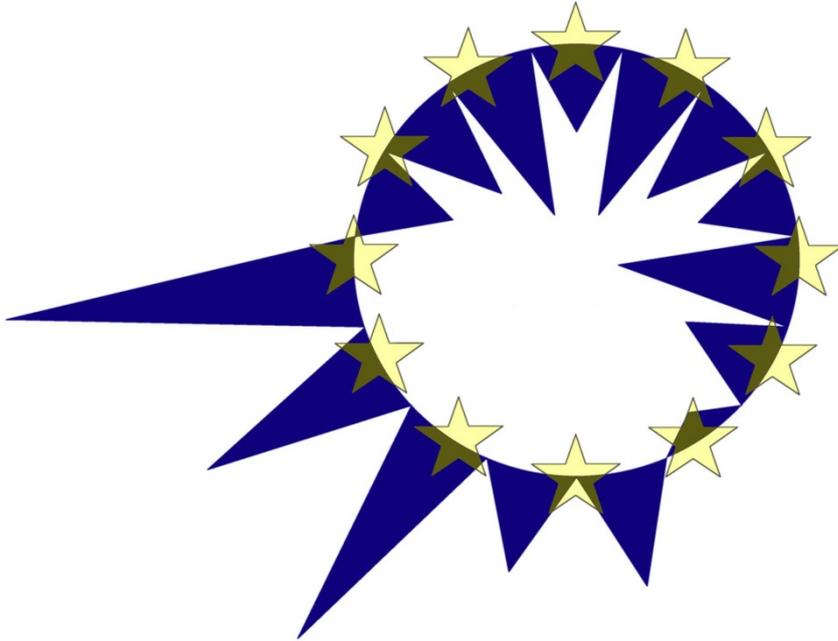


EUROMOD

COUNTRY REPORT



POLAND (2007-2012)

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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 Poland. 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>

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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.

¹ This Country Report is an updated version of earlier Country Reports for Poland (for years 2006 and 2007-10): Levy, Morawski, Myck, (2012) and Kundera, Levy, Morawski, Myck (2012).



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1. BASIC INFORMATION

Basic information about tax and benefit system is presented below.

1.1 Basic figures

Poland is characterized by a large (about 38 millions) and relatively young population with one of the lower life expectancy levels in Europe.

Table 1. Basic figures

	Pop. (m.)	Pop. < 18 (%) ^[1]	pop. ≥ 65 (%)	Life expect. (years)	Fertility rate	Unemp Rate (%)	GDP per head (PPS) ^[2]	Currency Name	Exch. rate ^[3]
2005	38.2	24.1	13.2	75.0	1.2	17.8%	51.1	PLN	3.2348
2006	38.1	23.4	13.4	75.3	1.3	13.9%	51.9	PLN	3.1025
2007	38.1	22.8	13.4	75.4	1.3	9.6%	54.4	PLN	2.7667
2008	38.1	22.4	13.5	75.6	1.4	7.1%	56.4	PLN	2.4092
2009	38.1	22.2	13.5	75.9	1.4	8.2%	60.4	PLN	3.1162
2010	38.2	21.8	13.5	76.4	1.4	9.6%	62.4	PLN	3.0157
2011	38.2	21.4	13.6	76.9	1.3	9.7%	64.5	PLN	2.9634

^[1] Proportion of population aged 0-19 years; ^[2] Percentage of EU27 total (based on PPS per inhabitant); ^[3] Dollar exchange rate – yearly average rate

Source: Eurostat (2012) <http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database>

National Bank of Poland (2012) http://www.nbp.pl/home.aspx?f=kursy/kursy_archiwum.html

1.2 The tax-benefit system

With large share of government expenditure social protection expenditure is on the average EU level. Transfers related to old-age and disability, i.e. directed at older sections of the population constitute the largest share in total social expenditure.

Table 2. Tax-benefit system and government budget

	Total general government revenue ^[1] % of GDP	Total tax receipts ^[2] % of GDP	Total general government expenditure ^[1] % of GDP	Social protection ^[3] % of GDP
2003	38.5	32.2	44.7	20.7
2004	37.2	31.5	42.6	19.7
2005	39.4	32.8	43.4	19.2
2006	40.2	33.8	43.9	19.0
2007	40.3	34.8	42.2	17.8
2008	39.5	34.3	43.2	18.2
2009	37.2	--	44.6	18.8
2010	37.6	--	45.4	18.6
2011	38.5	--	43.6	--

Source: ^[1] Eurostat (2012); ^[2] OECD Factbook 2011; ^[3] EUROSTAT (online data code: tps00098, Expenditure on social protection).

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

OECD Factbook 2011: <http://dx.doi.org/10.1787/888932507521>



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

	Sickness/ health care	Disability	Old age	Survivors	Family/ children	Unemployment	Housing	Social exclusion
2003	4.1	2.5	9.7	2.3	0.9	0.8	0.2	0.2
2004	3.8	2.3	9.5	2.2	0.9	0.7	0.1	0.2
2005	3.8	2.0	9.3	2.1	0.8	0.6	0.1	0.4
2006	3.8	1.9	9.4	2.1	0.8	0.6	0.1	0.2
2007	3.9	1.6	8.8	2.0	0.8	0.4	0.1	0.2
2008	4.5	1.5	9.0	2.0	0.7	0.4	0.1	0.2
2009	4.7	1.3	9.4	2.0	0.8	0.4	0.1	0.2
2010	4.5	1.4	9.3	2.0	0.8	0.4	0.1	0.1

Source: Eurostat (2012) [online data code : spr_exp_sum]

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

Table 4. Taxation (amount of total tax receipts in PLN)

	Personal income tax	Corporate income tax	Taxes on goods and services (VAT)	Other taxes
2004	36,667,427	18,030,232	62,536,048	41,025,698
2005	42,185,643	20,789,226	75,401,030	41,543,713
2006	48,690,547	25,342,490	84,439,484	44,359,614
2007	60,959,164	32,165,456	96,349,847	51,884,222
2008	67,193,526	34,635,014	101,782,739	53,627,213
2009	62,740,785	30,774,318	99,454,721	57,131,286
2010	62,487,000	27,891,932	107,879,702	58,973,584
2011	67,505,115	31,739,301	120,831,920	61,365,982

Source: Ministry of Finance (2012), *Wpływy budżetowe 2005 (2006, 2007, 2008, 2009, 2010, 2011) rok* [State Budget Revenue for 2005 (2006, 2007, 2008, 2009, 2010, 2011)]

Table 5. Taxation (as % of total tax receipts)

	Personal income tax ^[1]	Corporate income tax ^[1]	Taxes on goods and services (VAT) ^[1]	Other taxes ^[1]	Total tax receipts	Social security contributions ^[2]	
						Employees	Employers
2005	23.5	11.6	41.9	23.1	100	22.3	28.0
2006	24.0	12.5	41.6	21.9	100	22.0	26.7
2007	25.3	13.3	39.9	21.5	100	22.1	27.0
2008	26.1	13.5	39.6	20.9	100	--	--
2009	25.1	12.3	39.8	22.8	100	--	--
2010	24.3	10.8	41.9	22.9	100	--	--
2011	24.0	11.3	42.9	21.8	100	--	--

Source: [1] Ministry of Finance (2012), *Wpływy budżetowe 2005 (2006, 2007, 2008, 2009, 2010, 2011) rok* [State Budget Revenue for 2005 (2006, 2007, 2008, 2009, 2010, 2011)] [2] Eurostat (2012).

Note. Own calculations based on Ministry of Finance data present shares of a given category in total tax receipts without social security contributions (dochody podatkowe bez składek z tytułu ubezpieczeń społecznych).



1.2.1 Basic information about the tax-benefit system

- The tax and benefit system in Poland is a unified national system. Local governments have some discretion over agricultural tax, real estate tax, tax on means of transport and some other charges like duty on possession of dogs which is levied on the dog owners.
- The fiscal year runs from 1st of January to 31st of December. The family benefits allowance period runs from 1st September to 31st August of the following calendar year for which the right to family benefits is granted.
- The state pension age in years 2005-2012 was 65 years for men, and 60 years for women. Beginning with January 2013 the state pension age will start to grow incrementally to reach 67 for men (born after 30.09.1953) and women (born after 30.09.1973).
- Education in Poland is compulsory until the age of 18.
- Dependent children are defined as someone who is neither a parent nor married and:
 - a. aged 18 or less,
 - b. aged 25 or less and in full time education and living with his/her parents regardless of whether he/she is working or not;
 - c. aged 25 or less and in part time education and neither working nor registered as unemployed, and living with his or her parents.
- There is no definition of a single parent (lone parent) in the law.
- Spouses may tax their income jointly. They may pool their incomes and divide by two to determine the appropriate tax brackets. After the tax is calculated it is then multiplied by two. The same system applies to lone parents who can also take advantage of joint taxation.
- Capital income is taxed at a flat rate of 19%. Farmers pay agricultural tax that is based on farm size and quality of the land area. Self employment income may be taxed in one of three different ways, with more than 70% of the self-employed paying income tax according to the general progressive system.
- All individuals who earn an income need to file a tax return unless the only source of income is from a pension or if the individual is a farmer without non-farm work income.
- Social assistance benefit amounts are indexed to account for inflation. Starting from 2008 the indexation was carried out once a year, from 1 March. The indexation does not apply to income tax parameters or family benefits.
- The means-tested benefit system determines entitlement using two values. For family benefits, the previous year's taxable income of the benefit unit is considered while for housing benefit, the value of the previous 3 months income of the benefit unit is considered. Eligibility for social assistance is determined based on both income and wealth evaluation (the latter is carried out by representatives from the local social assistance office).

1.3 Social Benefits

Social security benefits in Poland can be divided into two main categories: *contributory* benefits and *non-contributory* benefits. Contributory benefits are earnings replacement benefits and pensions to which an individual is entitled if he/she meets certain conditions regarding work and/or health history. Non-contributory benefits may be means tested or universal and may also depend on contingencies such as disability or parenthood but without the requirement of previous contributions.



1.3.1 National Insurance Benefits (contributory)

Old-age pension (*świadczenie emerytalne*): contributory benefit to workers who have attained the statutory retirement age, 65 (60) years for men (women); conditional on at least 25 (20) year contributory and non-contributory period. Pension amount varies with amount and years of contribution and is guaranteed not to be below a specified minimum level.

Earlier old-age pension (*świadczenie emerytalne*): men (women) who have remained in employment relationship may acquire the full old-age pension in the age of 60 (55) years if they can prove at least 35 (30) year long contributory and non-contributory period or 25 (20) year contributory and non-contributory period and have been recognised as completely incapable of work.

Bridging old-age pension (*emerytura pomostowa*): the bridging pensions system that came into force from 2009 assumes that people working in special conditions have the right to receive a bridging pension up to five years before reaching retirement age.

Ex-officio old-age pension (*emerytura z urzędu*): was introduced in 1.01.2006. The ex-officio pension is granted to a person born before 1.01.1949 who is a recipient of the disability pension, irrespective of whether this person meets the condition of the 25 (20) year contributory and non-contributory period.

Nursing supplement (*dodatek pielęgnacyjny*): is paid to old-age pensioners who are aged 75 and above and to disability pensioners with severe disability.

Pre-retirement Benefits and Allowances (*zasilek przedemerytalny lub świadczenie przedemerytalne*): are financed by the Labour Fund and payable to individuals after at least 6 months of receiving unemployment benefit who have the unemployed status and satisfy specific requirements concerning age and length of employment.

Disability Pension (*renta z tytułu niezdolności do pracy*): contributory benefit granted following a work accident or an occupational disease irrespective of duration of accident insurance period and date of incapacitation.

Survivor pension (*renta rodzinna*): contributory benefit paid to eligible survivor(s) of a deceased person if the deceased met the contributory conditions.

Maternity Benefit (*zasilek macierzyński*): is granted to an insured woman who within the period of sickness insurance or within the period of child care leave: gave birth to a child, took in a child under 1 year of age and applied for legal adoption or took in a child under 1 year of age to be raised in a foster family. The right to the maternity benefit is also awarded to an insured man who took a child to be brought up, under the similar rules, as those applied to insured women. Maternity Benefit is payable at the rate of 100% of the remuneration that constitutes the basis of contribution rates for the allowance. From 2005 until 2008 the period of payment of the maternity benefit depended on the type of birth (first or subsequent birth) and also on the number of children born in one confinement. Since 1 January 2009 the period of payment of the maternity benefit has been extended and depends only on the number of children born in one confinement. It is paid during the period of maternity leave for: 20 weeks in the case of giving a single birth, 31 weeks if two children are born in one confinement, 33 weeks if three children are born in one confinement, 35 weeks if four children are born in one confinement and 37 if five and more children are born in one confinement.



Table 6. Period of payment of the maternity allowance - under old rules

	2005	2006	2007	2008
first birth	16	18	18	18
each subsequent birth	20	20	20	20
birth of more than one children in one confinement	26	28	28	28

Note: values given in weeks.

Source: Ministry of Labour and Social Policy (2012)

Table 7. Period of payment of the maternity allowance - under new rules (introduced in January 2009)

	2009	2010	2011	2012
single birth	20	20	20	20
two children are born in one confinement	31	31	31	31
three children are born in one confinement	33	33	33	33
four children are born in one confinement	35	35	35	35
five and more children are born in one confinement	37	37	37	37

Note: values given in weeks.

Source: Ministry of Labour and Social Policy (2012)

Farmer's Maternity Benefit (*zasilek macierzyński dla rolników*): in the farmers system, a maternity benefit is a lump-sum benefit and it is only granted for a maximum period of eight weeks. Payment rates of farmer's Maternity Benefit correspond to those of sickness benefits.

Table 8. Farmers maternity allowance

	2006	2007	2008	2009	2010	2011	2012
single birth	2,091.11	2,091.11	2,227.02	2,545.16	2,825.16	2,912.72	3,196.72

Note: values in PLN

Source: Agricultural Social Insurance Fund (2012)

Sickness Allowances (*zasilek chorobowy*): payments for periods of incapacity for work caused by an illness, accident or isolation due to an infectious disease. Sickness allowances are payable to employees starting from the 34th day of incapacity for work (continuous or otherwise) in a calendar year or from the 15th day (respectively) if the employee has reached age of 50 years. For the first 33 (14) days of incapacitation, an employee retains the right to remuneration financed from the employer's resources or, in certain circumstances, from the Guaranteed Employee Benefit Fund. If the incapacity for work was caused by accident at work or occupational disease, Sickness Allowance is payable from the first day of incapacity for work. Sickness Allowance is payable for the period in which a person is unable to work, however this period cannot exceed 182 days; and in case of incapacity for work caused by tuberculosis cannot exceed 270 days. From 1 January 2009 insured women have the right to the allowance (for a period not exceeding 270 days) if incapacity for work occurred during the period of pregnancy.

Health Rehabilitation Benefits (*świadczenie rehabilitacyjne*): granted to an insured person who has exhausted his or her entitlement to Sickness Allowance, but there is a good prognosis as to the restoration of his or her earning capacity. Rehabilitation benefits are disbursed in the form of monthly



payments for a period not exceeding 12 months. A decision to grant health rehabilitation benefit is made by a doctor that is licensed to issue declarations of work capacity.

Compensatory Allowances (*zasilek wyrównawczy*): granted to employees whose remuneration has been reduced as a result of occupational rehabilitation undertaken in order to adapt or retrain for a specific job. Only insured employees are entitled to the Compensatory Allowance. Compensatory Allowance is financed by the Social Insurance Institution (ZUS) and can be paid directly by ZUS or through the employer.

Care Allowances (*zasilek opiekuńczy*): payable to persons who are unable to work, because they have to take care of a sick child of up to 14 years of age or, in some cases, of a healthy child of up to 8 years of age, or another sick member of the family. These allowances are only available to persons who are subject to mandatory sickness insurance. The allowance is payable at the rate of 80% of the basis of contribution rates. In case of child care older than 14 years or in the event of taking care of other sick members of the family, the allowance is payable during a period of release from work, however it cannot be longer than 14 days per year. The total payment period of care allowance in respect of care of children and other family members may not exceed 60 days per year.

Funeral Grant (*zasilek pogrzebowy*): is aimed at covering costs of funeral of insured persons, pensioners, retirees or recipients of pre-retirement allowances or benefits and members of their families. The Funeral Grant is payable at a rate of 200% of average monthly earning being in force on the day of death of a given person.

Unemployment Benefits (*zasilek dla bezrobotnych*): is granted to unemployed persons who have lost a job and met certain conditions over at least 365 days in the period of 18 months before the day of registration in the labour office. The conditions include contributory work requirements and active job search.

