EUROMOD

COUNTRY REPORT

FINLAND (FI)

2007-2011

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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 Finland. This work was carried out by the EUROMOD core developer team, based mainly in ISER at the University of Essex, in collaboration with a national team.

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The results presented in this report are derived using EUROMOD version F6.0 EUROMOD is continually being improved and the results presented here may not match those that would be obtained with later versions of EUROMOD.

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

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

This programme is managed by the Directorate-General for Employment, social affairs and equal opportunities 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

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1. Basic Information[1]

1.1 Basic figures

Table 1. Basic figures

	Population (m.)	Population < 18 (%)	Population ≥ 65 (%)	Life Expectancy (in years)	Fertility Rate	Unemployment Rate	GDP per head (PPP)	Currency	
								Name	Exch. rate
2007	5.3	20.8	16.5	79.6	1.83	6.9	118	Euro	1.00
2008	5.3	20.7	16.5	79.9	1.85	6.4	119	Euro	1.00
2009	5.3	20.5	16.7	80.1	1.86	8.2	115	Euro	1.00
2010	5.4	20.3	17.0	80.2	1.87	8.4	115	Euro	1.00
2011	5.4	20.2	17.5	-	-	7.8	-	Euro	1.00

Note: Proportion of population aged less than 18 and 65 or over have been added up.
Source: Eurostat (2012) Statistics Database. Last accessed February 2012.

Table 2. Tax-benefit system and government budget

	Total general government revenue % of GDP	Total tax receipts % of GDP	Total general government expenditure % of GDP	Social protection % of GDP
2007	52.6	43.0	47.3	25.4
2008	53.5	42.9	49.3	26.2
2009	53.3	42.6	56.2	30.3
2010	53.4	42.1	55.1	-
2011	-	-	-	-

Sources: *OECD (2012) database: Last accessed February 2012;
*Eurostat (2012), Statistics Database. Last accessed February 2012.

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

	Sickness/ health care	Disability	Old age	Survivors	Family/ children	Unemployment	Housing	Social exclusion
2007	26.3	12.6	35.0	3.5	11.6	7.8	1.0	2.2
2008	26.8	12.6	34.6	3.4	11.6	7.1	1.7	2.2
2009	25.6	12.3	35.3	3.3	11.3	8.2	1.7	2.4
2010	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-

Source: Eurostat (2012), Statistics Database. Last accessed February 2012.

[1] All sources referred in this chapter (and this report) with the available websites, are listed in chapter 5.

Table 4. Taxes and social contributions, as % of total receipts

	Personal income tax	Corporate income tax	Social security contributions		Taxes on goods and services	Other taxes
			Employees[1]	Employers		
2007	30.3	9.0	7.9	20.3	30.1	2.4
2008	30.9	8.1	7.9	20.9	30.0	2.2
2009	31.2	4.7	8.7	22.0	31.4	2.0
2010	29.7	6.0	9.2	21.1	31.5	2.5
2011	-	-	-	-	-	-

Note: [1] Include self-employed and non-employed persons.
Source: OECD (2012) Statistics Database; Last accessed February 2012. The shares of total tax receipts calculated separately.

1.2 Basic information about the tax-benefit system

- The Finnish tax-benefit system is largely a uniform national system. The main exceptions are local tax rates which differ across municipalities and Churches and housing benefits which differ in different parts of the country.
- The "fiscal year" in taxation is the calendar year.
- The personal income tax system is individual with spouses being assessed independently. However, in some cases, it is possible to transfer tax deduction between spouses.
- Compulsory school starts at the age of seven. The age when obligatory schooling ends is normally 17 year.
- Dependent child is defined as being less than 18 years old.
- There are two complementary pension systems, a national pension based on the residence and an earnings-related pension based on the employment history.
- The earnings-related pension system allows a person to choose the retirement flexibly between the age of 63 and 68 years. It is also possible to continue working after 68 years or retire earlier. In the first case the amount of pension increases and in the second case decreases permanently. The retirement age for national pension is 65 years for both men and women.
- For benefit purposes lone parents are defined as parents with dependent child and not co-habiting with another person in a marriage-like relationship.
- The benefit schemes are basically divided into two types depending on how they are financed. With some exceptions the basic (minimum) social security benefits are financed by the state and earnings-related contributory benefits by employees, self-employed and employers.
- Earnings-related benefits are calculated on the basis of annual or monthly income. They are usually paid out on a daily basis except pensions which are paid on a monthly basis. Unemployment benefits are paid out on a working day basis (from Monday to Friday) whereas other daily allowances are paid out on a weekday basis (from Monday to Saturday).

