines, [2010]

percentage of individuals below:	EUROMOD	External source*	Ratio
40% of median equivalent income	3,40		
Males	3,60		
Females	3,20		
50% of median equivalent income	7,30		
Males	7,80		
Females	6,80		
60% of median equivalent income	13,20		
Males	13,60		
Females	13,00		
70% of median equivalent income	21,10		
Males	21,10		
Females	21,00		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

* Sources: ‘Own calculation using by the ‘EU-SILC 2009 UDB’.

Table 27. EUROMOD validation: poverty rates at different poverty lines, [2011]

percentage of individuals below:	EUROMOD	External source*	Ratio
40% of median equivalent income	3,10		
Males	3,30		
Females	3,00		
50% of median equivalent income	7,40		
Males	7,60		
Females	7,20		
60% of median equivalent income	13,40		
Males	13,40		
Females	13,40		
70% of median equivalent income	21,70		
Males	20,90		
Females	22,40		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

* Sources: ‘Own calculation using by the ‘EU-SILC 2010 UDB’.



Table 28. EUROMOD validation: poverty rates at different poverty lines, [2012]

percentage of individuals below:	EUROMOD	External source*	Ratio
40% of median equivalent income	2,90		
Males	3,20		
Females	2,60		
50% of median equivalent income	6,90		
Males	7,40		
Females	6,50		
60% of median equivalent income	12,30		
Males	12,50		
Females	12,10		
70% of median equivalent income	20,20		
Males	20,30		
Females	20,00		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

* Sources: EU-SILC 2011 not yet available.



Table 28 presents the poverty rate at 60% of the minimum income by age groups. The various panels in the table show worst estimates for those over 65 years old. The lower poverty rate simulated by EUROMOD is probably a combination of our assumption of full take-up and a high overestimation of home maintenance support (see above for further explanations).

Table 29. EUROMOD validation: poverty rates (median 60%) by age groups, [2007-2010]

[2009] Percentage of individuals below:	EUROMOD	External source	Ratio
Population	12,90	12,28	1,05
0-17	21,50	20,18	1,07
18-24	16,40	15,89	1,03
25-49	14,00	13,17	1,06
50-64	10,30	9,59	1,07
65-	3,40	4,11	0,83
[2010] Percentage of individuals below:	EUROMOD	External source	Ratio
Population	13,20		
0-17	21,20		
18-24	16,60		
25-49	14,20		
50-64	11,20		
65-	3,60		
[2011] Percentage of individuals below:	EUROMOD	External source	Ratio
Population	13,40		
0-17	19,90		
18-24	15,80		
25-49	12,70		
50-64	11,70		
65-	8,30		
[2012] Percentage of individuals below:	EUROMOD	External source	Ratio
Population	12,30		
0-17	18,50		
18-24	15,30		
25-49	12,40		
50-64	10,80		
65-	4,80		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

Sources: ‘External statistics: Own calculation using by the ‘EU-SILC 2008; 2009; 2010 UDB’. ‘EU-SILC 2011 UDB’ not yet available.



4.2.2 Income inequality

Table 29 to Table 32 present two main inequality indicators (Gini, S80/S20) and the income distribution for each year analysed in this report. EUROMOD's indicators do not differ significantly from the original EU-SILC results.

Table 30. EUROMOD validation: income inequality, [2009]

Percentage of individuals below:	EUROMOD	External source	Ratio
Gini Coefficient	0,241	0,255	0,94
Income quintile ratio (S80/S20)		3,49	
Average income per decile			
1	40397	45053	0,90
2	58321	63187	0,92
3	69886	75147	0,93
4	79020	84848	0,93
5	88511	94198	0,94
6	98069	104208	0,94
7	108178	114922	0,94
8	121365	129412	0,94
9	140581	151601	0,93
10	201073	226645	0,89
Mean income (equivalised)	100530	108904	0,92
Mean income (unequivalised)	67565	72875	0,93
Median income (equivalised)	93215	99323	0,94
Median income (uequivalised)	61582	65706	0,94

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the "modified OECD" equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

Sources: 'Own calculation using by the 'EU-SILC 2010 UDB'. In the case of the gini coefficient and the S80/S20 indicators: Eurostat Statistics database: <http://epp.eurostat.ec.europa.eu/>



Table 31. EUROMOD validation: income inequality, [2010]

percentage of individuals below:	EUROMOD	External source	Ratio
Gini Coefficient	0,248		
Income quintile ratio (S80/S20)			
Average income per decile			
1	39468		
2	58119		
3	69384		
4	78809		
5	88568		
6	98134		
7	108515		
8	122821		
9	143031		
10	206684		
Mean income (equivalised)	101340		
Mean income (unequivalised)	67977		
Median income (equivalised)	93275		
Median income (uequivalised)	61894		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

Sources: EU-SILC 2011 not yet available.

Table 32. EUROMOD validation: income inequality [2011]

percentage of individuals below:	EUROMOD	External source*	Ratio
Gini Coefficient	0,271		
Income quintile ratio (S80/S20)			
Average income per decile			
1	41138		
2	59212		
3	70642		
4	80856		
5	90840		
6	101922		
7	114569		
8	131367		
9	156796		
10	239385		
Mean income (equivalised)	108663		
Mean income (unequivalised)	72005		
Median income (equivalised)	95999		
Median income (uequivalised)	64487		

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

Sources: EU-SILC 2012 not yet available.



Table 33. EUROMOD validation: income inequality [2012]

percentage of individuals below:	EUROMOD	External source*	Ratio
Gini Coefficient	0,261	n.a.	n.a.
Income quintile ratio (S80/S20)		n.a.	n.a.
Average income per decile			
1	39662	n.a.	n.a.
2	58618	n.a.	n.a.
3	69482	n.a.	n.a.
4	78776	n.a.	n.a.
5	87941	n.a.	n.a.
6	97366	n.a.	n.a.
7	108437	n.a.	n.a.
8	123417	n.a.	n.a.
9	147467	n.a.	n.a.
10	224502	n.a.	n.a.
Mean income (equivalised)	103543	n.a.	n.a.
Mean income (unequivalised)	68698	n.a.	n.a.
Median income (equivalised)	92403	n.a.	n.a.
Median income (uequivalised)	62671	n.a.	n.a.

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

* Sources: EU-SILC 2013 not yet available.

4.3 Summary of “health warnings”

- The sample size is relatively big but in the case of very detailed analysis the number of cases may be little.
- Please take into consideration the underestimation of the self-employment incomes.
- The tax evasions and the non-take up problem are present but we don’t know the exact measure of this.
- The original dataset contains too few people with *low* and *high* earnings; most likely the model underestimates income inequality.

5. REFERENCES

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- *Sources for tax-benefit descriptions/rules*

General sources for tax-benefit descriptions/rules/regulations:

<http://www.magyarország.hu>