1.3.2 Family Benefits and safety net benefits (non-contributory)

Family Benefits:

Family Allowance (*zasilek rodzinny*): a non-contributory means tested yearly grant to families that have dependent children. The Family Allowance is paid until the child finishes education (usually to the age of 18). If the child continues education at school or university the allowance is paid until age of 24. Currently in addition to the family allowance, the following supplements may also be granted:

a) Supplement for child birth (*dodatek z tytułu urodzenia dziecka*): a one time lump sum grant paid upon the birth of a child. Family benefits are not taxable.

b) Parental Leave Supplement (*dodatek z tytułu opieki nad dzieckiem w okresie korzystania z urlopu wychowawczego*): a supplement granted to a parent, factual or statutory guardian of a child, who takes parental leave to take care of at least one child aged 6 years or less. Supplement is payable within period of 24, 36 or 72 months at a monthly rate.

c) Supplement for lone parents who do not receive alimony payments (*dodatek z tytułu samotnego wychowywania dziecka i na które nie ma możliwości zasądzenia alimentów*): supplement paid to a lone parent who does not get alimony payments. The supplement has been paid since 01.09.2005

d) Supplement for Education and Rehabilitation of a Disabled Child Supplement (*dodatek z tytułu kształcenia i rehabilitacji dziecka niepełnosprawnego*): is granted to the parent or guardian of a disabled child until the child attains the age of 16 years or 24 years if the disability is severe or moderate.



e) Supplement for bringing up a child in a multi-child family (*dodatek z tytułu wychowywania dziecka w rodzinie wielodzietnej*): the supplement is payable for the third and each subsequent child entitled to the family allowance.

f) Supplement for starting the school year (*dodatek z tytułu rozpoczęcia roku szkolnego*): the supplement is payable for each child in primary and secondary school;

g) Supplement for starting school outside the place of residence (*dodatek z tytułu podjęcia nauki w szkole poza miejscem zamieszkania*): the supplement is payable at monthly rate for 10 months (from September to June) if the child takes up education in a school outside of the place of residence.

Supplements that used to be granted in addition to Family Allowance but no longer exist:

h) Supplement for lone parents (*dodatek z tytułu samotnego wychowywania dziecka*): abolished on 31.08.2005; the supplement used to be paid to each lone parent eligible to the Family Allowance. In the case of disabled child an amount of supplement is increased. **Replaced by the supplement for lone parents who do not receive alimony payments.**

i) Supplement for lone parents who lost the right to unemployment benefit (*dodatek z tytułu samotnego wychowywania dziecka i utraty prawa do zasiłku dla bezrobotnych*): abolished on 31.12.2005, those eligible to it on 31.08.2005 maintain the right to receive it for up to three years; a supplement for bringing up a child alone and for the loss of the right to unemployment benefit due to the expiry of the statutory period of eligibility. Payable for a maximum period of 3 years until the child reaches the age of 7 years. The supplement is paid only to persons who obtained the grant before 1st September 2005 after which it was discontinued.

Further components of Family Benefits include:

Nursing Benefit (*zasilek pielęgnacyjny*): a benefit granted to a handicapped child, a handicapped person over 16 years of age who possesses a medical certificate confirming severe disability, or to a person who is over 75 years old and is not eligible to the nursing supplement. The benefit may also be granted to a person older than 16 years of age with a medical certificate of moderate degree of disability if the disability occurred before the person reached the age of 21 of age. The benefit is not granted to a person who is staying at an institution providing full time care if the services provided by the institution are financed by the state or the National Health Fund.

Nursing Allowance (*świadczenie pielęgnacyjne*): a benefit granted to a parent, a factual or statutory guardian, who resigns from employment or other paid job in order to take care of a child possessing a certificate confirming his/her disability. It used to be a means tested benefit but since 1.01.2010 it has become a universal benefit.

Alimony support:

Alimony Advance (*zaliczka alimentacyjna*): a payment made to lone parents for whom the court adjudicated the alimony, the execution of which was ineffective. The alimony advance was exempted from personal income tax and was not subject to an administrative and civil law execution. Alimony Advance has been paid since 1 September 2005 until 1 September 2008. From October 2008 it was replaced by grants from the Alimony Fund.

Grant from Alimony Fund (*świadczenie z Funduszu Alimentacyjnego*): is paid in situations in which the court was unable to obtain alimony from the absent parent. The Alimony Fund was closed down on 1st May 2004 and brought back in October 2008.

Housing support:



Housing benefit (*dodatek mieszkaniowy*): alongside social assistance and family allowance it is the main element of the system of public support for the poor in Poland. It is a means tested non-contributory benefit granted to families based on the size of their home and number of people in the household. The local government has some discretion over classification of housing costs for the purpose of determining the eligibility levels.

Social Assistance:

Social Pension (*renta socjalna*): provides compensation to individuals who are completely incapable to work due to an impairment of bodily functions which occurred before attaining the age of 18, or before attaining the age of 25, if the person concerned was still in education, e.g. university or other graduate and post-graduate studies.

Social Assistance (*pomoc społeczna*): this is the main social assistance scheme in Poland. It is a non-contributory benefit for households that have insufficient resources while also meeting some specific social criteria. It is intended to benefit orphans, the disabled, unemployed, homeless, the chronically sick, pregnant women and those generally in poverty. Rules and general guidelines are set at the national level but benefit amounts are partly subject to the discretion of the local SA office and resources. The benefit is non-taxable and may be constitutes the 'safety net'. There are three main elements of the Social Assistance system - Permanent Compensation Benefit, Temporary Social Benefit and Special Purpose Benefit in case of special circumstances. The Social Assistance Benefits can also be divided into two groups: mandatory (obligatory) and non-mandatory (facultative) benefits.

- a) **Permanent Compensation Benefit** (*zasilek stały*): is an obligatory allowance granted to a person who is unable to work due to disability or age, and who does not qualify for social insurance payments or invalidity pension.
- b) **Temporary Social Assistance Benefit** (*zasilek okresowy*): a grant made to a household that is experiencing financial problems caused by unemployment, prolonged illnesses(s), or disability and that have incomes lower than the Social Assistance threshold. The maximum amount of Temporary Social Allowance is determined as the difference between the income criterion and income before receipt of TSA.
- c) **Special Circumstances Benefit** (*zasilek celowy*): is a facultative allowance paid in case of unforeseen events like natural disasters;

Employers' sickness benefit:

Sickness benefit (*zasilek chorobowy*) is payable to employees by the employer for the first 33 days of their sickness period.

1.3.3 Scope and scale of social benefits

In 2010 the spendings on old-age pensions remained the most significant among expenditures on social benefits in Poland. They were paid to 16.7% of population and constituted 58.4% of total social benefit expenditures. Sickness and disability pensions accounted for 16.1% of social benefit expenditure. Social spending directed to families are much less important in the Polish tax-benefit system. Family and children oriented social protection expenditures accounted for 7.7% while social assistance in cash for less than 1% of total social benefit expenditure.



Table 9. Social benefits: recipients (thousands)

	Units	2006	2007	2008	2009	2010	2011
Old-age Pension	i	5,870.7	6,010.5	6,192.2	6,376.7	6,353	6,294
Non-agricultural system	i	4,625.0	4,801.0	5,017.0	5,239.0	5,256	5,237
Agricultural system	i	1,245.7	1,209.5	1,175.2	1,137.7	1,097	1,057
Disability Pension	i	1,889.0	1,786.6	1,674.4	1,566.5	1,500	1,438
Non-agricultural system	i	1,594.0	1,511.0	1,416.0	1,322.0	1,265	1,211
Agricultural system	i	295.0	275.6	258.4	244.5	235	227
Family Pension	i	1,390.2	1,391.2	1,389.7	1,388.3	1,391	1,392
Non-agricultural system	i	1,346.0	1,347.0	1,346.0	1,345.0	1,348	1,349
Agricultural system	i	44.2	44.2	43.7	43.3	43.0	43.0
Unemployment Benefits	i	331.2	264.3	224.9	334.1	345.7	309.0
Pre-retirement Allowance	i	243.0	193.2	122.1	66.4	73.0	87.1
Pre-retirement Benefits	i	213.3	174.6	133.7	98.6	79.1	61.8
Social Insurance Benefits							
Maternity Benefits	i	n/a	n/a	n/a	n/a	n/a	n/a
Sickness Benefits	i	n/a	n/a	n/a	n/a	n/a	n/a
Care Benefits	i	n/a	n/a	n/a	n/a	n/a	n/a
Compensatory Allowances	i	n/a	n/a	n/a	n/a	n/a	n/a
Funeral Benefits	i	366.3	370.9	368.2	372.4	368.1	364.6
Rehabilitation Benefits	i	n/a	n/a	n/a	n/a	n/a	n/a
Family Benefits							
Family Allowance		2,332.7	2,170.6	1,927.3	1,697.9	n/a	1,417.0
Supplement for Lone Parents	i	179.4	173.3	161.6	149.3	139.4	130.2
Supplement for Large Families	i	775.3	706.8	629.7	558.9	504.7	462.1
Supplement for Parental Leave	i	130.7	126.2	125.1	121.2	111.9	98.4
Supplement for Starting School	i	n/a	251.5	201.1	199.6	178.0	2,026.1
Supplement for Child Birth	i	256.0	222.5	213.5	195.4	182.5	160.9
Supplement for Education Disabled Child	i	230.0	218.5	202.9	186.3	172.9	162.0
Universal Child Birth Allowance	i	387.4	380.2	412.5	413.9	412.8	397.9
Alimony Advance	f	184.4	x	x	x	x	x
Nursing Allowance	i	71.5	70.4	69.9	67.9	108.4	168.4
Nursing Benefit	i	676.1	727.8	771.3	836.0	873.0	898.1
Nursing Supplement	i	n/a	n/a	n/a	n/a	n/a	n/a
Social Pension	i	238.4	238.2	240.5	244.4	248.2	252.0
Social Assistance							
Permanent Social Assistance	i	182.2	184.3	182.6	184.3	184.0	189.0
Temporary Social Assistance	f/h	310.0	258.0	203.0	201.0	203.0	205.0
Other Social Assistance	i	n/a	1,701.0	1,108.0	961.0	990.0	1,009.0
Housing Benefits	h	588.4	494.0	386.7	345.8	351.3	336.7

Source: Central Statistical Office (2012), *Statistical Yearbook of the Republic of Poland 2007 (2008, 2009, 2010, 2011)*; CSO (2012), *Concise Statistical Yearbook of Poland 2007 (2008, 2009, 2010, 2011, 2012)*; CSO (2012), *Gospodarka mieszkaniowa w 2006 r. (2007, 2008, 2009, 2010, 2011)*; Ministry of Labour and Social Policy (2012), *Informacja o realizacji świadczeń rodzinnych w 2006 r. (2007, 2008, 2009, 2010, 2011)*.

Comments: "i" stands for number of individuals, "f" for number of families, "h" for number of households, "x" stands for non-existing benefits, "na" – not available data (*) te numbers for permanent social assistance nad temporary social social assistance give questmations for monthly averages



Table 10. Social benefits: amounts (million PLN)

	2006	2007	2008	2009	2010	2011
Old-age Pension	88,076.80	92,836.47	104,338.85	116,776.73	123,802	128,965
Non-agricultural system	75,505.00	80,468.00	91,700.00	103,799.00	110,695	115,926
Agricultural system	12,571.80	12,368.47	12,638.85	12,977.73	13,107	13,039
Disability Pension	21,761.34	21,039.84	21,214.80	21,402.60	21,848	21,938
Non-agricultural system	19,500.00	18,908.00	19,108.00	19,290.00	19,731	19,820
Agricultural system	2,261.34	2,131.84	2,106.80	2,112.60	2,117	2,118
Family Pension	19,879.01	20,430.49	22,092.01	23,767.32	25,229	26,402
Non-agricultural system	19,448.00	19,992.00	21,627.00	23,272.00	24,705	25,858
Agricultural system	431.01	438.49	465.01	495.32	524	544
Unemployment Benefits	2,080.40	1,688.60	1,465.20	2,280.60	2,622.9	2,435.8
Pre-retirement Pensions	4,781.60	3,837.80	2,617.80	1,676.30	1,596.0	1,605.5
Pre-retirement Benefits	1,835.80	1,520.70	1,202.30	939.70	777.9	620.8
Pre-retirement Allowance	2,945.80	2,317.10	1,415.50	736.60	818.1	984.7
Maternity Benefits	1,176.30	1,481.70	1,894.40	2,505.10	3,038.2	3,115.3
Sickness Benefits	3,936.80	4,217.80	5,216.10	6,980.50	7,213.9	7,620.5
Care Benefits	222.60	278.20	369.00	464.90	489.1	543.0
Compensatory Allowances	0.90	0.70	0.80	0.60	0.80	0.5
Other Survivor Benefits (Funeral)	1,782.40	1,937.9	2,114.3	2,289.6	2,358.0	1,666.0
Rehabilitation Benefits	552.90	614.80	776.20	890.60	924.40	960.8
Family Allowance	2,806.68	3,111.62	2,746.20	2,553.17	3,090.9	2,842.9
Supplement for Lone Parents	417.16	362.93	338.34	312.65	292.0	272.8
Supplement for Large Families	552.49	678.47	604.53	536.52	484.5	443.6
Supplement for Parental Leave	614.52	589.07	573.35	561.05	517.0	456.6
Supplement for Starting School	319.08	301.78	241.33	239.56	213.5	202.6
Supplement for Child Birth	226.50	222.48	213.53	195.39	182.5	160.9
Supplement for Education of Disabled Child	182.65	201.13	186.82	171.17	159.0	148.9
Universal Child Birth Allowance	387.41	380.14	412.44	413.83	412.8	398.0
Alimony Advance	822.60	x	x	x	x	x
Nursing Allowance	357.38	349.44	336.49	349.46	667.1	1,030.8
Nursing Benefit	1,209.47	1,336.22	1,416.10	1,534.75	1,602.8	1,648.9
Nursing Supplement	n/a	n/a	n/a	n/a	n/a	n/a
Social Pension	1,368	1,443	1,527	1,643	1,747.0	1,830.1
Social Assistance	2,370.0	1,881.0	2,021.0	2,043.0	2,074.0	n/a
Permanent Social Assistance	602.83	605.13	622.21	622.2	648.3	n/a
Temporary Social Assistance	612.0	541.0	648.0	645.4	636.9	n/a
Other Social Assistance	1,197.0	737.0	768.0	775.7	789.7	n/a
Housing Benefits	1,168.12	1,047.26	818.34	806.99	865.75	884.33

Source: Central Statistical Office (2012), *Statistical Yearbook of the Republic of Poland 2007 (2008, 2009, 2010, 2011)*; CSO (2012), *Concise Statistical Yearbook of Poland 2007 (2008, 2009, 2010, 2011, 2012)*; CSO (2012), *Gospodarka mieszkaniowa w 2006 r. (2007, 2008, 2009, 2010, 2011)*; Ministry of Labour and Social Policy (2012), *Informacja o realizacji świadczeń rodzinnych w 2006 r. (2007, 2008, 2009, 2010, 2011)*.

Comments: , “x” stands for non-existing benefits, “na” – not available data



1.4 Social Security Contributions

There are separate social security systems for non-farmers and farmers. Social security contributions in the non-farm system are used to finance current *contributory benefits* as well as other *non-contributory benefits*. The contributions are divided into the employee and the employer parts and are used to finance: old-age pension insurance, disability and survivors' pension insurance, sickness and maternity insurance, work and occupational illness insurance and unemployment benefits. Most of these contributions fall within the auspices of Social Insurance Fund (Fundusz Ubezpieczeń Społecznych - FUS) that is part of Social Insurance Institution (Zakład Ubezpieczeń Społecznych - ZUS).

Farmers contribute to retirement and disability pension insurance and to accident, illness, maternity insurance and health insurance. Contributions are paid to Farmers Social Insurance Institution (Kasa Rolnicznego Ubezpieczenia Społecznego – KRUS).

Old-Age Pension Insurance (*składka emerytalna*): this contribution is divided equally into the employers' and employees' parts. The self-employed also contribute while in the case of an unemployed person who receives unemployment benefits, contributions are retained from the benefits. Contributed amounts are determined on the basis of gross income from work for employees with permanent job contracts. For employees with temporary job contracts, the obligation to make this contribution may depend on other factors.

Disability Insurance (*składka rentowa*): up until July 2007 this contribution was made in equal parts by both employers and employees. In July 2007 and January 2008 these contributions have been reformed and the employee and employer rates currently differ. Contributions are also withheld from unemployment benefits. Disability insurance guarantees benefits in case of loss of income due to disability.

Sickness Insurance (*składka chorobowa*): contribution made by employees to finance contributory sickness benefits. The self-employed may contribute voluntarily. Obligatory sickness insurance gives right to receive insurance and sickness allowance after 30 days of continuous sickness insurance.

Work Accident Insurance (*składka wypadkowa*): contribution made by employers on the basis of the degree of accident risk faced by employees.

Labour Fund (*Fundusz Pracy*): contributions made by employers to finance unemployment benefits, pre-retirement allowances and vocational activation programmes for people looking for work and/or people threatened by job loss.

Health Insurance (*powszechne ubezpieczenie zdrowotne*): contributions made to finance benefits that cover preventive, diagnostic, therapeutical and rehabilitation costs. Practically all social groups are covered by obligatory health insurance. Health Insurance gives the right to medical care which ensures health protection, disease and contusions prevention, early detection of illnesses as well as preventing disability it.

Farmer's old-age and disability Insurance (*składka emerytalno-rentowa rolników*): contribution made by *farmers* in each quarter of the year, at a rate of 30% of the basic monthly old age pension.

Farmer's accident, sickness and maternity Insurance (*składka na ubezpieczenie wypadkowe, chorobowe i macierzyńskie*): contribution made by farmers at a quarterly rate fixed by the *Farmers' Social Insurance Council* towards expenditures associated with accident, sickness and maternity benefits and prevention and rehabilitation costs.

Farmer's health insurance (*składka na ubezpieczenie zdrowotne rolników*): remains one of changes introduced in Polish social security system in January 2012, since then farmers are obliged to pay health insurance contributions that are deducted quarterly and calculated on monthly amount basis.



1.5 Taxes

The Polish tax system distinguishes 11 types of taxes (8 direct taxes and 3 indirect taxes). These include personal income tax, corporate income tax, gambling tax and real estate tax amongst others.