- Almost all social benefits are adjusted annually either by price index or by “mixed” indices. From March 2011 only student benefits are not adjusted by any index. None of the social benefits are adjusted by earnings index.
- Means-testing is defined as testing against spouse’s, household’s or person’s own income.
- Earnings-related benefits are not means-tested except the survivor’s pension, which is means-tested against person’s other pensions.
- Taxable benefits are paid to individuals. Non-taxable benefits are paid to individuals and households or, in case of local income support (social assistance), to individuals and families.
- Eligibility considerations for unemployment benefits can entail means-testing if a person is partly-employed. Partly employed persons may receive unemployment benefits and wage income at the same time if certain conditions are met (so-called conciliated adjustable allowance). In this case the unemployment benefit is cut by half of the wage income.
- Minimum benefits may be means-tested or not. Family benefits are generally not means-tested with an exception of child home care allowance.
- Most of the benefits are subject to income tax. The most important non-taxable benefits are housing allowances, child benefit and local income support. Some disability benefits are also non-taxable.
- Tax liability is based on annual income and tax allowances and thresholds are referred to in annual terms.
- Personal income taxation is based on a dual income tax system where all incomes are divided into earned and capital income. Both income types are taxed separately with different rates. Earned income includes employment, pension and other benefit incomes. Capital income includes e.g. return on deposit, property and investment as well as gains from sale of property. Only net incomes are taxed meaning that expenses directly related to the income are deductible in both capital and earned taxation.
- Income from self-employment is divided into earned and capital income in personal taxation. This is to address the fact that income is generated both from labour and capital inputs committed by the self-employed. Two main types of self-employed are entrepreneurs and farmers.
- Monetary tax parameters are not automatically indexed with an exception of pension deduction parameters in state and local taxation. These deductions are based on full national pension which is adjusted by price index. All other possible changes in tax rules (deductions, income limits in the schedule, marginal rates etc.) are decided annually.
- There are three taxes based on earned income in this report: state tax, municipal tax and church tax - even if the latter is based on voluntary membership of Church.
- The earned income subject to tax is the same in state and local taxation but tax allowances, and thus tax bases, differ.
- Municipal and church tax rates are flat and applied to local tax base. They are decided independently by municipalities and Churches.
- A progressive tax schedule is applied to earned income tax base in state taxation.

- Although earned income and capital income are taxed separately there are links between them. Some tax credits are subtracted both from earned and capital income taxes. Some interests are deductible in capital taxation but may also be deductible (a share of them) from earned income taxes.

1.3 Social Benefits

Social security benefits can be divided into three different categories: The first consists of *contributory* earnings-related benefits. Entitlements to these benefits are usually based on contributions paid by employees, self-employed and employers. The second type of benefits is *non-contributory, non-means-tested* benefits. These benefits depend on specific conditions such as disability or parenthood. The third type of benefits is *means-tested benefits* which depend on a range of personal or family circumstances and on own, spousal or family incomes.

1.3.1 Contributory benefits

All the contributory benefits (incl. pensions) are earnings-related. The contributions depend on the size of earnings with an exception of earnings-related unemployment allowance where the fee to the fund may be a flat amount. Most of the contributory schemes are statutory for employees. The contributory benefits, as all other earnings replacement benefits, are taxable and usually not subject to any means-testing. There is no upper limit for employee, self-employed or employer contributions. Neither there is any ceiling in any of the contributory benefits. The main such benefits are the following.

Earnings-related unemployment allowance (*ansiopäiväraha***)** is a benefit for unemployed persons aged between 17–64 years who are registered as full-time job seekers at the local employment office. The claimant must be a member of unemployment fund and meet the working condition. For person with dependent child a supplement is paid. The allowance is payable for a maximum of 500 working days.