Personal Income Tax (*podatek dochodowy od osób fizycznych*): from January 2009 it is imposed on individual incomes at a progressive rates of 18% and 32% (prior to this a 3 rate level was in operation: 19, 30 and 40%). A couple or a single parent may file taxes jointly, provided that for the whole tax year they did not earn income subjected to flat-rate taxation (an option available to the self-employed). A single parent or a couple making a joint tax declaration are allowed to set half of their taxable income against the tax schedule and then multiply the resulting tax due by two. Personal Income Tax however, does not apply to agricultural and self employment incomes. Besides that, income from some other sources such as investments, incomes from property rent, interests, dividends or capital gains is taxed separately on a lump-sum basis.

Agricultural Tax (*podatek rolny*): is levied on ownership, co-ownership, possession and co-possession of agricultural arable lands or woods. Lands on which the agricultural tax is imposed are classified in the Register of Lands and Buildings. The tax base differs depending on whether land belongs to a farm or not. In case of farm land it is the number of *conversion hectares* (calculated on the basis of actual area, kind and quality of land and location in one of four tax zones, set depending on economic and climatic conditions of agricultural production). For other land it is the number of hectares.

Real Estate Tax (*podatek od nieruchomości*): is imposed on ownership, co-ownership, possession and co-possession of land, buildings, building structures and construction devices. Agricultural and forest lands do not fall within the scope of taxation. The tax base differs depending on the kind of real estate. Rates of Real Estate Tax are set by the appropriate community council but rates can not exceed statutory limits.

Forestry Tax (*podatek leśny*): levied on forest land classified by the Register of Land and Building as forests, except for forests up to 40 years old, forests enlisted as relics or forests used for carrying out economic activities other than those connected with forestry. The tax base is the area of woodland given in hectares.

Tax Card (*karta podatkowa*): lump-sum tax from small-scale entrepreneurial activities in craft and retail trade. The tax office (*Urząd Skarbowy*) decides which enterprise/activity qualifies to pay taxes under this rule.

Lump sum tax from registered revenues (*zryczałtowany podatek dochodowy od przychodów*): is applied to selected registered revenues and may be paid by taxpayers who in the previous year raised revenue from an economic activity at the amount not exceeding 150,000 euro (506.625,00 zł). The lump-sum tax rates differ depending on the kind of revenues received. Regardless of the revenue, the lump sum tax on registered revenue is levied on taxpayers who start carrying out a given activity in the tax year and are not taxed in the form of tax card.

Tax on Goods and Services (*podatek od dóbr i usług VAT*): is imposed on the supply of goods and services at each state of production and distribution process. Until January 2011 the basic rate was 22% and it was raised to 23%, which is applied to most goods and services. Reduced rates apply to some categories of goods with the lower rate applying particularly to unprocessed or semi processed products of agriculture, forestry, hunting and fishery. The 0% VAT rate used to a selected set of goods but it was raised to 5% in January 2011.

Gambling Tax (*podatek od gier losowych*): is levied on revenues from activities related to the establishment and performance of gambling and mutual bets. Taxable base and rates differ depending on the kind of conducted gambling activities. Rates range from a low of 2% for revenues from mutual bets on competition of animals to 45% for casino gambles and machine/video lotteries.



1.5.1 Scope and scale of taxes and social security contributions

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

Table 11. Taxes: taxpayers (thousands)

	2006	2007	2008	2009	2010	2011
Progressive income tax	22,365	22,897	23,178	23,161	23,279	23,084
Health insurance	20,005	20,617	21,121	21,298	21,379	21,083
Agricultural tax	2,034	1,998	1,962	1,926	1,891	---
Capital income tax	n/a	n/a	n/a	257	486	413

Source: Ministry of Finance (2012) *Informacja dotycząca rozliczenia podatku dochodowego od osób fizycznych za rok 2006 (2007, 2008, 2009, 2010, 2011)* [Information on personal income tax];
 Note: Approximate information for health insurance, data for agricultural tax based on approximation using agricultural census data from 2002 and 2010

Table 12. Taxes: Revenues (in millions PLN)

	2006	2007	2008	2009	2010	2011
Annual revenue						
Direct taxes	63,408.90	67,494.80	80,913.90	73,488.52	72,686.70	79,923.09
of which:						
Personal Income Tax	37,099.40	34,398.40	45,050.90	41,475.20	43,806.40	47,121.79
Agricultural Tax ^[a]	967.00	931.00	1,228.00	1,239.00	989.00	1,062.00
Corporate Income Tax	25,342.50	32,165.40	34,635.00	30,774.32	27,891.93	31,739.30
Indirect taxes	127,412.30	146,482.00	153,677.70	154,957.68	165,189.02	180,272.58
of which:						
VAT	84,439.50	96,349.80	101,782.70	99,454.72	107,879.70	120,831.92
Excise Tax	42,078.00	49,025.50	50,490.10	53,926.89	55,684.48	57,963.71
Gaming Tax	894.80	1,106.70	1,404.90	1,576.07	1,624.84	1,476.95
Other Tax Revenues	1,386.80	1,752.00	1,732.20	1,628.33	1,664.27	1,925.32
Total	203,799.20	242,289.60	258,466.40	251,340.11	258,221.22	282,504.32

Source: Ministry of Finance (2012), *Wpływy budżetowe 2006 (2007, 2008, 2009, 2010, 2011)*,
<http://www.mf.gov.pl/dokument.php?const=3&dzial=149&id=48490&typ=news>

^[a] Agricultural tax, all years: Source: CSO (2012), *Statistical Yearbook of Agriculture 2009 (2010, 2011, 2012)*;

Ministry of Finance (2012) *Informacja dotycząca rozliczenia podatku dochodowego od osób fizycznych za rok 2006 (2007, 2008, 2009, 2010, 2011)* [Information on personal income tax]



2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

In Table 135 benefits included in EUROMOD are divided into imputed ones, partially simulated, simulated and excluded ones. The lack of detailed information on contribution history is the main reason why values of some benefits are imputed from the dataset. In Table 12 taxes and social contributions are presented.

Table 13. Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in Euromod 2007-2012	Why not fully simulated ?
Old-age pension	poa00	I	No data on contribution history
Disability Pension	pdi00	I	No data on contribution history
Survivor Pension:	psu00	I	No data on contribution history
Unemployment Benefits	bun_s	PS	Eligibility and amount depend on contribution history. Simulation takes eligibility from data and amount is assumed to be the basic amount for all recipients.
Pre-retirement benefit and Pre-retirement allowance	pyr	I	No data on contribution history
Maternity benefit	bma	I	No data on contribution history
Sickness Benefit	bhl	I	No data on contribution history
Care Benefit		E	No data on contribution history
Compensatory allowances		E	No data on contribution history
Funeral Benefit	psuot	I	No data on contribution history
Rehabilitation benefits	psuot	I	No data on contribution history
Social Pension	pdinw	I	No data on disability history

... continued on next page.



Table 13 continued:

	Variable name(s)	Treatment in Euromod 2007-2012	Why not fully simulated ?
Family Allowance	bch00_s	S	
Supplement due to taking care of a child during child-care leave (parental leave allowance)	bchpl	I	No data on work history
Supplement for lone parents	bchlp_s	PS	Eligibility from data
Supplement for lone parents due to lost a right to the unemployment	bchot	I	Very small benefit, no data on work history
Supplement for child birth	bchba_s	S	
Supplement for large families	bchlg_s	S	
Supplement for starting the school year	bched_s	S	
Supplement for education outside place of living	bchot	I	No data on place of living
Supplement for education or rehabilitation of disabled child	bchdied_s	S	
Nursing Benefit	pdiuc_s	S	
Nursing Allowance	bcrchdi_s	S	
Nursing Supplement	poacm_s	S	
Housing Benefits	bho_s	S/PS	Eligibility from data or full simulation
Permanent social assistance	bsapm_s	S	
Temporary social assistance	bsatm_s	S	Eligibility is based on the wealth test
Special Circumstances social assistance	bsaot	I	

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,” S/PS” option to choose either eligibility condition based on data or fully simulated eligibility



Table 14. Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in Euromod 2007-2012	Why not fully simulated ?
Personal Income Tax	tin_s	S	
Corporate Income Tax		E	No information available
Agricultural Income Tax	tag_s	S	
Forestry Tax		E	No information available
Tax Card and lump-sum revenue		E	No information available
Gaming Tax		E	No information available
Tax on Goods and Services – VAT		E	
Excise Duty		E	
Old-age insurance		PS	Amounts contributed by the central government from benefits are not taken into account (except unemployemnt benefit)
Disability insurance		PS	Amounts contributed by the central government from benefits are not taken into account (except unemployemnt benefit)
Sickness Insurance		S	
Work Accident Insurance		S	
Fund of Guaranteed Employee Benefits		S	
Labour Fund		S	
Health Insurance		PS	Amounts contributed by the central government from benefits are not taken into account (except unemployemnt benefit)

Notes: In the model it is assumed that all income from non-agricultural self-employment activities is taxed by the Personal Income Tax with progressive tax rates.



2.2 Simulated policies and order of simulation

2.2.1 Simulated policies

Table 15. Simulated policies

Policy	Description	Years
		2006-2012
Ben_un_pl	BEN Unemployment Benefit	X
Sic_ee_pj_pl	SIC Employee (permanent and temporary contract)	X
Sic_er_pj_pl	SIC Employer (permanent and temporary contract)	X
Sic_fr_pl	SIC Farmer	X
Sic_se_pl	SIC Self-employed	X
Sic_ma_ee_pl	SIC Maternity Leave: “employee”	X
Sic_ma_er_pl	SIC Maternity Leave: “employer”	X
Sic_un_pl	SIC Unemployment benefit recipient	X
Tax_kt_pl	TAX Tax on Capital Income	X
Tax_it_tb_pl	TAX Income Tax Base	X
Tax_hl_pl	TAX Health Insurance	X
Tax_ag_pl	TAX Agricultural tax	X
Pen_ns_pl	BEN Nursing Supplement	X
Ben_na_pl	BEN Nursing Allowance	X
Ben_fa_pl	BEN Family Allowance	X
Ben_fas_pl	BEN Family Allowance Supplements	X
Ben_cb_pl	BEN Universal Child Birth Allowance	X
Ben_nb_pl	BEN Nursing Benefit	X
Ben_ho_pl	BEN Housing Benefit	X
Ben_sa_pl	BEN Social Assistance	X

2.2.2 Order of simulation

The means-tested benefits, Family Allowance with supplements, Nursing Benefits, Housing Benefits and Social Assistance all depend on net incomes after income tax due, social security contributions and health insurance contribution are deducted. They are therefore simulated after the simulation of income taxes and social security contributions.



Table 16. EUROMOD Spine: order of simulation, [2006-2012]

Policy	Description	Main output
ben_un_pl	BEN Unemployment Benefit	bun_s
sic_ee_pj_pl	SIC Employee (permanent contract)	tscee_s
sic_er_pj_pl	SIC Employer (permanent contract)	tscer_s
sic_fr_pl	SIC Farmer	tscfr_s
sic_se_pl	SIC Self-employed	tscse_s
sic_un_pl	SIC Unemployment benefit recipient	tscun_s
tax_kt_pl	TAX Tax on Capital Income	tkt_s
tax_hl_mx_pl	TAX Maximum Health Insurance Tax	thlmx_s
tax_it_tb_pl	TAX Income Tax Base	tintb_s
tax_it_it_pl	TAX Income Tax: Individual Taxation	tinit_s
tax_it_jt_pl	TAX Income Tax: Joint Taxation	tinjt_s
tax_it_pl	TAX Income Tax: Optimisation	tin_s
tax_hl_pl	TAX Health Insurance	thl_s
tax_ag_pl	TAX Agricultural tax	tag_s
ben_inc_pl	BEN Farmers imputed income	yagiv_s
pen_ns_pl	BEN Nursing Supplement	poacm_s
ben_na_pl	BEN Nursing Allowance	berchdi_s
ben_fa_pl	BEN Family Allowance	bch00_s
ben_fas_pl	BEN Family Allowance Supplements : child birth	bchba_s
ben_fas_pl	BEN Family Allowance Supplements : starting school	bchbed_s
ben_fas_pl	BEN Family Allowance Supplements : education and rehabilitation	Bchdied_s
ben_fas_pl	BEN Family Allowance Supplements : lone parent	bchlp00_s
ben_fas_pl	BEN Family Allowance Supplements : large family	bchlg_s
ben_cb_pl	BEN Child Birth Allowance	bchuc_s
ben_nb_pl	BEN Nursing Benefit	pdiuc_s
ben_ho_pl	BEN Housing Benefit	bho_s
ben_sa_pl	BEN Permanent Social Assistance	bsapm_s
ben_sa_pl	BEN Temporary Social Assistance	bsatm_s

2.3 Social benefits

2.3.1 Nursing Supplement (dodatek pielęgnacyjny)

The benefit is paid to old-age, disability or survivor pensioner who are aged 75+ or with severe disability.

Definitions: The unit of analysis is an individual. This benefit is not means-tested.

Eligibility conditions: All pensioners in age 75 and more or those with severe disability.

Income test: No income test.

Benefit amount

Table 17. Nursing Supplement

Year	2005	2006	2007	2008	2009	2010	2011	2012
Amount	144.25	144.25	153.19	153.19	163.15	173.10	186.71	195.67

Note: PLN per month

Source: Ministry of Labour and Social Policy (2012).



2.3.2 Nursing Benefit (pdiuc - zasilek pielęgnacyjny)

Definitions: The unit of analysis is an individual. If the person entitled is a child, the benefit is paid to the parent/guardian.

Eligibility: It is a universal (non-contributory) benefit for disabled children, severe disabled working-age adults, severe disabled pensioners and people aged 75 or more with no disability. It is incompatible with receiving Nursing Supplement (Section 2.3.1) – only one of these can be received at any time.

Income test: This allowance is not means-tested.

Benefit amount:

Table 18. Nursing Benefit

Year (June)	2005	2006	2007	2008	2009	2010	2011	2012
Amount	144	144	153	153	153	153	153	153

Note: PLN per month.

Source: Ministry of Labour and Social Policy (2012).

2.3.3 Family allowance (bch00_s)

Definitions: This is an income-tested child benefit that requires the presence of dependent children in the family.

Eligibility: Family allowance is granted to families with dependent children and income lower than a specified threshold. Dependent children are defined as aged up to 18 or up to 21 and in secondary school or below 24 if continues education and holds a certificate of disability.

Income test: The benefit is means-tested over the previous year using the personal income tax form. Net income (net of social security contributions, health insurance contributions and income tax payments) per capita must be below a threshold [1] that is larger [2] if there is a disable child in the family. The income test for farmers is applied on imputed income equal to the number of converted hectares times a specified amount [3].

Table 19. Family Allowance thresholds

Year (June)	2005	2006	2007	2008	2009	2010	2011	2012
Regulation period	01.06.2005	1.09.2005	1.09.2006	1.09.2007	1.09.2008	1.11.2009	1.11.2010	1.11.2011
	-	-	-	-	-	-	-	-
	31.08.2005	31.08.2006	31.08.2007	31.08.2008	31.10.2009	31.10.2010	31.10.2012	31.10.2012
[1]	504	504	504	504	504	504	504	504
[2]	583	583	583	583	583	583	583	583
[3]	90.50	135.50	153.67	158.17	185.00	171.33	159.00	189.83

Note: PLN per month.

Source: Ministry of Labour and Social Policy (2012).

Benefit amount

Until 2006 amount per child was different according to the number of children. The amount for the first and the second child [1] was lower than for the third [3] which was also lower than for the fourth and subsequent children.



Since 1st of September 2006 amount per child differs by the age of children. The lowest amount is granted for a child up to 5 years old [1*] and it is higher for children between 5 and 18 years [2*] and for those between 18 and 24 years old.

Payment period is from 1st of September till 31st of August

Table 20. Family Allowance – benefit levels

Year (June)	2005	2006	2007	2008	2009	2010	2011	2012
Regulation	01.06.2005	1.09.2005	1.09.2006	1.09.2007	1.09.2008	1.11.2009	1.11.2010	1.11.2011
period	-	-	-	-	-	-	-	-
	31.08.2005	31.08.2006	31.08.2007	31.08.2008	31.10.2009	31.10.2010	31.10.2012	31.10.2012
[1]	43	44	48	48	48	68	68	68
[2]	53	56	64	64	64	91	91	91
[3]	66	65	68	68	68	98	98	98

Note: PLN per month.

Source: Ministry of Labour and Social Policy (2012).

2.3.4 Supplements to family allowance

Supplement for child birth (bchba_s)

Definitions: Lump-sum amount for the birth or adoption of a child.

Eligibility: Child aged 0 years and eligibility to the main family allowance.

Income test: Income test the same as for the Family Allowance.

Benefit amount: see Table 21

Single payment per eligible child.

Supplement for starting school year (co_bched)

Definitions: Lump sum amount payable once a year in September, for each child in primary and secondary school (we assume here for each child in education below 16).

Eligibility: Children aged under 16 and in education.

Income test: Income test the same as for the Family Allowance.

Benefit amount: see Table 21

One payment per year per eligible child.

Supplement for education or rehabilitation of disabled child (bchdied_s)

Definitions: For families with a child below 16 or 24 if he/she is in education and with moderate or severe degree of disability.

Eligibility: Disabled child aged below 24 years.

Income test: Income test as for the Family Allowance.

Benefit amount: see Table 21



Amounts are different per disabled child aged below 5 years [1], per disabled child aged between 5 and 16 years [2] or between 17 and 24 [3].

Supplement for lone parents (bchlp00_s)

Definitions: For a lone parent taking care of a child.

Eligibility: A lone parent eligible for the Family Allowance. May not be combined with a social pension for a child.

Income test: As for the Family Allowance

Benefit amount: see Table 21

Payment per child [1] , larger if disable child [2].

Supplement for large families (bchlg_s)

Definitions: For parents with 3 or more children.

Eligibility: The third and each subsequent child entitled to the Family Allowance.

Income test: As for the Family Allowance.

Benefit amount: see Table 21

Payment per child.

Table 21. Supplements to Family Allowance

Year (June)	2005	2006	2007	2008	2009	2010	2011	2012
Child birth	500	500	1,000	1,000	1,000	1,000	1,000	1,000
Starting school year	90	90	100	100	100	100	100	100
Education and rehabilitation of a disabled child:								
[1]	50	50	60	60	60	60	60	60
[2]	70	70	80	80	80	80	80	80
[3]	70	70	80	80	80	80	80	80
Lone parents*								
[1]	170	170	170	170	170	170	170	170
[2]	250	250	250	250	250	250	250	250
For large families	--	50	80	80	80	80	80	80

Note: single payment PLN. *From 1.09.2006 benefit amount per all children must be below 340 and in case of disabled children must be below 500 PLN.

Source: Ministry of Labour and Social Policy (2012)



2.3.5 Universal Child Birth Allowance (bchuc_s)

Definitions: Lump-sum amount for the birth or adoption of a child introduced in 2006.

Eligibility: Universal – all parents of new-born children.

Income test: None.

Benefit amount: One time payment per eligible child – the benefit amount is 1000.

2.3.6 Nursing Allowance (bcrchdi_s – świadczenie pielęgnacyjne)

Definitions: Until 2010 nursing benefit was a means-tested benefit for parents voluntarily on leave to take care of a disabled child and not receiving unemployment benefit or pre-retirement pension. From 01.01.2010 the income test for the benefit no longer exists.

Eligibility: This benefit is granted to parents (single parent or in couple) voluntarily on leave, who were not receiving unemployment benefit or pre-retirement pension and took care of disabled children.

Income test: From 1.01.2010 this allowance is not means-tested.

Benefit amount

Fixed amount independently of the number of disabled children.

Table 22. Nursing Allowance

Year	2005	2006	2007	2008	2009*	2010	2011	2012
Amount	420	420	420	420	420	520	520	520

Note: PLN per month

* Until 31st of October 2009 (from November 520 PLN).

Source: Ministry of Labour and Social Policy (2012)

2.3.7 Housing benefit (bho_s)

Definitions

Family or household level benefit in order to cover housing expenditures. Expenses include rent and other housing related bills (gas, electricity, heating, water, etc.). The authorities use imputed rent and expenses in their computations of eligibility, rather than actual values provided by the household. Imputed rent corresponds cannot be greater than the maximum level of local municipal rent.

Eligibility

This is an income-tested benefit with additional restrictions flat size. The size limit for a 1 person household is 35 m². However the limit may be increased by 30% with proportional decrease in the amount of the benefit. The limits are given in the table below.

Table 23. Housing Benefit flat area limits

Number of people in household	Flat area	Extended flat area
1 person	35 m ²	+ 30% = 45,5 m ²



2 people	40 m ²	+ 30% = 52 m ²
3 people	45 m ²	+ 30% = 58,5 m ²
4 people	55 m ²	+ 30% = 71,5 m ²
5 people	65 m ²	+ 30% = 84,5 m ²
(5+n) people	65 m ² + n*5 m ²	+ 30% = 84,5 m ² + (n*30%*5) m ²

Source: *Ustawa z dn. 21 czerwca 2001 r. o dodatkach mieszkaniowych*. Dz.U. 2001 nr poz. 734.

Income test

To qualify for the housing income per capita for the last quarter must be below 150% of the Minimum Pension for a multi-person household and 175% for a one-person household. Income is gross income minus revenue costs, social security contributions, health insurance contributions and family benefits. Income tax is not deducted from the income. Social assistance is not included in the income test.

Farmers' income is computed on the basis of equivalence hectares and is augmented by the amount of family benefits.

Table 24. Minimum Pension values

Year	2005	2006	2007	2008	2009	2010	2011	2012
Amount	562.58	597.46	597.46	636.29	675.10	706.29	728.18	799.18

Note: PLN per month

Source: Social Insurance Institution (2012)

Benefit amount

The amount is equal to the difference between expenditures and a fraction of the income. The fraction of the income depends on household size and per capita income. The eligible amount is computed as:

$$HB = E - K * (Y_{HB}) \quad (4)$$

where k equal to 10%, 12%, 15% or 20%.

Table 25. Housing Benefit – housing costs parameters

	<u>One person hh</u>		<u>2-4 people in the hh</u>		<u>5+ people in the hh</u>	
Income	Below 150%	[150%,175%]	Below 100%	[100%,125%]	Below 100%	[100%,125%]
K	15%	20%	12%	15%	10%	12%

Source: *Ustawa z dn. 21 czerwca 2001 r. o dodatkach mieszkaniowych*. Dz.U. 2001 nr poz. 734.

The minimum amount must be above 2% of minimum old-age pension.



2.3.8 Permanent Social Assistance (bsapm_s)

Definitions: The permanent allowance (*zasilek stały*) is a specific permanent Social Assistance allowance for a person incapable of working due to disability or age, who is not entitled to social insurance invalidity pension. The benefit constitutes a complement to income, up to the amount of a specified income criterion.

Eligibility: To be eligible one must have disability of significant or moderate degree or be unable to work due to age, whereby the age limit is 60 for women and 65 for men. Per capita income must be below 477 pln [1] for one person household and 351 pln [2] for more than one person household.

Income test: If an individual is not a farmer the income test is based on net income per capita (excludes investment income, incidental benefits), and if individual is a farmer the income measure is hectare-based imputed earnings plus non-work income.

Benefit amount

The amount corresponds to the difference between a threshold and total household income.

Table 26. Permanent and Temporary Social Assistance thresholds

Year	2005	2006	2007	2008	2009	2010	2011	2012
[1]	461	461	477	477	477	477	477	477
[2]	316	316	351	351	351	351	351	351

Note: PLN per month.

Source: Ministry of Labour and Social Policy (2012).

The amount of permanent allowance may not be lower than 30 PLN.

2.3.9 Temporary Social Assistance (bsatm_s)

Definitions: A grant made to persons who are experiencing financial problems (income lower than the specified legal income criterion), caused by unemployment, chronic illnesses(s), or disability; or to persons who have incomes lower than the Social Assistance threshold and are still ineligible for social protection.

Eligibility: To be eligible a household income per capita must be below the specified threshold and a household must pass informal test conducted by a Local Social Assistance Representative. The income thresholds are the same as in Permanent Social Assistance.

Income test: The income concept is the same as for Permanent Social Assistance.

Benefit amount

The amount corresponds to the difference between a threshold and total household income with a threshold calculated as for Permanent Social Assistance.

Central versus local funding of Temporary Social Assistance:

The Central Government is obliged to pay 20% [1] of eligible amount in case of multi-person household and 30% [2] in a case of single-person household (*co_bsاتمefna*) while the rest of the eligible amount may be paid by the local government. In the model it is assumed that local government pays 7% [3] of the amount at its disposal due (*co_bsاتمefmu*).

The model allows to choose between the effective amount (*co_bsاتمefna*+ *co_bsاتمefmu*) and the entitled amount (*co_bsاتمefna*).



Table 27. Temporary Social Assistance – central funding proportion

Year	2004	2005	2006	2007	2008	2009*	2010	2011	2012
[1]	20%	20%	35%	35%	35%	50%	50%	50%	50%
[2]	15%	30%	25%	25%	25%	50%	50%	50%	50%
[3]	7%	7%	7%	7%	7%	7%	7%	7%	7%

Note: * since 1st of October 2008.

Source: Ministry of Labour and Social Policy (2012).

2.4 Social contributions

2.4.1 Employee social contributions

Income Base

Social security contributions are paid by the employer and by the employee, according to the rate schedules described below. All rates are applied to the same income base, which is gross income, defined as:

gross income = net income + IT + HI + employee part of SSCs

where: IT – personal income tax; HI – health insurance contributions

Gross income does not include the part of social security contributions, which is paid by the employer. The total cost to the employer is therefore gross income plus the employer's part of social security contributions.



Table 28. Social security contribution rates (2007 – 2012)

	Year	Total contribution rate (%)	Employee rate (%)	Employer rate (%)	Income base limit
Old-age pension insurance	2007 – 2012	19.52	9.76	9.76	gross income
	01/01 – 30/06 2007	13.00	6.5	6.5	gross income
	01/07 – 31/12 2007	10.00	3.5	6.5	gross income
Disability insurance	01/01/2008 – 31/01/2012	6.00	1.5	4.5	gross income
	01/02 – 31/12 2012	8.00	1.5	6.5	gross income
	2007-2012	2.45	2.45	---	gross income
Sickness Insurane	01/01 – /31/03 2007	from 0.90 to 3.60	---	0.90 – 3.60	gross income
	01/04/2007 – 31/12/2008	from 0.67 to 3.60	---	0.67 – 3.60	gross income
	01/01/2009 – 31/03/2012	from 0.67 to 3.33	---	0.67 – 3.33	gross income
	01/04/2012 – 31/12/2012	from 0.67 to 3.86	---	0.67 – 3.86	gross income
	2007 – 2012	2.45	---	2.45	gross income
Labour Fund	2007 – 2012	0.10	---	0.10	gross income
	2007 – 2012	0.10	---	0.10	gross income
Fund of Guaranteed Employee Benefits	2007 – 2012	0.10	---	0.10	gross income
Helath Insurance	2007 – 2012	9.00	---	9.00	gross income net of SSC

Source: *Wysokość składek na ubezpieczenia społeczne* [Social security contribution rates], ZUS (2012) <http://www.zus.pl/default.asp?p=4&id=35>.

Incomes from temporary labour contracts may or may not be included in the social security income base. With minor exceptions, a temporary job income is excluded from the SSC income base if the job is performed in addition to a permanent job and it is performed for a different employer than the permanent job. Due to the lack of detailed data, all temporary work incomes earned in addition to permanent work incomes are excluded from the social security income base. Some forms of labour incomes, such as compensation of corporate supervisory board members, are excluded from the SSC income base, even though they are part of the gross income for the purpose of income tax. Old-age pension insurance and disability insurance contributions are also paid on unemployment benefits and maternity benefits. Other benefits are excluded from social security contributions.

For the purpose of old-age pension insurance and disability insurance contributions, the gross income base is limited: contributions are paid as long as the annual cumulative gross income is below a threshold. The threshold is computed as 30 times the average monthly wage indicator, estimated for a given year by the government and published in the state budget. It was equal to 78,480 PLN in 2007 and 105,780 PLN in 2012.

Table 29. Old-age pension and disability insurance – income thresholds (annual in PLN)

	2005	2006	2007	2008	2009	2010	2011	2012
Threshold for old-age pension insurance and disability insurance	72,690	73,560	78,480	85,290	95,790	94,380	100,770	105,780

Source: ZUS (2012).

The work accident insurance rates depends on the type of work performed. Currently it ranges from 0.67% to 3.86%.



2.4.2 Social contributions for farmers

Individual farmers and their families, who conduct farming activities on their own behalf, are eligible for social insurance according to Agricultural Social Insurance Fund (KRUS) principles. The KRUS contributions are quarterly lump-sum payments. People insured in KRUS paid the following quarterly amounts of contributions, per person in PLN:

Table 30. Old age pension and disability insurance contribution rates of KRUS
(1st quarter 2005- 3rd quarter 2009)

Old-age pension and disability insurance	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
2005	168.8	168.8	168.8	168.8
2006	168.8	179.0	179.0	179.0
2007	179.0	179.0	179.0	179.0
2008	179.0	191.0	191.0	191.0
2009	191.0	203.0	203.0	.

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.

Starting from October 2009 amounts of contributions (paid by people insured in KRUS) have changed and have been subjected to the size of farm:

Table 31. Old age pension quarterly amounts for farmers conditional on farm area
(4th quarter 2009 - 4th quarter 2010)

Farm's size	2009		2010		
	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
up to 50 ha	204.0	204.0	213.0	213.0	213.0
50ha – 100ha	447.0	447.0	468.0	468.0	468.0
100ha – 150ha	690.0	690.0	723.0	723.0	723.0
150ha- 300ha	933.0	933.0	975.0	975.0	975.0
more than 300 ha	1,176.0	1,176.0	1,230.0	1,230.0	1,230.0

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.

Table 32. Old age pension quarterly amounts for farmers conditional on farm area
(1st quarter 2011 – 4th quarter 2012)

Farm's size	2011				2012			
	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter
up to 50 ha	213.0	219.0	219.0	219.0	219.0	366.0	366.0	366.0
50ha – 100ha	468.0	480.0	480.0	480.0	480.0	654.0	654.0	654.0
100ha – 150ha	723.0	744.0	744.0	744.0	744.0	942.0	942.0	942.0
150ha- 300ha	975.0	1,005.0	1,005.0	1,005.0	1,005.0	1,230.0	1,230.0	1,230.0
more than 300 ha	1,230.0	1,269.0	1,269.0	1,269.0	1,269.0	1,518.0	1,518.0	1,518.0

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.



Table 33. Old-age pension quarterly amounts for farmers keeping farm and conducting non-agricultural activity (4th quarter 2009 - 4th quarter 2010)

Farm's size	2009		2010		
	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
up to 50 ha	408.0	408.0	426.0	426.0	426.0
50ha – 100ha	651.0	651.0	681.0	681.0	681.0
100ha – 150ha	894.0	894.0	936.0	936.0	936.0
150ha- 300ha	1,137.0	1,137.0	1,188.0	1,188.0	1,188.0
more than 300 ha	1,380.0	1,380.0	1,443.0	1,443.0	1,443.0

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.

Table 34. Old-age pension quarterly amounts for farmers keeping farm and conducting non-agricultural activity (1st quarter 2011 – 4th quarter 2012)

Farm's size	2011				2012			
	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
up to 50 ha	426.0	438.0	438.0	438.0	438.0	480.0	480.0	480.0
50ha – 100ha	681.0	699.0	699.0	699.0	699.0	768.0	768.0	768.0
100ha – 150ha	936.0	963.0	963.0	963.0	963.0	1,056.0	1,056.0	1,056.0
150ha- 300ha	1,188.0	1,224.0	1,224.0	1,224.0	1,224.0	1,344.0	1,344.0	1,344.0
more than 300 ha	1,443.0	1,488.0	1,488.0	1,488.0	1,488.0	1,632.0	1,632.0	1,632.0

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.

Table 35. Work Accident, sickness and maternity insurance contribution rates of KRUS (2005-2012)

Work accident, sickness and maternity insurance	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
2005	60.0	60.0	72.0	72.0
2006	72.0	72.0	72.0	72.0
2007	72.0	72.0	72.0	72.0
2008	78.0	78.0	78.0	78.0
2009	78.0	90.0	90.0	90.0
2010	90.0	90.0	108.0	108.0
2011	108.0	126.0	126.0	126.0
2012	126.0	126.0	126.0	--

Source: KRUS (2012), *KRUS w liczbach [KRUS in numbers]*, <http://www.krus.gov.pl/krus/krus-w-liczbach/>.

Since the latest changes in the act that defines rules of the farmer's health insurance system that were introduced in Poland in January 2012, farmer's health insurance contributions are no longer paid from budgetary funds in such extent as it used to function before the changes. Instead of farmer's health insurance contributions paid from national budget, farmers now are obliged to pay health insurance contributions from their own funds depending on their farm size measured in conversion hectares and type of agricultural activity (with some exceptions). Farmers' health insurance contributions are paid each quarter in the same periods as described in case of farmers' old-age pension, disability, work accident, sickness and maternity insurance.

According to the new rules, farmers' health insurance monthly contribution amounts to 1 PLN per insured farmer and 1 PLN per household member in particular agricultural holding, multiplied



by number of conversion hectares. If the farm's size is less than 6 conversion hectares health insurance contributions are paid from budgetary funds. Moreover, farmers' health insurance contribution amounts vary depending on whether farm is runned jointly with production in special agricultural sector or only in self-contained special sector of agricultural production.

Table 21. Farmers' health insurance monthly contribution rates depending on type of agricultural holding and insured person status (from February 2012)

Type of agricultural holding	Insured farmer	Household member
Farm sized less than 6 conversion hectares	financed from budget	financed from budget
Farm sized 6 or more conversion hectares	1 PLN per person multiplied by number of conversion hectares	1 PLN per person multiplied by number of conversion hectares
Farm sized less than 6 conversion hectares jointly with production in special agricultural sector	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	financed from budget
Farm sized 6 or more conversion hectares jointly with production in special agricultural sector	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	1 PLN per person multiplied by number of conversion hectares
Self-contained special sectors of agricultural production	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	9% of base amount of 33,4% of average salary in non-financial corporations sector in 4 th quarter of previous year per person

Source: KRUS (2012), <http://www.krus.gov.pl/aktualnosci/dokument/arttykul/ubezpieczenie-zdrowotne-rolnikow-po-zmianach-od-1-lutego-2012/>.