Sickness leave benefit (*sairauspäiväraha*) is paid from the sickness insurance. Eligible are 16-67 year-old (from 2011) employees and self-employed. The benefit is paid for maximum of 300 weekdays. The benefit amount is based on person’s previous employment income reported to the tax authorities or on the last 6 months average employment income. For self-employed the benefit is based on the estimated employment income which is the base for all their contributory benefits.

Maternity leave benefit (*äitiysraha*) is paid for 105 weekdays. The minimum amount of the benefit equals the minimum amount of sickness leave benefit. **Parental leave benefit** (*vanhempainraha*) is paid either to a mother or to a father when the maternity leave period has expired. The benefit is paid for 158 weekdays to the parent who stays at home and takes care of the child. Both parents cannot receive the parental leave benefit at the same time. Increased parental leave benefit is paid for the first 30 days of paternal leave. **Paternity leave benefit** (*isyysraha*) is paid to a father for 18 days. The benefit can be divided into maximum of four distinct periods during the maternity or parental leave periods. The standard amount of paternity leave benefit equals the standard parental leave benefit.

Old-age pension (*vanhuuseläke***)** scheme is flexible. A person may choose to retire between 63-68 years of age. There is an incentive to carry on working in the sense that the employment income accrues more pension income in the old ages. A predated old-age pension is possible at the age of 62 years. In this case the pension is permanently reduced by 0.6 percent for each predated month. The pension may also be deferred beyond the age of 68. In this case the pension is increasing by 0.4 percent for every postponed month.

Part-time pension *(osa-aikaeläke)* is designed to employee and self-employed who want to work less and retire (partly) earlier. The age limits when it is possible to retire are the following: a) 58-64 if born before 1947, 58-67 if born in 1947-1952 and 60-67 if born later than 1952. To be eligible to the benefit, earnings must also be reduced by 35-70 percent from full-time work to part-time work. The amount of the part-time pension is 50 percent of the difference between the full-time and part-time earnings, but at most 75 percent of that old-aged pension which is accrued up to the start of the part-time pension. The full time earnings are calculated as the mean of the previous five years monthly wage.

Unemployment pension (*työttömyyseläke*) as an earnings-related pension is awarded to a long-term unemployed person who is 60-63 years old and whose unemployment allowance has expired after the maximum period of 500 days. A further criterion is that the applicant is born before 1950 and has been working at least 5 years during the last 15 years. If a person is born in 1950 or later, he or she is not entitled to the unemployment pension.

Disability pension (*työkyvyttömyyseläke*) is awarded to a person aged between 18-62 years and who is incapable to work because of illness, handicap or injury. Depending on the reduction in work ability the disability pension is paid either as a full or partial pension. Often a temporary r**ehabilitation allowance** (*kuntoutustuki*) is paid before the disability pension benefit. The amount of the rehabilitation allowance is the same as disability pension. It is also paid either as full or partial benefit.

Survivors' pension (*perhe-eläke*) can be paid to a surviving spouse, former spouse (in some cases) and to a child of the deceased. The pension is divided into two types: surviving spouse's pension and orphan's pension.

Work injury pension *(työtapaturmaeläke)* is paid to all employees and farmers in case of accident at work or on the journey between home and work. The pension is paid after the work injury daily allowance period has expired (maximum one year). The full work injury pension amounts to 85 percent of annual earnings if a person is less than 65 years and 70 percent if at least 65 years. When a person reaches the age of 65 years "the name" of all pensions is changed to old age pension. The pension may be paid as full or partial.

Basically all contributory benefits are paid as non-contributory minimum benefits if a person has no work history and is thus not entitled to employment pension.

1.3.2 Non-contributory, non-means-tested benefits

Basic unemployment allowance (*peruspäiväraha*) is payable to a person aged between 17–64 years who is registered as full-time job-seeker at the local employment office and meets the employment condition. The claimant must also be available to the labour market. The benefit is payable for a maximum of 500 working days. It is taxable.

Child benefit (*lapsilisä*) is a universal flat-rate benefit paid for every child under 17 years of age and resident in Finland. The benefit is paid regardless of any other benefits (or any other reasons). The amount of child benefit per child is larger if there are more children in household, up to the fifth child. Parents may choose which one of them receives the benefit. The child benefit is not taxable.