2.4.3 Self-employed social contributions

The rates of SSCs for self-employed (entrepreneurs) are the sum of the rates for employee and employer. However, the income base for this form of employment is self-declared, with a minimum declared income base set at 60% of the average monthly gross income in the previous quarter, which is published with a 2-month delay. The second difference is that sickness insurance for the self-employed is voluntary. Exact data on income base declarations and sickness insurance participation is not available. However, virtually all self-employed minimize their SSC contributions by declaring the minimum income base and by opting out of the sickness insurance. We therefore assume that the self-employed SSC's are the lump-sum amounts based on the minimum declared income base and no sickness insurance. Since 2005 these **monthly** amounts were (in PLN):



Table 36. Self-employed social contributions (2005-2012)

Year	period	minimum income base	old-age pension insurance	disability insurance	sickness insurance	work accident insurance *	Labour Fund
2005	Jan-Feb	1,361.96	265.85	177.05	33.37	26.29	33.37
	Mar-May	1,443.28	281.73	187.63	35.36	27.86	35.36
	Jun-Aug	1,449.27	282.90	188.41	35.51	27.97	35.51
	Sep-Nov	1,391.12	271.55	180.85	34.08	26.85	34.08
	Dec	1,408.34	274.91	183.08	34.50	27.18	34.50
2006	Jan-Feb	1,408.34	274.91	183.08	34.50	29.28	34.50
	Mar-May	1,517.17	296.15	197.23	37.17	27.31	37.17
	Jun-Aug	1,518.11	296.34	197.35	37.19	27.33	37.19
	Sep-Nov	1,456.36	284.28	189.33	35.68	26.21	35.68
	Dec	1,478.80	288.66	192.24	36.23	26.62	36.23
2007	Jan-Feb	1,478.80	288.66	192.24	36.23	26.62	36.23
	Mar-May	1,597.51	311.83	207.68	39.14	28.76	39.14
	Jun-Aug	1,625.48	317.29	162.55	39.82	29.26	39.82
	Sep-Nov	1,586.60	309.70	158.66	38.87	28.56	38.87
	Dec	1,622.05	316.62	162.21	39.74	29.20	39.74
2008	Jan-Feb	1,622.05	339.63	97.32	39.74	29.20	39.74
	Mar-May	1,739.90	339.63	104.39	42.63	31.32	42.63
	Jun-Aug	1,790.39	349.48	107.42	43.86	32.23	43.86
	Sep-Nov	1,770.82	345.66	106.25	43.39	31.87	43.39
	Dec	1,781.13	347.68	106.87	43.64	32.06	43.64
2009**	Jan-Dec	1,915.80	373.96	114.95	46.94	31.99	46.94
2010	Jan-Dec	1,887.60	368.46	113.26	46.25	34.43	46.25
2011	Jan-Dec	2,015.40	393.41	120.92	49.38	33.65	49.38
2012	Jan-Dec	2,115.60	412.97	169.25	51.83	40.83	51.83

Source: ZUS (2012).

- from 1st of January 2003 till 31st of March 2006 work accident insurance contribution rate for self-employed equals 1,93%, and from 1st of April 2006 - 1,80%
- **since 2009 self-employed social contributions are set once a year.

Accident insurance rate is assumed to be 1.93%. which is the rate for entrepreneurs who hire less than 9 persons.

2.4.4 Other social contributions (if applicable)

Health Insurance (HI)

While sickness insurance finances replacement benefits during prolonged sickness or maternity leave, health insurance finances the National Health Fund, which is the public healthcare management institution.

HI contributions are considered to be social security contributions, however, they are calculated according to different principles. The income base for HI contributions for work contracts is lower than for SSCs; it is equal to the gross income minus the employee part of SSC. i.e.



2.4.4.1.1.1 HI income base = net income + IT + HI = gross income – employee part of SSC

In 2005 the rate of HI contributions was 8.5% but since 2007 it has gone up to 9.0% of the HI income base. Moreover HI contributions are linked to the personal income tax (IT) in two ways. First, the HI dues paid on any particular work contract cannot exceed the IT dues paid on that contract. Second, 7.75% of the HI income base (about 91.2% of HI dues) are deducted from the calculated IT dues. In other words:

if the calculated IT dues are lower than 7.75% of the HI income base then the actual HI dues are equal to the calculated IT dues and the actual IT paid is zero;

if the calculated IT dues exceed 7.75% of the HI income base, but does not exceed 8.5% (9.0% from 2007) of the HI income base, then the actual HI dues are equal to the calculated IT dues, while actual IT dues are equal to the difference between the calculated IT dues and the amount of deduction (7.75% of the HI income base) if the calculated IT dues exceeds 8.5% of the HI income base, then the actual HI dues are equal to 8.5% (9.0% from 2007) of the HI income base, while the actual IT dues are equal to the difference between the calculated IT dues and the amount of deduction (7.75% of the HI income base).

Table 37. Health Insurance

Year	HI Paid	HI Deducted
2005	8.50 %	7.75 %
2006	8.75 %	7.75 %
2007-2012	9.00 %	7.75 %

Source: Ministry of Health (2012).

Health Insurance for self-employed (HI)

The self-employed pay the HI contributions according to the same rates and IT deduction rules as above. However, just like in the case of SSCs a minimum HI income tax base limit applies, which results in the self-employed paying a lump-sum amount of contributions. Interestingly, the HI income base limit is higher than the SSC income base limit [75% of the average monthly gross income in the previous quarter in the non-government sector, instead of 60% of the overall average monthly gross income in the previous quarter], even though the HI income base for work contracts is lower than the SSC income base. In addition HI dues for self-employed can exceed IT dues, but still only 7.75% of the HI income base limit can be deducted from the income tax dues. The amounts of HI income base limits, the lump-sum dues, and the IT-deductible amounts since 2005 are given in the table below:



Table 38. Health Insurance for self-employed (monthly)

Year	Period	HI income base limit	HI dues	IT-deductible dues
2005	Jan-Feb	1,822.13	154.8	141.22
	Mar-May	1,910.99	162.4	148.10
	Jun-Aug	1,818.93	154.6	140.97
	Sep-Nov	1,852.73	157.4	143.59
	Dec	1,871.73	159.1	143.59
2006	Jan-Feb	1,871.73	163.78	145.06
	Mar-May	2,002.91	175.25	155.23
	Jun-Aug	1,904.66	166.66	147.61
	Sep-Nov	1,936.75	169.47	150.10
	Dec	1,970.65	172.43	150.10
2007	Jan-Feb	1,970.65	177.36	152.73
	Mar-May	2,116.88	190.52	164.06
	Jun-Aug	2,053.34	184.80	159.13
	Sep-Nov	2,109.46	189.85	163.48
	Dec	2,168.30	195.15	163.48
2008	Jan-Feb	2,168.30	195.15	168.04
	Mar-May	2,328.80	209.59	180.48
	Jun-Aug	2,287.40	205.87	177.27
	Sep-Nov	2,364.27	212.78	183.23
	Dec	2,392.76	215.35	185.44
2009	Jan- Feb	2,392.76	215.35	185.44
	Mar-Dec	2,491.57	224.24	193.10
2010	Jan- Dec	2,592.46	233.32	200.92
2011	Jan-Dec	2704.31	243.39	209.58
2012	Jan-Dec	2828.21	254.55	219.19

Source: Ministry of Health (2012).

The HI contributions on social security benefits and for most farmers are covered by the state budget. Only those who conduct special activities in agriculture pay health insurance.

2.5 Personal income tax

The main tax simulated for Poland is the personal income tax. It is the most comprehensive direct tax in the Polish tax code. Almost 24 million people filed a tax return in 2005, this number rose up to almost 24.7 million people in 2011. Personal Income Tax receipts amounted to 43.8 billion in 2010 i.e. about 17% of all tax revenues.

Table 39. Number of Personal Income Tax taxpayers

	2005	2006	2007	2008	2009	2010	2011
PIT taxpayers	23,939,623	24,063,759	24,454,995	24,747,173	24,740,297	24,907,974	24,654,420

Source: Ministry of Finance (2012): *Informacja dotycząca rozliczenia podatku dochodowego od osób fizycznych za rok 2006 (2007, 2008, 2009, 2010, 2011)* [Information on personal income tax].



2.5.1 Tax unit

Personal income tax in Poland is an individual system, but couples (as well as single parents), can file a joint tax return. In case of joint filing, the tax is levied on the average taxable income, and then the tax dues are multiplied by two. This can lower the tax liability if the two persons individually would fall into different income brackets. For example, if one of these individuals has no income or almost no income in a given year, they benefit from joint filing by claiming two universal tax credits, as described below.

2.5.2 Exemptions

The list of tax-exempt incomes includes more than 100 categories, most importantly:

- non-contributory benefits (social assistance, family benefits and housing benefits),
- disability pensions for war veterans,
- student scholarships,
- alimonies paid to children.

Regular old-age and disability pensions are not tax exempt. Income from farm activity or self-employment is taxed according to special rules, described in a separate section below.

Incomes from capital gains are taxed according to separate rules, described in the separate section below.

2.5.3 Tax allowances

In 2005 the list of tax allowances was short, and included:

- revenue costs,
- charitable donations,
- housing loan (mortgage) interest,
- medical rehabilitation expenses,
- internet access expenses.

In 2006 the list of tax allowances got extended. New tax allowances were introduced:

- purchase of new technologies,
- sports sponsoring - it was brought down from 1st of January 2007

In 2007 children tax credit was introduced and also a new tax deduction for volunteer blood-donors was implemented.

In years 2008-2012 no major changes in tax allowances were introduced. However, from tax year 2012, those individuals who pay contributions to their Individual Pension Security Accounts



(*Indywidualne Konto Zabezpieczenia Emeryalnego*), will be allowed to deduct from their tax-base the amounts ranging from 665.28 PLN to 4,030.80 PLN per year.

All of the above are subject to certain limits. Only the revenue costs and the the internet allowance are included in the model and described below, due to the lack of data on the other allowances take-up.

Revenue costs

The amount of revenue costs allowance depends on the type of the work contract. On most temporary labour contracts, the allowance is equal to 20% of gross income. On some types of temporary contracts, such as scientific or artistic activities, the rate of allowance is 50%. However, due to the lack of detailed data, in the model we assume the basic 20% rate for all temporary work contracts.

The revenue cost allowance for permanent work contracts is a lump-sum amount, which depends on two factors:

- whether the employee has one or more permanent jobs,
- whether the job (jobs) is outside the area of residence.

The table below gives the amounts of revenue cost exemptions on permanent work incomes from 2005 till 2012 in PLN.

Table 40. Cost exemptions on permanent work income

		2005	2006	2007	2008	2009	2010	2011	2012
Job(s) within the residence area	one job	1,227.00	1,227.00	1,302.00	1,335.00	1,335.00	1,335.00	1,335.00	1,335.00
	more than one job	1,840.77	1,840.77	1,953.33	2,002.05	2,002.05	2,002.05	2,002.05	2,002.05
Job(s) outside of the residence area	one job	1,533.84	1,533.84	1,627.56	1,668.72	1,668.72	1,668.72	1,668.72	1,668.72
	more than one job	2,300.94	2,300.94	2,441.54	2,502.56	2,502.56	2,502.56	2,502.56	2,502.56

Source: Ministry of Finance (2012).

In the model we assume that all persons have one job performed at the area of residence.

Charitable donations

Donations made for purposes related to religion and donations made for public utility organizations are deductible up to 6% of the taxable income. However, if the donation is made to an individual or entity that engages in certain activities than deduction is not allowed.

Table 41. Charitable donations

Donation type	Year	deduction limit (% of taxable income)
donations for churches	2005-2012	no limit
other donations	2005-2012	6.0

Source: Ministry of Finance (2012).

Housing loan (mortgage) interest

Interests on mortgage loan were deductible if taken (as of 01 January 2002) to build or purchase residential property. However, to qualify for the deduction, the construction must be completed within the 3 years of the end of the calendar year the building permit was issued.



Table 42. Housing loan interest allowance

	Year	deduction limit (amount of mortgage loan, PLN)
Housing loan (mortgage) interest	2005-2007	189,000
	2008	212,870
	2009-2010	243,460
	2011-2012	325,990

Source: Ministry of Finance (2012).

In 2007 housing loan (mortgage) interest deduction was withdrawn. However, it is treated as an acquired right and may be claimed by those who got a housing lone between 2002-2006 up to the end of 2027.

Medical rehabilitation expenses

2.5.3.1.1.1 Taxable income may be also decreased by expenses incurred for the purposes of rehabilitation

Internet access expenses

Internet access expenses are deductible up to 760 zł per annum.

Table 43. Medical rehabilitation expenses allowance, Internet expenses, Deduction for volunteer blood-donors

	year	deduction limit (PLN per year)
Medical rehabilitation expences allowance	2005-2012	2,280
Internet access expenses	2005-2012	760

Source: Ministry of Finance (2012).

Table 44. Deduction for volunteer blood-donors

	year	deduction limit (% of taxable income)
Deduction for volunteer blood-donors	2007-2012	6.0

Source: Ministry of Finance (2012).

2.5.4 Tax base

The tax base is gross income which is equal to the gross income minus social security contributions and tax allowances (deductions). Health insurance contributions are not subtracted from gross income (they are included in the income tax base), but they are linked with income tax as described in a separate section above. As described in the “tax unit” section, the average income tax base is used for couples and single parents filing a joint tax return with their spouse or dependent child respectively.

2.5.5 Tax schedule

The tax schedule until 2009 was progressive as in the table below.



Table 45. Tax schedule (2005-2008)

Bracket number	2005		2006		2007		2008		Rates
	Lower limit	Upper limit	Lower limit	Lower limit	Upper limit	Upper limit	Lower limit	Upper limit	
1	0	37,024	0	37,024	0	43,405	0	44,490	19%
2	37,024	74,048	37,024	74,048	43,405	85,528	44,490	85,528	30%
3	74,048	-	74,048	-	85,528	-	85,528	-	40%

Source: Ministry of Finance (2012).

From 2009 the tax is imposed at different progressive rates (there are only 2 brackets).

Table 46. Tax schedule (2009-2012)

2009-2012			
Bracket number	Lower limit	Upper limit	Rates
1	0	85,528	18%
2	85,528	-	32%

Source: Ministry of Finance (2012).

2.5.6 Tax credits

Three types of tax credits were deductible from the tax liability:

- Universal tax credit: each taxpayer may deduct a specified amount per year from his/her tax dues. This tax credit is equivalent to a tax-free income bracket.

Table 47. Universal and child tax credits (2005-2012)

	2005	2006	2007	2008	2009	2010	2011	2012
Universal tax credit (in PLN)	530.08	530.08	527.54	586.85	556.02	556.02	556.02	556.02
Child tax credit (in PLN)	-	-	1,145.08	1,173.70	1,112.04	1,112.04	1,112.04	1,112.04

Source: Ministry of Finance (2012).

- Non-refundable child tax credit: it can be deducted independently of the source of taxable income. However, self-employed whose income is not taxed in accordance with general income tax regulation with progressive tax rates are not eligible for the child tax credit. The credit was introduced in 2007.
- Part of health insurance (7.75% of the HI income base, as described above; see Table 25).
- Housing tax credits – if eligibility for it acquired before 2005: due to lack of take-up data, this credit is excluded from the model.



2.6 Other taxes

Income tax for farmers (agricultural tax)

Incomes from agricultural activities, with the exception of revenue from special branches of agricultural production, are not liable to personal income tax. Such incomes are subject to an agricultural tax. The tax base is measured in “*conversion hectares*” (calculated on the basis of actual area, type and quality of land and location in one of four tax zones, set depending on economic and climatic conditions of agricultural production). The **annual** rate of the tax amounts to the pecuniary equivalent of 2.5 quintals of rye per 1 conversion hectare of farm land and 5 quintals of rye per non-farm land. The pecuniary equivalent is based on the average purchase price of rye for the first three quarters of the year preceding the tax year.

Table 48. Amounts of agricultural tax (2005-2012)

	2005	2006	2007	2008	2009	2010	2011	2012
Amount of agricultural tax per:								
1 conversion hectare	94.17	69.70	88.80	145.73	139.50	85.25	94.01	185.45
1 hectare	188.35	139.40	177.60	291.45	279.00	170.50	188.20	370.90
1 quintal of rye	37.67	27.88	35.52	58.30	55.80	34.10	37.64	74.18

Source: Ministry of Finance (2012).

2.6.2 Income tax for self-employed

Individuals who carry out business activities may opt to choose a flat-rate taxation of their business incomes at the rate of 19 %, equal to the rate of CIT. That is why instead of being taxed according to the general personal income tax rules with progressive tax rates, most self-employed can choose to be taxed according to this flat tax rate. 261 thousand taxpayers had chosen this taxation regime in 2005. This number has gone up to 463 thousand taxpayers in 2008 (for exact changes from 2005 till 2008 – see Table 41). However, with the flat rate taxation the taxpayer loses to right to some allowances and to the tax credits. Some self-employed (such as hairdressers) can also opt for a lump-sum tax option or for a flat-rate tax levied on revenues (costs cannot be deducted; the rate differs depending on the type of activity). Due to the lack of data, and the fact that more than 80% of the self-employed in Poland choose to be taxed according to general (progressive-rate) rules, we apply general progressive taxation rules to all self-employed in the model.

Table 49. Income tax for self-employed – taxpayers

Year:	2005	2006	2007	2008	2009	2010	2011
Flat-tax taxpayers: (non-agricultural self-employment activity)	260,999	328,047	393,780	463,115	391,784	395,039	410,813

Source: Ministry of Finance (2012), *Informacja dotycząca rozliczenia podatku dochodowego od osób fizycznych za rok 2005 (2006, 2007, 2008, 2009, 2010, 2011)* [Information on personal income tax].

2.6.3 Income tax on capital gains

Dividends are excluded from the overall income. In general, there is no special tax rate for capital gains in Poland:

- Capital gains, such as the gains from savings accounts, mutual funds and stock exchange, are taxed at source according to a 19% flat rate, with no allowances or deductions. [For stock exchange, the tax base are net gains].



- The sale of real estate by an individual is taxable at the rate of 10% of the sale price but if the real estate is sold more than 5 years after it was purchased the capital gain is exempt from tax.

2.6.4 Income tax on rents

Taxpayers can choose to tax their incomes from rents according to general (progressive) income tax rules, or according to *special rules* (no allowances or credits with two tax brackets). We assume that incomes from rents are taxed according to general rules.

Income tax on rents rates:

- 20% for people who are classified as having a free profession (*wolny zawód*) such as painters, actors, singers, translators, architects, lawyers etc.
- 17% for people that are involved with a number of activities such as hotels, guest houses, carparks, car mechanics, vehicle rental, computer hardware/software etc.
- 8.5% for people involved with a number of activities such as working with pre-school children; botanical, zoologica or environmental protection, sale of alcoholic drinks;
- 5.5% for people involved with building works or transport (with loads above 2 tonnes);
- 3% for people involved with gastronomic activities .

3. DATA

3.1 General description

Table 50. EUROMOD database description

	UDB - 2008
EUROMOD database	
Original name	UDB EU-SILC
Provider	GUS
Year of collection	2008
Period of collection	May, 2 - June, 19
Income reference period	2007
Sampling	Random. stratified
Unit of assessment	Household
Coverage	Private households
Sample size	13 984
Response rate	65.4%

The survey unit was a household and all the household members who had completed 16 years of age by December 31, 2007. The survey did not cover collective accommodation households (such as boarding house, workers' hostel, pensioners' house or monastery), except for the households of the staff members of these institutions living in these buildings in order to do their job (e.g. hotel manager, tender etc.). The households of foreign citizens should participate in the survey.

3.2 Definition of the household

Household is a group of persons related to each other by kinship or not, living together and sharing their income and expenditure (multi-person household) or a single person, not sharing his/her income



or expenditure with any other person, whether living alone or with other persons (one-person household). Family members living together but not sharing their income and expenditure with other family members make up separate households. The household size is determined by the number of persons comprised by the household.

The household composition did not account for:

- persons at the age of over 15 years, absent from the household for education purposes, living in boarding houses, students' hostels or private dwellings;
- men in military service (those performing substitute military service working in companies and living at home are included in the household);
- persons in prison;
- persons absent from the household at the time of the survey, staying at education centres, welfare houses or hospitals, if their real or intended stay outside the household is more than 6 months;
- persons (household's guests) staying in the household at the time of the survey who have been or intended to be there for less than 6 months;
- persons renting a room, including students (unless they are treated as household members);
- persons renting a room or bed for the time of work in a given place (including such works as land melioration, geodetic measurements, forest cut-down or building constructions);
- persons living in the household and employed as au pairs, helping personnel on the farm, craft apprentices or trainees.

3.3 Microsimulation indicators provided by the Polish Central Statistical Office

Annual information for incomes is available in UDB SILC. The main disadvantage of this dataset is the fact that incomes are aggregated into a limited number of broad income categories and that the data does not include specific crucial information from the point of view of microsimulation, such as disability status, flat size and farm size.

One crucial consequence of income aggregation in UDB SILC is that the same source of income may appear in several aggregated categories. In the case of Poland this applies in particular to:

- 1) nursing benefit, which falls into either: old-age benefits, disability benefits or income received by individuals aged less than 16,
- 2) survivor's pension, which may be included in survivor's pensions, old-age benefits or income received by individuals aged less than 16,
- 3) retirement pension which may be included in old-age benefits or family related benefit (if a person is below the statutory retirement age and retired in order to take care of a disabled child).

The primary database for the purpose of microsimulation in EUROMOD is the UDB SILC. On a special request from the Polish partner, the Centre for Economic Analysis, the Polish CSO prepared an additional database with data on flat size, farm size, disability levels and dummy variables indicating receipt of a specific income item (without amounts). Thanks to this information, we can identify, for example, that nursing allowance or family allowance was reported by a specific household, but we have no information about amounts. The dataset provided by the Polish central Statistical Office was used to generate microsimulation indicators which were matched with the UDB SILC database. A complex set of imputations has been applied to this combined data to disaggregate some elements of



the aggregated UDB incomes, which has substantially improved the quality of data validation process and subsequently also the simulations. We are very grateful to the representatives of the Polish CSO for making the indicator data available and for their helpful assistance. Below we refer to this database as the SILC national indicator database (SILC-NID).

PLEASE NOTE – any EUROMOD analysis using the data for Poland must, in addition to the general data acknowledgement include the following statement: **“Microsimulation SILC indicator dataset complementing the Polish UDB SILC database was provided for the purpose of income source identification in EUROMOD by the Polish Central Statistical Office.”**

3.4 Sample quality and weights

The two-stage sampling scheme with differentiated selection probabilities at the first stage was used. Prior to selection, sampling units were stratified. The first-stage sampling units (primary sampling units - PSU) were enumeration census areas, while at the second stage dwellings were selected. All the households from the selected dwellings are supposed to enter the survey.

The strata were the voivodships (NUTS2) and within voivodships primary sampling units were classified by class of locality. In urban areas census areas were grouped by size of town, but in the five largest cities districts were treated as strata. In rural areas strata were represented by rural gminas (NUTS5) of a subregion (NUTS3) or of a few neighbouring poviats (NUTS4). Altogether 211 strata were distinguished.

It was decided that the sample should include about 24 000 dwellings in the first year of the survey (2005). Proportional allocation of dwellings to particular strata was applied. The number of dwellings selected from a particular stratum was in proportion to the number of dwellings in the stratum. Furthermore, the number of the first-stage units selected from the strata was obtained by dividing the number of dwellings in the sample by the number of dwellings determined for a given class of locality to be selected from the first-stage unit. In towns with over 100 000 population 3 dwellings per PSU were selected, in towns with 20-100 thousand population – 4 dwellings per PSU, in towns with less than 20 000 population – 5 dwellings per PSU, respectively. In rural areas 6 dwellings were selected from each PSU.

Design factor – DB080 is equal to the dwelling sampling fraction reciprocal in the h-th stratum.

3.4.1 Non-response

Household non-response rate was 14.94. A number of contacted households was 15 722 out of 16 565 in a sample and 13 986 interviews were realized. The main reason for lack of contact was “Address does not exist or is non-residential or is unoccupied or not the principal residence” (773 cases). The main reason of non-responding was “refusal to co-operate” (1 740 cases) and “Entire household temporarily away for duration of fieldwork” (414 cases).

The number of accepted interviews for people at age of 16 or more was 31 619. There were 25 894 face to face interviews and 5 725 proxy interviews among them. The interviewers decided on proxy interviews only if the substitute respondents were well informed about the situation in the household and there was no other possibility to get the information. Proxy interviews were performed in the following situations:

1. no contact with the respondent because of long-term absence (e.g. work in another town or abroad);
2. respondent’s disability, illness or pathology (such as alcoholism);
3. according to other members of the household, the respondent was only available late at night and was not willing to participate in such a long interview, while at the same time the proxy could provide detailed information, even based on the documents, such as tax statements.



3.4.2 Weights

DB080 weights were adjusted with the use of household non-response rates estimated for each class of locality separately.

Table 51. Descriptive statistics – interview response rates

Class of locality	Completeness rate
Poland	0.654
Warsaw	0.404
Towns 500 000 – 1 000 000 inhabitants	0.535
Towns 100 000 – 500 000 inhabitants	0.581
Towns 20 000 – 100 000 inhabitants	0.637
Towns less than 20 000 inhabitants	0.665
Rural areas	0.787

Table 52. Descriptive Statistics of the Grossing-up weight

	Weight
Number	41 200
Mean	913.53
Median	763.38
Maximum	3287.20
Minimum	271.65
Max/Min	12.1
Decile 1	342.88
Decile 9	1699.17
Dec 9 / Dec1	4.95

Notes: Calculated from db090 (household cross-sectional weight)

3.4.3 Item non-response and under-reporting

The data on income from self-employment were collected in two different ways: the respondents were asked about the company's costs and profits and also about the amount of money gained from self-employment which was allocated to the household's expenditure.

Death grants are not included in the income because the whole sum is used to cover the cost of the funeral.

Sickness and childcare benefits are not included (a childcare benefit is granted to the working parent of a sick child), because they are paid by the employer and cannot be detached from the income from hired employment.

The respondents were asked to give the net incomes and contributions (income tax prepayments and compulsory social insurance). The gross income was obtained by summing up net value, income tax prepayments and compulsory social insurance contributions. If the information on tax and insurance contributions was missing, the amounts were imputed on the basis of the results obtained.

Self-employment income is poorly recored by EU-SILC. It gives only 26% of SNA value. One should also expect that capital income nad housing rents are highly underreported in the data.

Missing data on incomes are imputed by the Polish CSO by hot-deck metod that is by a random selection of a representative (donor) out of the correct records. The hot-deck method is also applied



when the income data are known from the previous year but a suitable model fitting is difficult. In such a case the income from the previous year is used as a grouping variable

3.5 Data adjustment

Incomes aggregation in UDB SILC is presented below.

Table 53. Income aggregation in UDB SILC2008

UDB-SILC variable		Non-simulated	Simulated
Cash Employee income or near cash income	py100g	Labour Act employment, Civil Law employment, Maternity leave benefit, Sickness benefit	
Self-employment income	py050g	Business self-employment income, Agricultural self-employment income.	
Unemployment benefits	py090g	Pre-retirement allowance, Pre-retirement benefits, Employment gratuity	Unemployment benefits (partially)
Old-age benefits	py100g	Old-age pension, Supplements to pensions, Retirement gratuity, Rehabilitation allowance,	Nursing allowance Nursing supplement
Survivor' benefits	py110g	Survivor's pension, structural pension Survivor's pension,	
Sickness Benefit	py120g	Supplements to pensions Sickness benefits,	
Disability benefits	py130g	Compensation for injury Disability pension, training supplement, rehabilitation allowance, Social pension Special scholarship for disabled student Supplements to pensions	Nursing benefit
Family/children related allowances	hy050g	Supplement to lone parent and loss of a right to unemployment benefit Supplement for education outside living place) Alimony down payment, Old-age pension Supplements to pensions	Family allowance, Parental leave supplement, Supplement to lone parent, Supplement for large families, Child birth supplement, Education and rehabilitation of disabled child, Supplement for starting school, One-off child birth benefits, Maternity benefit, Nursing allowance,
Social exclusion	hy060g	Other special allowances from Social Assistance, Other financial support from NGOs	Permanent Social Assistance, Temporary Social Assistance
Income received by people age under 16	hy110g	Survivor's pension, Scholarship,	Nursing benefit

The variables from SILC were separated into EUROMOD variables using the variables from the SILC-NID as follows:



Table 54. Data disaggregation using national indicators (EU-SILC -> EUROMOD)

EUROMOD variables:	SILC variables				
	py090g	py130g	py100g	py110g	hy100g
bun	bun				
pyr	pyr				
ysv	ysv				
pdi00		pdi00	<i>poadp</i>		
poa00			<i>poa00</i>		
			<i>poafr</i>		
			<i>poasp</i>		
psu00			<i>psu_poa</i>	psu00	<i>psu_cb</i>
pdiuc		pdiuc	<i>poa_pdiuc</i>		<i>psu_uc</i>
pdinw		pdinw			
bed		<i>pdist</i>			<i>psu_ed</i>
					<i>psu_emp</i>
poaot			<i>poart</i>		
psuot				<i>psu_dg</i>	

Variables written in italics (e.g. *poadp*, *poafr*, *poasp*, *psu_poa*, *psu_cb*, *psu_uc*, *psu_ed*, *psu_emp*, *pdist*, *poart*, *psu_dg*) are not included in the final dataset. They are components of EUROMOD variables. After disaggregating SILC variables and aggregating components into EUROMOD variables one may assume that:

1. a number and a value for old-age pension (*poa00*) should be smaller in Euromod than in UDB (*py100g*) since some observations are re-classified as disability pension (*pdi00*) or survivor pension (*psu00*) or nursing benefit (*pdiuc*) or other old age benefit (*poaot*);
2. a number and a value for disability pension (*pdi00*) should be similar to the values in UDB. However some observations for disability pensions from UDB were re-classified into nursing benefit (*pdiuc*) or social pension (*pdinw*) or education benefit (*bed*) while some observations from *py100g* were added to *pdi00*;
3. a number and a value for survivor pension (*psu00*) should be significantly above values in UDB due to survivor pensions paid to children that are part of *hy100g* and the pensions paid to widows in retirement age that are included in *py100g*;
4. nursing benefit (*pdiuc*) is imputed from components of *py130g*, *py110g* and *hy100g*;
5. social pension (*pdinw*) is part of *py130g*;
6. other old-age benefit (*poaot*) includes severance payment to retirees;
7. Other survivor pensions (*psuot*) includes “single payment to someone whose entitlement derives from their relationship with a deceased person (widows, widowers, orphans and similar)”;
8. “Incomes received by people aged below 16” (*hy110g*) included in survivor pension (*psu00*), nursing benefit (*pdiuc*) and education benefits (*bed*) are allocated to the main person in a household (*int_order=1*).

Special treatment was applied to family benefits (*hy050g*). The variable includes main family allowance, supplements to it, maternity benefit and other minor transfers. Family allowance is often main object of policy change that is why it is important to separate simulated and non-simulated incomes. Otherwise we would not be able to correctly define incomes while simulating housing benefit and social assistance and it would be impossible to measure hypothetical disposable income. Components of *hy050g* were identified by comparison of the declarations in the SILC-NID data with system values.



Table 55. Disagregation of family benefits (hy050g)

Simulated and in UDB		Non-simulated and in UDB	
bch00	Main family allowance	<i>bchpl</i>	Parental leave supp.
bchlp00	Main lone parent supp.	<i>bchunlp</i>	Minor lone parent supp.
bchlg	Large family supp.	<i>bchoe</i>	Outside education
bchba	Child birth supp.	<i>bma</i>	Maternity benefit
bchuc	Universal child birth allowance	<i>bfaam</i>	Alimony Fund allowance
berchdi	Nursing allowance	<i>bfaot</i>	Soldier's benefit
		<i>bchfsa</i>	Foster family benefit
Simulated but not in UDB			
bchdied	Education and rehabilitation supp.		
bched	Starting school supp.		

Social exclusion benefits (hy060g) are split into three variables: permanent social assistance (bsapm), temporary social assistance (bsatm) and other social assistance (bsaot).

Table 56. Disagregation of social exclusion benefits (hy060g)

Simulated and in UDB		Non-simulated and in UDB	
bsapm	Permanent social assistance	<i>bsaot</i>	Special social assistance and help from ngo's
bsatm	Temporary social assistance		

Imputations

Social security contributions for farmers are based on a size of arable land. This makes it necessary to identify farmers in the model. A person is a farmer if she/he:

1. uses a farm and
2. declares income from self-employment (py050) or income from self-employment and paid-employment are not declared but own-consumption is positive (py070).

A person is not classified as a farmer if she/he:

1. uses a farm but
2. income from self-employment is not declared but income from paid-employment is positive.

Imputed housing rent

Values for mortgage interest per square metre are imputed if a reported value is above the median. The imputation is based on a linear prediction with flat size, degree of urbanization, dwelling type, number of rooms available to the household, household size, household type and total disposable household income.



3.5.1 Time period

3.5.2 Other imputed variables

Temporary Social Assistance is a top-up benefit for households which meet two criteria: “insufficient resources” and specific social criteria (the eligible person belongs to one of the following ‘dysfunctionality’ groups: poverty, orphanage, disability, unemployment, homelessness, physical or mental impairment, maternity protection, chronic disease, difficulties in social adjustment after imprisonment, inability to provide for the care of household, elemental disaster). In the model, due to lack of such specific information, we must ignore these criteria.

The payment of Social Assistance is conditional on an assessment by the Local Social Assistance Centre (MOPS). Thus although there is no official wealth or assets test, a visit by the MOPS representative acts as such an informal test. In the model we introduce a type of wealth-test to mimic the local authority discretion concerning the eligibility assessment.

Simulation of temporary social assistance without regard to this test would overestimate its receipt. Other reasons could explain why eligible families do not receive SA: tight social budget in some areas, non-take-up issues or temporary ineligibility on grounds other than wealth.

We estimate a probability (probit) model of receiving temporary social assistance on a set of household characteristics for the entire population. Exogenous variables include: flat size, region, number of people living in household, dummies for possession of color tv set, computer, washing machine, bath shower, capacity to face unexpected financial expenses, capacity to afford paying for one week annual holiday away from home.

The estimates are then used to generate an expected receipt probability value for each household and we set a uniform wealth threshold above which a family is eligible to receive the assistance conditional on passing also the income means-test. The threshold is calibrated in order to reflect the correct number of recipients of temporary social assistance according to official statistics.