Disability allowance *(vammaistuki)* is designed to provide financial support to disabled persons in everyday life. There are two types of disability allowances with different conditions and amounts: one paid to disabled persons between 16-64 years and another paid to children aged less than 16 years. Both types of benefit are in three categories depending on the nature of the illness or handicap. The disability allowance is not taxable.

Pensioners' care allowance *(eläkkeensaajien hoitotuki)* is designed to give financial support to long-time sick or disabled pensioners. Pensioners' care allowance is scaled into three groups based on the need for assistance and the size of special costs. The allowance is not taxable.

Home care allowance *(omaishoidon tuki)* is a compensation paid to a person who takes care of an elderly, disabled or ill person at their home. It is possible to pay the allowance to a family member or relative. Home care allowance can also be provided in the form of services (e.g. food or transport services). The benefit is arranged by municipals. It is taxable if paid in cash.

1.3.3 Means-tested benefits

The national pension (*kansaneläke***)** is a basic minimum pension. It is means-tested against person's occupational pension income. Pensioner's other incomes or the wealth does not affect the national pension, neither spouse's income or wealth. The national pension is paid as disability pension (at the age of 16-64 years), unemployment pension (at the age of 60-64 years) and old age pension (from the age of 65 years or 62 year if predated pension). The age limit for old-age pension is 65 year which is different from the contributory earnings-related pension where retirement age is flexible between 63–68 years. In 2011 so-called guarantee pension was introduced which guarantees a certain level of pension to all pensioners (euro/month in 2011). The amount of national pension is different for single persons and couples who may be married or co-habiting. The national pension is subject to tax but because of pension deductions no taxes are paid if there is no other taxable income. If a person has lived abroad long enough, the national pension may be smaller because it is related to the time lived in Finland.

Labour market subsidy *(työmarkkinatuki)* is granted to an unemployed person aged between 17-64 years who is registered as job seeker at the employment office. The benefit is designed for people who do not meet the working condition or have received basic or earnings-related allowance the maximum of 500 benefit days. In the latter case the labour market support is not means-tested for the first 180 days. The size of the benefit depends on own and spouse's income and parent's income if a person is living at home. There is no time limit for the labour market subsidy. The benefit is taxable.

Child home care allowance *(kotihoidon tuki)* is designed to support the child care of small children at home. The child home care allowance includes two components: an allowance and a supplement. The first is a flat-rate benefit and the second is means-tested against other family income. Municipalities may pay additional supplements and decide the rules applied to them. The partial home care allowance may be paid out if parents reduce their working hours due to childcare. The benefit is taxable.

General housing allowance *(yleinen asumistuki)* decreases the housing costs of low-income households. Housing allowance can be paid to households living in rented, right-to-occupancy or owner-occupied dwellings. The allowance is admitted only to the reasonable housing costs. The size of the benefit depends on the number of persons living in the household, the monthly household income and the location of the dwelling (the country is divided into four areas). The household is defined as all persons living in the same dwelling. General housing allowance is not taxable.

Housing allowance for pensioners *(eläkkeensaajien asumistuki)* is paid to pensioners with low income. The size of the benefit depends on housing costs and family relations as well as the income and wealth of a pensioner and the spouse. The age of the pensioner has no significance. The pensioner's housing allowance is not taxable.

Student housing supplement *(opintotuen asumislisä)* is designed to cover a share of students housing costs. Students may live in a rented or in a right-of-occupancy dwelling in order to be eligible for the benefit. The benefit is paid only for "the study months". It is means-tested against student's all income and, if under 18-years, also against parents' income. Until 2009 also spouse's income decreased the benefit. The student housing supplement is not taxable.

Study grant *(opintoraha)* is a benefit paid for full-time studies after comprehensive school, i.e. for upper secondary school studies or vocational, supplementary and higher degree education. It is one component of the student's financial aid, which consists of study grant, housing supplement and student loan as well as certain subsidies, such as meal and travel subsidy. The study grant is taxable.