3.6 Updating

Table 57. Updating factors

Index	Income Source/index type	2007-2008	2007-2009	2007-2010	2007-2011	2007-2012
h_cpi	Eurostat / Harmonized Indices of Consumer Prices (HICP)	1.0432	1.0874	1.1134	1.1547	1.2037
lab_cost	Eurostat / Labour market / Labour costs – Labour cost index - Annual data	1.1030	1.1697	1.1955	1.2542	1.2829
ret_pen	Retirement Pension index: source: based on SILC-NID on average retirement pension from the nonagricultural sector;	1.1133	1.1945	1.2652	1.3276	1.3974
dis_pen	Disability Pension index: source: based on SILC-NID on average disability pension from the nonagricultural sector	1.0940	1.1790	1.2595	1.3179	1.4044
fam_pen	Family Pension index: source: based on SILC-NID on average family pension from the nonagricultural sector	1.0958	1.1772	1.2434	1.2979	1.3735
gdp	nominal GDP index: based on SILC-NID for a given year	1.1066	1.1692	1.2310	1.3153	1.4150



4. VALIDATION

4.1 Aggregate Validation

4.1.1 Market income

The numbers of recipients for paid employment income (yem) in subsequent years from 2007 to 2011 are close to those reported in external sources. Ratios of simulation results divided by external data from corresponding years are ranging from 101% in 2007 to 99% in 2011 what might be considered as good approximation. The total amounts for 2007 and for 2009 are slightly above the external data, for 2010 and 2011 the model slightly underestimates this number while simulation results for 2008 matches the external statistics in 100%.

Self-employment income (py050g) had been split using indicators from the SILC-NID data into business or agricultural income on a basis of farm land possession. The procedure has not been perfect and one must be aware of mistakes due to possible mis-assessments. The aggregated amounts are much more diverse and less accurate than the numbers of recipients. While compared to the external numbers the total number of business self-employed (yse) occurs to be above the benchmarks throughout all simulated years. The highest difference between simulated aggregated income amount compared to external statistics appears in 2007, in this year simulated value of self-employed income exceeds official statistics by about 29%. The lack of national account statistics for 2012 makes it impossible to validate results for that year.

As it was described in previous releases of EUROMOD Country Report for Poland, the difference for investment income recipients for EUROMOD and UDB data (70%) is due to different counting units. Heads and spouses are counted in the EUROMOD while only heads are considered in the UDB. The lack of a relevant administrative statistics makes validation impossible. The total amounts are underreported for all years which is standard result for this type of income.

Other incomes such as property income (ypr), private pension income (ypp), private transfers (ypt), other income (yot), ysv (severance payments), paid private transfers (xmp) are of minor importance in relation to employment income. Other income (yot: income received by people aged under 16) that is recorded in SILC is not included in EUROMOD database since it is allocated into education benefit (bed), survivor pension (psu00) and nursing benefit (pdiuc). The values of severance payment are extracted from py090g (unemployment benefit) variable in the UDB.



Table 58. Market Income-Number of recipients (in thousands)

	EUROMOD Simulation						External statistics						Ratio				EU-SILC			
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	ratio
Original income	17,141	17,141	17,141	17,141	17,141	17,141														
Employment	13,976	13,976	13,976	13,976	13,976	13,976	13,771	14,037	13,782	14,110	14,150	n/a	101%	100%	101%	99%	99%	---	13,976	100%
Self-employment	3,119	3,119	3,119	3,119	3,119	3,119	3,499	3,554	3,349	3,642	3,646	n/a	89%	88%	93%	86%	86%	---	3,119	100%
Investment	514	514	514	514	514	514													302	170%
Property	304	304	304	304	304	304													185	164%
Private pension	7	7	7	7	7	7													7	100%
Private transfers	798	798	798	798	798	798													798	100%
Other	0	0	0	0	0	0													386	0%
Severance payments	30	30	30	30	30	30													0	0%
Paid private transfers	654	654	654	654	654	654													654	100%
In-kind income																				
Fringe benefits	4,466	4,466	4,466	4,466	4,466	4,466													4,466	100%
Imputed housing	20,361	20,361	20,361	20,361	20,361	20,361													12,871	158%

Table 59. Market Income-Aggregate amounts (in millions of PLN)

	EUROMOD Simulation						External statistics						Ratio				EU-SILC			
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	ratio
Original income	444,876	489,731	518,819	531,973	558,924	574,662														
Employment	380,423	419,595	444,969	454,799	477,137	488,040	351,961	400,375	415,252	432,488	n/a	n/a	108%	105%	107%	105%	---	---	378,814	100%
Self-employment	58,291	63,394	66,737	69,743	73,908	78,295	45,274	53,262	55,922	58,341	n/a	n/a	129%	119%	119%	120%	---	---	58,045	100%
Investment	2,666	2,950	3,118	3,285	3,510	3,741													2,655	100%
Property	1,475	1,632	1,725	1,818	1,942	2,070													1,469	100%
Private pension	158	176	189	200	210	221													158	100%
Private transfers	4,313	4,499	4,690	4,802	4,980	5,191													4,294	100%
Other																			953	0%
Severance payments	652	720	763	780	818	837													0	0%
Paid private transfers	3,102	3,236	3,373	3,453	3,581	3,733													3,089	100%
In-kind income																				
Fringe benefits	4,696	4,899	5,107	5,228	5,422	5,652													4,676	100%
Imputed housing	130,195	135,823	141,576	144,952	150,330	156,709													129,644	100%



4.1.2 Disability, old-age, survivor and sickness benefits

Retirement severance payment, farmers' structural pension and nursing supplement are identified using the SILC-NID dataset. High amount of the nursing supplement is due to combining in the data all supplements to main pensions. This value has been named nursing supplement since this supplement is by far the most common benefit from among the benefits in the aggregated list of items.

The simulated number of recipients of the main disability pension for 2008 exceeds by 4% the number reported by CSO and might be regarded as accurate. However, according to external statistics the numbers simulated for years 2009-2011 are too high. This reflects the decreasing number of disability pensioners in reality that could be observed in external data. The total amounts are significantly above the targets. The underreporting is consistent with results that were observed so far in the Household Budget Surveys and still there is no clear explanation for such result. Exclusion of people from long term care institution who are eligible for disability pensions may partially explain the difference.

Other payments related to disability included in the database are nursing supplement and social pension. Both variables are imputed on the basis of the SILC-NID data. The identification of social pension recipients is correct. Regrettably there are no official statistics on the number of people receiving nursing supplement in Poland.

The identification of the main survivor pension is also done on the basis of the SILC-NID data. In the UDB this income may be reported as survivor pension but also as old-age pension or income received by people aged under 16. The difference between the database and the target may be attributed to the identification errors and to declaring the survivor pension as old-age pensions by respondents. The accuracy for the total amount is similar to that for the numbers implying the correct averages.

Pre-retirement pensions and sickness benefits are also identified on a basis of the SILC-NID data. The number of recipients of pre-retirement pensions is significantly below the target for the year 2007. The differences increase for the consecutive years since the number of recipients in the external data are significantly lower for years 2008-2011. In 2007 there were 368,000 people receiving the pre-retirement pensions while in 2011 only 149,000 got them. The fractions of declared amounts in the database in relation to the external source are similar to the fractions for the total numbers.

There are no administrative data about numbers of recipients for sickness benefits that may be used for the validation exercise. We may expect small fractions of income from those sources included in the database. The fractions of income from the sickness benefit that are in the database are about 15%. This is surprising since the total administrative amounts for that benefit range from 7.6 billion PLN in 2007 up to almost 11.7 billion PLN in 2011. We may expect that most of this income is included in employment income because it is a benefit paid by employers.



Table 60. Disability, old-age, survivor and sickness benefits - Number of recipients (in thousands)

	EUROMOD Simulation						External statistics						Ratio					EU-SILC		
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	ratio
Pensions	10,038	10,038	10,038	10,038	10,038	10,038	9,118	9,256	9,332	9,244	9,124	n/a	110%	108%	108%	109%	110%	---	9,804	100%
Disability	2,201	2,201	2,201	2,201	2,201	2,201														
Disability pension	1,748	1,748	1,748	1,748	1,748	1,748	1,787	1,674	1,567	1,500	1,438	n/a	98%	104%	112%	117%	122%	---		
nursing supplement	12	12	12	12	12	12	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---		
social pension	213	213	213	213	213	213	238	241	244	248	252	n/a	89%	89%	87%	86%	85%	---		
Old age																				
old age pension	6,805	6,805	6,805	6,805	6,805	6,805	6,010	6,192	6,377	6,353	6,294	n/a	113%	110%	107%	107%	108%	---		
nursing supplement	1,530	1,530	1,530	1,530	1,530	1,530	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---		
farmer's structural pension	55	55	55	55	55	55	n/a	54	n/a	63	n/a	n/a	---	102%	---	87%	---	---		
ret. severance payment	47	47	47	47	47	47	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---		
Survivors																				
Survivors pension	1,016	1,016	1,016	1,016	1,016	1,016	1,391	1,390	1,388	1,391	1,392	n/a	73%	73%	73%	73%	73%	---		
nursing supplement	250	250	250	250	250	250	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---		
other survivor benefits	10	10	10	10	10	10	371	368	372	368	365	n/a	3%	3%	3%	3%	3%	---		
Pre-retirement benefit	313	313	313	313	313	313	368	256	165	152	149	n/a	85%	122%	190%	206%	210%	---		
Sickness	114	114	114	114	114	114	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---	114	102%



Table 61. Disability, old-age, survivor and sickness benefits - aggregated amounts (in millions of PLN)

	EUROMOD Simulation						External statistics						Ratio					EU-SILC			
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	ratio	
Pensions	140,383	155,716	167,188	177,221	185,802	195,965	138,145	150,263	163,623	172,475	178,911	n/a	102%	104%	102%	103%	104%	---	137,236	113%	
Disability																					
Disability pension	16,098	17,612	18,980	20,275	21,217	22,608	21,040	21,215	21,403	21,848	21,938	n/a	77%	83%	89%	93%	97%	---			
nursing supplement	6	7	7	7	8	8	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
social pension	1,304	1,427	1,538	1,643	1,719	1,832	1,443	1,527	1,643	1,747	1,830	n/a	90%	93%	94%	94%	94%	---			
Old age																					
old age pension	105,218	117,137	125,687	133,124	139,686	147,027	92,836	104,339	116,777	123,802	128,965	n/a	113%	112%	108%	108%	108%	---			
nursing supplement	723	805	864	915	960	1,010	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
farmer's structural pension	923	1,028	1,103	1,168	1,226	1,290	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
ret. severance payment	236	263	282	299	314	330	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
Survivors																					
Survivors pension	13,417	14,703	15,794	16,682	17,413	18,428	20,430	22,092	23,767	25,229	26,402	n/a	66%	67%	66%	66%	66%	---			
nursing supplement	118	132	141	150	157	165	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
other survivor benefits	51	56	60	63	66	70	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---			
Pre-retirement benefit	3,134	3,489	3,744	3,966	4,161	4,380	3,838	2,618	1,676	1,596	1,605	n/a	82%	133%	223%	248%	259%	---			
Sickness	410	427	446	456	473	493	7,646	9,533	11,504	11,537	11,714	n/a	5%	4%	4%	4%	4%	---	408	105%	



4.1.3 Social insurance contribution from paid employment and self-employment

The number of employees who contribute to retirement and disability social insurance looks poorly identified by the model. However these results compare two different units which are the number of payers in a year for EUROMOD and a monthly average for the external data. Supplementary explanation for mechanism that might have caused such differences between simulated and reported number of social insurance contributors could be provided with the fact that the Euromod model assumes that all declared incomes are registered. In real in 2007 in Poland the considerable part of labor force remained in shadow economy. The prevalence of this phenomenon in Polish economy in 2007 was estimated at level of 12-15% of GDP¹. This suggests unregistered employment assumption to be a significant reason for the observed differences. The same reason explains a difference for the illness contribution in 2007.

The number of self-employed who contribute to retirement and disability social insurance is also above the values in the external data. The differences are smaller for the consecutive years due to rising numbers of self-employed. Similarly to the previous case of employees the differences might be due to different measures – a number of payers in a year for the model and a monthly average for the administrative data – and inclusion of potentially unregistered income in the model. The number of self-employed who contribute for illness insurance is over-simulated because the model assumes that it is paid by all self-employed while the contribution is voluntary from that source.

The amounts of retirement and disability insurance contributions paid by employees are oversimulated for all years of simulation in similar way as the numbers of contributors. Values reported in external data are considerably lower than simulation results. The average simulated contribution for the illness insurance is significantly above the external data. It may be explained by higher fraction of low wages due to temporary employment and unregistered employment. The illness contribution is not paid from these sources as well as from sickness benefit that is integrated into the employment variable but it is simulated in the model.

One has to remember that self-employment income from agricultural activities and business activities are aggregated into one variable in the UDB. The potential lack of precision in the identification procedure based on the CSO data may add to discrepancies between targets and results. The total amount for retirement and disability contributions from self-employment income is over-simulated. The observed difference may be at least partially explained by applying the standard rate of 60% for calculation of the base which means that we do not account for the reduced rate of 30% for owners who are disabled and those who run up a business for less than two years.

4.1.4 Progressive income tax, health insurance contribution and agricultural tax

The number of income tax payers and total amounts of tax paid are close relative to the administrative benchmarks. The results on health insurance contributions also seem satisfactory. Two warnings about self-employed should be flagged though. Firstly, the relation between reported self-employment income in the dataset and self-employment income for tax purpose is not clear. According to the UDB description the income in the data includes the part of income from self-employment activity that is used for private consumption. This differs significantly from the tax base from self-employment. Secondly, it is assumed that self-employment income is taxed on the basis of general progressive income taxation rule. However about 45% of self-employed may use the other form of income taxation such as revenue tax or tax card.

¹ European Commission, *European Employment Observatory Review: Spring2007*, p. 7.



Agricultural tax

The number of payers of agricultural tax is poorly identified. The model number, which is the number of households with farm land, overstates the true number of the payers since not all farms pay the agricultural tax. The ones who conduct “special activities” (breeding, mushroom cultivation, fur farming, etc.) pay income tax, and some households possessing farm land conduct no agricultural activities. That is why the true number of agricultural tax payers should be lower than assumed in the validation. The total amounts are also oversimulated. The agricultural tax is a local tax and local governments have the right to lower the rate of this tax that is applied to farm size. This may explain, at least partially, the obtained difference.



Table 62. Taxes and contributions - Number of payers (in thousands)

	EUROMOD Simulation						External statistics						Ratio					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Employee contributions	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
for retirement and disability	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
for sickness	13,976	13,976	13,976	13,976	13,976	13,976	9,738	9,940	9,995	11,505	10,131	n/a	144%	141%	140%	121%	138%	---
Self-employed contributions	1,269	1,269	1,278	1,278	1,269	1,278	1,085	1,193	1,244	1,299	1,356	n/a	116%	106%	103%	98%	94%	---
for retirement and disability	1,269	1,269	1,278	1,278	1,269	1,278	1,085	1,193	1,244	1,299	1,356	n/a	116%	106%	103%	98%	94%	---
for sickness	1,269	1,269	1,278	1,278	1,269	1,278	949	1,035	1,081	1,123	1,139	n/a	133%	123%	118%	114%	112%	---
for labour fund	1,269	1,269	1,278	1,278	1,269	1,278	1,085	1,193	1,244	1,299	1,356	n/a	116%	106%	103%	98%	94%	---
Employer contributions	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
for retirement and disability	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
for accident	13,976	13,976	13,976	13,976	13,976	13,976	10,050	9,480	10,511	12,597	10,427	n/a	139%	147%	133%	111%	134%	---
for labour fund	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
for employer insolvency	13,976	13,976	13,976	13,976	13,976	13,976	9,825	10,080	10,158	10,200	10,344	n/a	142%	139%	138%	137%	135%	---
Other contributions																		
farmer contributions	1,465	1,465	1,465	1,465	1,465	1,465	1,610	1,585	1,571	1,544	n/a	n/a	91%	92%	93%	95%	---	---
Taxes																		
Total Income tax	20,467	21,135	21,264	21,441	21,697	21,813	22,897	23,178	23,161	23,279	23,084	n/a	89%	91%	92%	92%	94%	---
Capital income tax	514	514	514	514	514	514	n/a	n/a	257	486	414	n/a	---	---	200%	106%	124%	---
Health insurance	21,139	21,234	21,284	21,299	21,333	21,342	20,617	21,121	21,298	21,379	21,084	n/a	103%	101%	100%	100%	101%	---
Agricultural tax	1,281	1,281	1,281	1,281	1,281	1,281	1,998	1,962	1,926	1,891	n/a	n/a	64%	65%	66%	68%	n/a	n/a
Property tax	7,272	7,272	7,272	7,272	7,272	7,272	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---



Table 63. Taxes and contributions - Aggregate amounts (in millions of PLN)

	EUROMOD Simulation						External statistics						Ratio					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Employee contributions	67,913	54,973	58,538	59,677	62,687	64,233	48,236	46,176	47,821	47,081	49,402	n/a	141%	119%	122%	127%	127%	---
for retirement and disability	58,593	44,693	47,636	48,534	44,203	45,312	41,193	37,994	39,320	38,294	40,207	n/a	153%	134%	129%	127%	120%	---
for sickness	9,320	10,280	10,902	11,143	11,690	11,957	7,403	8,182	8,501	8,787	9,195	n/a	132%	126%	128%	127%	127%	---
Self-employed contributions	9,201	8,295	8,919	9,285	9,705	10,946	6,183	6,352	7,115	7,499	8,250	n/a	149%	131%	125%	124%	118%	---
for retirement and disability	7,996	6,959	7,482	7,789	8,142	9,292	5,202	5,178	5,803	6,120	6,776	n/a	154%	134%	129%	127%	120%	---
for sickness	602	668	718	748	782	827	344	411	464	491	522	n/a	175%	163%	155%	152%	150%	---
for labour fund	602	668	718	748	782	827	344	411	464	491	522	n/a	175%	163%	155%	152%	150%	---
Employer contributions	74,000	74,853	79,684	80,567	84,624	95,987	55,371	56,745	58,731	62,457	65,508	n/a	134%	132%	136%	129%	129%	---
for retirement and disability	58,893	56,600	60,327	61,465	64,584	75,490	43,841	43,323	44,835	48,497	50,919	n/a	134%	131%	135%	127%	127%	---
for accident	5,706	7,553	8,009	7,504	7,873	8,053	4,199	4,906	5,048	5,173	5,394	n/a	136%	154%	159%	145%	146%	---
for labour fund	9,320	10,280	10,902	11,143	11,690	11,957	7,043	8,182	8,501	8,787	9,195	n/a	132%	126%	128%	127%	127%	---
for employer insolvency	380	420	445	455	477	488	287	334	347	n/a	n/a	n/a	132%	126%	128%	---	---	---
Other contributions																		
farmer contributions	1,470	1,576	1,716	1,796	2,781	2,906	1,769	1,859	1,793	n/a	n/a	n/a	83%	85%	96%	---	---	---
Taxes																		
Total Income tax	37,325	46,425	42,163	44,492	48,039	50,548	34,398	45,051	41,475	43,806	47,122	n/a	109%	103%	102%	102%	102%	---
capital income tax	507	561	592	624	667	711	n/a	1,177	746	1,153	900	n/a	---	48%	79%	54%	74%	---
Health insurance	40,536	46,683	49,678	51,511	54,161	56,062	31,362	37,432	40,260	42,335	43,942	n/a	129%	125%	123%	122%	123%	---
Agricultural tax	1,117	1,833	1,755	1,072	1,184	2,333	931	1,228	1,239	989	1,062	n/a	120%	149%	142%	108%	111%	---
Property tax	1,574	1,642	1,712	1,753	1,818	1,895	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---



4.1.5 Family benefits (simulated)

The results are in line with previous ones obtained using EU-SILC2007. The number of recipients of the main family allowance is 17% below the administrative value for 2007. It may happen due to under-representation of small farms in the UDB and poor data on business self-employment income. The table below gives the numbers of households for which the given income was identified while some administrative values are published for the number of eligible children.