Local authority income support *(toimeentulotuki)* is the last resort income security. It ensures the minimum subsistence to all persons and families regardless of any preconditions. Anyone (any family) whose income and wealth are insufficient to meet the subsistence needs is entitled to the income support. The benefit includes two components: a) a basic component which covers basic needs (e.g. costs of food, clothing, hobbies, TV, telephone and minor health care expenditures) and b) a supplementary component which covers certain other expenses (e.g. day care fee, additional housing costs and health care costs). The income support is means-tested against all personal or family income after taxes and contributions. The benefit is paid by the local authority. It is not taxable.

1.3.4 Not strictly benefits

There are elements in the Finnish social security which are not strictly benefits. Sometimes these payments may be seen as substitutes for benefits. The most important such payments are:

Municipal child day-care fee *(lasten päivähoitomaksu)* is a service charge paid by families for child day care. The public child day-care is an alternative to the child home care and to the private day care. All children under school age (7 years) are entitled to municipal childcare. In other words all families have a "subjective right" to public child day care. Entitlement begins when the period of parental allowance ends. In some cases, e.g. if the child participates in pre-school education before starting the comprehensive school, the day-care may be arranged on a part-time basis. The day care fee is based on the family income. The maximum fee was 200 euro/ month for the first child, 180 euro for the second child and 20 percent of the first child's fee for each other children (in 2007). The minimum fee was 18 euro/month per child. The rules changed in August 2008. The maximum fee increased to 254 euro for the first child and 229 euro for the second child. Also income limits changed and income classes increased from three to five. For low-income families the day care is free of charge.

Private day-care compensation *(yksityisen hoidon tuki)* is paid for families whose children are in private day-care. The compensation is paid directly to the day-care center or private babysitter. As in public day-care the fee can be paid when the parental allowance period ends and until the child begins the comprehensive school. The private day-care compensation is paid as a flat care allowance and as a means-tested care supplement. Both are paid for each child. The care supplement is means-tested against all family income in the same way as the child home care supplement.

- ***Scope and scale***

The recipients and the expenditures of the main social benefits are shown in Tables 5 and 6. "Not strictly benefits" are not included.

Table 5. Social benefits: number of recipients and recipients as % of population in 2007–2009

	2007		2008		2009	
	Number	**%**	**Number**	**%**	**Number**	**%**
Pensions	1,389,832		1,414,200		1,443,189	
Old-age pension	978,278	18.5	1,005,277	19.0	1,048,379	19.7
Part-time pension	29,988	0.6	29,140	0.5	27,887	0.5
Unemployment pension	50,263	1.0	50,770	1.0	46,602	0.9
Disability pensions[1]	271,624	5.1	272,878	5.1	272,326	5.1
Survivor's pensions	287,889	5.5	287,405	5.4	287,162	5.4
Unemployment benefits						
Basic unemployment allowance	44,665	0.8	44,778	0.8	63,949	1.2
Earnings-related allowance	232,619	4.4	224,720	4.2	366,590	6.9
Labour market subsidy	202,554	3.8	183,485	3.5	184,009	3.5
Sickness leave benefit[2]	176,788	3,4	168,304	3,2	163,152	3,1
Disability benefits						
Disability allowance[3]	47,452	0.9	45,690	0.9	44,071	0.8
Rehabilitation allowance	58,996	1.1	58,056	1.1	54,299	1.0
Pensioner care allowance[3]	192,833	3.7	196,828	3.7	198,882	3.7
Home care allowance	6,200	0.1	6,600	0.1	6,700	0.1
Family benefits						
Parental benefits[3] [4]	152,309	2.9	155,174	2.9	156,837	2.9
Child home care allowance	113,327	2.1	113,736	2.1	114,669	2.2
Child benefit[5]	565,212	10.7	596,549	11.3	596,254	11.2
Housing benefits						
General housing allowance [3]	142,240	2.7	139,390	2.6	161,842	3.0
Housing allowance for pensioners[3]	173,518	3.3	175,449	3.3	177,916	3.3
Student housing supplement	213,475	4.0	210,302	4.0	218,588	4.1
Social assistance benefits						
Study grant	315,599	6.0	322,418	6.1	331,933	6.2
Local authority income support	217,842	4.1	215,570	4.1	238,755	4.5

Notes:
[1] Include full and partial disability pensions and individual early retirement pensions due to disability.
[1] Individual recipients only, not employers.
[3] Recipients 31.12.
[4] Include recipients of maternity, parental and paternity leave benefit.
[5] Recipients 31.12 in 2007.
Sources:
*Social Security Institution, KELA: Statistical Yearbook 2007-2009.
*Social Security Institution, KELA, Statistical Database.
*Finnish Center for Pensions, ETK, Statistical Database
*National Institute for Health and Welfare, THL: Income support 2007-2009 and Database SOTKAnet.

Table 6. Social benefits: expenditure in millions and as % of total expenditure in 2007–2009

	2007		2008		2009	
	Mill. euro	**%**	**Mill. euro**	**%**	**Mill. euro**	**%**
Pensions	**19,573**	**42.9**	**20,281**	**41.8**	**21,982**	**42.0**
Old-age pension	13,012	28.5	13,790	28.4	15,268	29.2
Part-time pension	214	0.5	216	0.4	221	0.4
Unemployment pension	679	1.5	723	1.5	696	1.3
Disability pensions[1]	3,122	6.8	3,061	6.3	3,159	6.0
Survivor's pension	1,478	3.2	1,521	3.1	1,600	3.1
Other pensions	1,068	2.3	970	2.0	1,038	2.0
Unemployment benefits	**2,338**	**5.1**	**2,207**	**4.5**	**2,989**	**5.7**
Basic unemployment allowance	95	0.2	96	0.2	166	0.3
Earnings-related allowance	1,515	3.3	1,445	3.0	2,090	4.0
Labour market subsidy	706	1,5	645	1.3	710	1.4
Other unemployment benefits	22	0.0	21	0.0	23	0.0
Sickness leave benefit[2]	**424**	**0.9**	**423**	**0.9**	**451**	**0.9**
Disability benefits	**558**	**1.2**	**580**	**1.2**	**622**	**1.2**
Disability allowance	104	0.2	102	0.2	102	0.2
Rehabilitation allowance	58	0.1	59	0.1	65	0.1
Pensioner care allowance	278	0.6	291	0.6	310	0.6
Home care allowance	118	0.3	128	0.3	145	0.3
Family benefits	**2,398**	**5.5**	**2,445**	**5.0**	**2,547**	**4.9**
Parental benefits[4]	656	1.7	695	1.4	761	1.5
Child home care allowance	331	0.7	325	0.7	349	0.7
Child benefit	1,411	3.1	1,425	2.9	1,437	2.7
Housing benefits	**1,008**	**2.2**	**1,019**	**2.1**	**1,119**	**2.1**
General housing allowance	431	0.9	428	0.9	482	0.9
Housing allow. for pensioners	334	0.7	349	0.7	370	0.7
Student housing supplement	243	0.5	242	0.5	267	0.5
Social assistance benefits	**882**	**1.9**	**967**	**2.0**	**1,119**	**2.1**
Study grant	406	0.9	441	0.9	504	1.0
Local authority income support	476	1.0	526	1.1	615	1.2
Total (benefits)	**27,188**	**59.6**	**27,930**	**57.5**	**30,837**	**58.8**
Total (benefits and services)[6]	**45,615**	**100.0**	**48,572**	**100.0**	**52,307**	**100.0**

Notes and sources: See Table 5.
[6] Total social expenditure by National Institute for Health and Welfare (ESSPROS).

1.4 Social contributions

Social insurance contributions are used to finance contributory pensions and other contributory benefits, public health care and to some extent national pensions (up to 2010). Employees have four statutory social security contributions. Three of them, *occupational pension contribution*, *unemployment contribution* and *sickness daily allowance contribution*, are based on gross wage (incl. taxable in-kind-benefits). They are all deductible in personal taxation.

Entrepreneurs have two statutory social security contributions: occupational pension contribution and sickness daily allowance contribution. In addition farmers have to pay *work injury* and *group life insurance contributions*. Self-employed persons, entrepreneurs and farmers, may pay and deduct their pension contributions either in their business and farming activity or in their personal taxation. In the first case the contributions are not anymore deductible in personal taxation. The sickness daily allowance contributions are deductible only in personal taxation. Farmers subtract work injury and group life insurance contributions in their farming activity.