The numbers of recipients of parental leave and universal child birth allowance are identified correctly, although in the case of parental leave supplement the receipt is imputed from the UDB (using identifiers from the national CSO data).

Supplement for starting school (the number of households in the model and the number of children in the external data) and supplement for child birth are less accurately simulated presumably because of eligibility conditions that are hard for identification in the data or different age structure in the UDB. The total amounts are consistent with the simulation of the numbers showing that the eligibility identification is the main problem in the case of family benefits.

4.1.6 Unemployment benefit

The number of recipients of the unemployment benefit for 2007 is 462,000 in the database and 264,000 in the external statistics. It seems that the number of recipients of the unemployment benefit for 2007 is oversimulated but this is due to a different concept of unemployment used in comparisons - the total number of recipients in EUROMOD and a monthly average number of recipients for the benchmark. If we assume that the benefit had been received on average for six months then the expected monthly number of recipients is 87.5% of the target. We get the exact fit for the average duration of unemployment benefit receipt of 6.9 months which is quite reasonable since some benefits are paid for 12 or even 18 months.

4.1.7 Nursing allowance and nursing benefit

Eligibility conditions for nursing allowance and nursing benefit are difficult to identify. The eligibility condition for the nursing allowance is taken from the data, but since the benefit was not directly reported in the UDB it had to be imputed using the national CSO data. The nursing allowance is identified correctly. Identification of recipients of nursing benefit is less successful. The allowance is mostly paid to parents of children who need special care and disability is not necessary condition for eligibility. For example, a child with severe allergic problem might be eligible for the allowance even though she/he is not formally disabled. The eligibility condition based on disability gives too low number of recipients. The total amounts are simulated correctly since this is a lump-sum benefit.

4.1.8 Housing benefit and social assistance

The eligibility rules assume the fulfilment of two conditions: housing benefit must be declared in the EU-SILC and it must be identified by the model. As a result of that the number of recipients in the model is necessarily smaller than in the dataset. Full simulation without considering the data eligibility condition would oversimulate the benefit more than twice. The average payments are simulated correctly. Note that the housing benefit is financed by the local government (gmina) and central legislation creates only the legal framework for it. We may expect a significant level of discrepancy among local governments in the treatment of eligibility and payment of benefits. For example housing expenditures that may be covered by the benefit may range from 90% to 50% according to local government decision.



Permanent social assistance is fully simulated while the number of recipients for the temporary social assistance is calibrated using a wealth test described previously. The calibrated probability threshold for 2007 is set at the level of 3.4%, for 2008 at 4.15% for 2009 at 3.8% and for years 2010-2012 at constant level of 3.0%. The total amounts for the temporary assistance are close to the benchmarks except of year 2007. Big difference between model's accuracy in assessing aggregated amount for 2008 compared to 2007 was influenced by the change in proportions of financing this benefit form local and central budgetary funds that occurred in 2007 (check the point devoted to temporary social assistance in section *Simulation of taxes and benefits in EUROMOD* in report's structure). In case of aggregated amounts for permanent social assistance, model's simulation accuracy is low and it ranges from 66% to 87%.



Table 64. Family and Children, Unemployment, Housing and Social Assistance benefits – Number of recipients (in thousands)

	EUROMOD Simulation						External statistics						Ratio					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Family and Children																		
Family allowance	1,798	1,492	1,383	1,350	1,274	1,233	2,171	1,927	1,698	n/a	1,417	n/a	83%	77%	81%	---	90%	---
supp child birth	140	113	101	98	93	92	223	214	195	183	161	n/a	63%	53%	51%	53%	58%	---
supp education of disabled child	160	138	131	129	124	117	219	203	186	173	162	n/a	73%	68%	71%	75%	77%	---
supp starting school year	1,105	918	849	826	778	756	3,018	2,413	2,396	2,135	2,026	n/a	37%	38%	35%	39%	38%	---
supp large families	365	328	320	315	305	297	707	630	559	505	462	n/a	52%	52%	57%	62%	66%	---
supp lone parent	89	81	78	77	75	73	173	162	149	139	130	n/a	51%	50%	52%	55%	58%	---
parental leave	117	117	117	117	117	117	126	125	121	112	98	n/a	93%	93%	97%	105%	119%	---
universal child birth allowance	372	372	372	372	372	372	380	412	414	413	398	n/a	98%	90%	90%	90%	93%	---
nursing allowance	62	61	56	72	72	72	70	70	68	108	168	n/a	89%	87%	82%	66%	42%	---
nursing benefit	442	442	442	442	442	442	728	771	836	873	898	n/a	61%	57%	53%	51%	49%	---
Unemployment	462	462	462	462	462	462	264	225	334	346	309	n/a	175%	205%	138%	134%	149%	---
Housing benefit	345	318	301	293	289	299	494	387	346	351	337	n/a	70%	82%	87%	84%	86%	---
Social assistance																		
soc assist permanent	126	101	93	84	82	80	150	148	151	156	158	n/a	84%	68%	62%	54%	52%	---
soc assist temporary	258	202	201	197	209	209	258	203	201	203	205	n/a	100%	99%	100%	97%	102%	---
other soc assist	282	282	282	282	282	282	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---



Table 65. Family and Children, Unemployment, Housing and Social Assistance benefits – Amount (in millions of PLN)

	EUROMOD Simulation						External statistics						Ratio					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Family and Children																		
Family allowance	2,465	2,081	1,957	2,722	2,571	2,493	3,112	2,746	2,553	3,091	2,843	n/a	79%	76%	77%	88%	90%	---
supp child birth	143	116	104	101	96	95	222	214	195	183	161	n/a	64%	55%	53%	55%	60%	---
supp education of disabled child	158	134	128	126	121	113	201	187	171	159	149	n/a	79%	72%	75%	79%	81%	---
supp starting school year	172	145	136	133	125	122	302	241	240	214	203	n/a	57%	60%	57%	62%	62%	---
supp large families	552	503	495	489	476	463	678	605	537	485	444	n/a	81%	83%	92%	101%	107%	---
supp lone parent	346	325	313	308	299	288	363	338	313	292	273	n/a	95%	96%	100%	105%	110%	---
parental leave	411	429	447	458	475	495	589	573	561	517	457	n/a	70%	75%	80%	89%	104%	---
universal child birth allowance	375	375	375	375	375	375	380	412	414	413	398	n/a	99%	91%	91%	91%	94%	---
nursing allowance	315	308	280	446	446	532	349	336	349	667	1,031	n/a	90%	92%	80%	67%	43%	---
nursing benefit	854	854	854	854	854	854	1,336	1,416	1,535	1,603	1,649	n/a	64%	60%	56%	53%	52%	---
Unemployment	1,160	1,189	1,239	1,408	1,492	1,559	1,689	1,465	2,281	2,623	2,436	n/a	69%	81%	54%	54%	61%	---
Housing benefit	700	632	628	618	621	656	1,047	818	807	866	884	n/a	67%	77%	78%	71%	70%	---
Social assistance																		
soc assist permanent	489	437	422	387	380	375	603	605	622	648	n/a	n/a	81%	72%	68%	60%	---	---
soc assist temporary	359	529	484	420	589	573	541	648	645	637	n/a	n/a	66%	84%	86%	87%	---	---
other soc assist	117	122	127	130	135	141	n/a	n/a	n/a	n/a	n/a	n/a	---	---	---	---	---	---



4.2 Inequality and Poverty

The following indicators of income distribution are presented: mean and median equivalised incomes by gender, income quintile ratio and the Gini coefficient. According to the results, the mean and median equivalised disposable income in EUROMOD are only slightly different to the values in the original EU-SILC data.

At-risk-of-poverty rates calculated using EUROMOD baseline output are significantly underestimated in relation to EU-SILC statistics. The discrepancies in particular in the case of older population may be explained by the fact that there is likely to be a concentration of households around the 60% of the median income and thus the poverty rates calculated with respect to this threshold will be very sensitive to any potential income differences or income definitions.²

Another problem that needs explanation is the issue of decreasing poverty rates for simulation results in 2010 while in majority of cases the external statistics are showing increasing levels of at risk of poverty rates. Those differences can be explained by indexation and changes in unemployment structure. Throughout the simulation period the values of income from initial dataset are being indexed. What is more, the structure of employment remains unchanged in simulated years because of unchanging dataset. Because of income information from 2007 and unchanging employment structure, dataset 2008 does not reflect the financial crisis' influence on the income situation of households. It is visible in the data on unemployment rates in Poland that financial crisis led to increase of unemployment. Taking as an example the 50-64 group of population we see that simulation results are showing a decrease in poverty rates for 2009 and 2010 while external statistics are indicating an increase. The changing situation of 50-64 population might be explained both by changes in employment structure and the decrease in share of people taking the old-age and disability pensions. Unemployment rate in population of those aged 50-64 and below the retirement age increased from 3.1% in 2008 to 4.6% in 2010 while the share of people taking old-age and disability pensions among 55-64 decreased from the level of 51.2% in 2008 to 46.7% in 2010³.

² The same pattern – correct results for inequality and underestimation for poverty – appears also for Czech Republic 2005-2008 data.

³ See the Appendix.



Table 66. Inequality

Description	EUROMOD						External statistics						Ratio				EU-SILC			
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	Ratio
Mean income (equivalised)																				
total population	4,883	6,199	5,013	5,572	6,048	5,828	4,940	5,984	5,116	5,813	n/a	n/a	99%	104%	98%	96%	---	---	4,911	99%
males	4,936	6,273	5,073	5,636	6,118	5,891	5,001	6,062	5,174	5,865	n/a	n/a	99%	103%	98%	96%	---	---	4,855	102%
females	4,834	6,130	4,956	5,512	5,983	5,769	4,882	5,913	5,063	5,765	n/a	n/a	99%	104%	98%	96%	---	---	4,971	97%
Median income (equivalised)																				
total population	4,167	5,276	4,241	4,711	5,115	4,939	4,155	5,097	4,405	5,025	n/a	n/a	100%	104%	96%	94%	---	---	4,117	101%
males	4,203	5,342	4,280	4,757	5,165	5,004	4,197	5,196	4,482	5,087	n/a	n/a	100%	103%	95%	94%	---	---	4,078	103%
females	4,135	5,227	4,198	4,676	5,070	4,904	4,113	5,001	4,342	4,951	n/a	n/a	101%	105%	97%	94%	---	---	4,162	99%
Income quintile ratio (S80/S20)																				
	4.76	4.87	5.02	4.91	5.00	5.08	5.10	5.00	5.00	5.00	n/a	n/a	93%	97%	100%	98%	---	---	5.15	92%
Gini Coefficient																				
	30.57	30.94	31.58	31.26	31.51	31.66	32.00	31.40	31.10	31.10	n/a	n/a	96%	99%	102%	101%	---	---	32.15	95%



Table 67. Poverty

Description	EUROMOD						External statistics						Ratio				EU-SILC			
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012	Baseline	Ratio
40% median HDI																				
Total	4.57	4.79	5.10	4.81	5.10	5.39	5.20	5.40	5.70	5.70	n/a	n/a	88%	89%	90%	84%	---	---	5.18	88%
Males	4.99	5.19	5.52	5.24	5.53	5.86	5.50	5.70	6.10	6.20	n/a	n/a	91%	92%	90%	85%	---	---	5.43	92%
Females	4.18	4.43	4.72	4.42	4.69	4.95	4.90	5.10	5.30	5.30	n/a	n/a	85%	87%	89%	83%	---	---	4.95	84%
50% median HDI																				
Total	9.07	9.66	9.96	9.56	10.06	10.33	10.20	10.40	10.50	10.50	n/a	n/a	89%	93%	95%	91%	---	---	10.11	90%
Males	9.45	9.91	10.22	9.86	10.39	10.68	10.60	10.50	10.80	10.90	n/a	n/a	89%	94%	95%	90%	---	---	10.41	91%
Females	8.71	9.43	9.72	9.27	9.76	10.01	10.00	10.30	10.30	10.10	n/a	n/a	87%	92%	94%	92%	---	---	9.83	89%
60% median HDI																				
Total	15.28	16.26	16.74	16.15	16.65	16.96	16.90	17.10	17.60	17.70	n/a	n/a	90%	95%	95%	91%	---	---	17.00	90%
Males	15.48	16.42	16.90	16.38	16.84	17.16	17.00	16.90	17.40	17.80	n/a	n/a	91%	97%	97%	92%	---	---	17.17	90%
Females	15.08	16.12	16.58	15.93	16.48	16.77	16.70	17.40	17.70	17.60	n/a	n/a	90%	93%	94%	91%	---	---	16.84	90%
70% median HDI																				
Total	23.61	24.49	24.78	24.17	24.60	24.78	25.00	24.80	25.50	25.70	n/a	n/a	94%	99%	97%	94%	---	---	24.88	95%
Males	23.46	24.23	24.54	24.01	24.46	24.73	24.60	24.00	24.90	25.30	n/a	n/a	95%	101%	99%	95%	---	---	24.57	95%
Females	23.75	24.73	25.00	24.31	24.74	24.83	25.30	25.60	26.00	26.00	n/a	n/a	94%	97%	96%	94%	---	---	25.17	94%
60% median HDI																				
0-17 years	18.92	20.60	21.70	21.03	21.94	22.64	22.40	23.00	22.50	22.00	n/a	n/a	84%	90%	96%	96%	---	---	22.72	83%
18-24 years	18.00	18.33	19.11	18.79	19.27	19.94	20.10	19.80	20.90	20.70	n/a	n/a	90%	93%	91%	91%	---	---	20.20	89%
25-49 years	14.40	15.08	15.70	15.31	15.82	16.28	15.90	14.90	16.10	16.30	n/a	n/a	91%	101%	98%	94%	---	---	16.08	90%
50-64 years	14.65	15.15	15.11	14.54	14.82	14.84	14.90	15.90	16.30	16.70	n/a	n/a	98%	95%	93%	87%	---	---	14.96	98%
65+ years	11.07	13.10	12.78	11.57	11.78	11.24	11.70	14.40	14.20	14.70	n/a	n/a	95%	91%	90%	79%	---	---	11.42	97%



4.3 Summary of “healthy warnings”

Some particular aspects should be born in mind using the Polish part of EUROMOD:

- 1) the weights do not control for different sources of non-response;
- 2) many sources of income are combined into one variable in EU-SILC what makes difficult to separate:
 - a) agricultural and business self-employment;
 - b) temporary and permanent employment;
 - c) work employment and sickness benefit;
 - d) simulated and non-simulated supplements to family allowance.
- 3) there are suggestions that there are too few small farms in a sample;
- 4) there are suggestions that declarations on self-employment are not reliable.

5. APPENDIX

Table 68. Total unemployment rate in Poland (2nd quarter of the year)

	2007	2008	2009	2010
Rate of unemployment	9.6%	7.1%	7.9%	9.5%

Source: GUS (2013), *Baza danych lokalnych*.

Table 69. Total unemployment rate within the population of males aged 50-64 and females aged 50-59 (state in 4th quarter of the year)

	2007	2008	2009	2010
Rate of unemployment within population	4.4%	3.1%	3.8%	4.6%

Source: Own calculations based on: CSO (2013), *People over 50 on the labour market in 2010 (2008, 2009)*.

Table 70. Pensions in population group of 55-64

	2007	2008	2009	2010
Old-age pensions, disability pensions (in th.)	2,228.7	2,401.0	2,484.5	2,449.7
Population (in th.)	4,440.1	4,687.9	4,929.2	5,245.5
Old-age pensions, disability pensions (in % of population)	50.2	51.2	50.4	46.7

Source: Own calculations based on: ZUS (2013), *Emerytury i renty przyznane w 2010 r. (2007, 2008, 2009)*; GUS (2013), *Baza danych lokalnych*.



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