The base for all social insurance contributions of self-employed persons is a "hypothetical" YEL-income (entrepreneurs) and MYEL-income (farmers). These are not actual incomes received from self-employment but estimated employment incomes. Ideally they correspond the income paid to a person who would do the same work as the self-employed and with the equal professional skill.

The health care sickness contribution is based on local tax base and is paid by all individuals who have positive tax base. The contribution of self-employed persons is not based on the actual local tax base but on the "hypothetical" tax base. In this tax base the actual self-employment income is replaced by YEL- or MYEL-income and the local tax deductions are subtracted from this income, except the pension contribution. We may call this as the "adjusted" local tax base.

Employers finance the same contributory benefits as employees and self-employed. In addition they have to pay some other contributions. On average the employer contribution rate is approximately five times higher than the employee contribution rate.

- ***Individual contributions***

Occupational pension contribution (*työeläkevakuutusmaksu*) is statutory for all employees and self-employed. The employee contribution is based on the gross wage and the self-employed contribution on the estimated employment income (YEL- or MYEL-income). The contribution rate is the same for all individuals with certain exceptions. People aged at least 53 years have higher contribution rate than younger persons. In addition self-employed have higher contribution rate than employees. Farmers' contribution rate depends to some extent on the size of the income from farming.

National pension contribution for individuals was abolished in 1996.

Employee unemployment contribution (*työttömyysvakuutusmaksu*) is statutory for all employees but voluntary for self-employed. The contribution rate is the same for all employees. The employee unemployment contribution is an exception among social contributions in the sense that it is based on wage but is not directly connected to the contributory benefit. To be entitled to the contributory earnings-related unemployment benefit another "contribution" is required, **the fee to the unemployment fund**. The membership of the fund is voluntary. The fee may be either as a percentage share of wage or a flat-rate fee. To be entitled to the earnings-related unemployment benefit also the employment condition must be fulfilled.

Sickness daily allowance contribution (*päivärahamaksu*) is statutory for all employees and self-employed. The base for the employee contribution is the gross wage. For self-employed the base is the estimated employment income (YEL- and MYEL-income). The contribution rate is the same for wage and farming income but higher for entrepreneur income.

Health care contribution (*sairaanhoitomaksu*) is based on the local tax base. This means that people with very low income do not pay the contribution. For benefit and pension income the contribution rate is higher than for employment income. To say, the contribution rate is higher if sickness daily allowance contribution is not paid from that income. As described above for self-employed the calculation of the contribution is based on the "adjusted" local tax base where employment income is replaced by the estimated YEL- or MYEL-income. Health care contribution and sickness daily allowance contribution make together the sickness insurance contribution.

- ***Employer contributions***

All employers' contributions are based on gross wage but the contribution rates differ depending on e.g. the number and age of employees, the institutional sector, the wage sum and responsibilities to pay disability or unemployment pensions. This means that contributions are different for most of the employers. Only the sickness contribution rate is the same for all employers. Employers, as employees, pay occupational pension contribution**,** unemployment contribution and sickness contributions**.** In addition they have to pay the following contributions:

Work injury insurance contribution (*tapaturmavakuutusmaksu*) covers all employees. The size of the contribution is determined according to different criteria, which may be slightly different in each insurance company. The work injury contribution is statutory also for farmers but voluntary for entrepreneurs.

Life insurance contribution (*henkivakuutusmaksu*) is not based on legislation but on trade union agreements. Nevertheless it includes most of the employees and all farmers.

National pension contribution (*kansaneläkemaksu)* is not a contribution to any contributory benefit because the national pension is a flat-rate minimum benefit. The minimum benefits are usually financed by taxes but employers are also obliged to contribute to national pension scheme (up to 2010).

- ***Scope and scale***

Table 7. Social contributions: number of contributors in 2007-2009

	2007	**2008**	**2009**
Occupational pension contribution			
Private sector employees	1,707,908	1,615,788	1,593,589
Seamen	9,200	9,163	8,118
State employees	180,000	190,000	180,000
Municipality employees	490,000	495,000	500,000
Church employees	18,948	18,719	18,916
Other public pension schemes	9,000	9,000	9,000
Entrepreneurs	188,140	192,393	191,080
Farmers	86,549	84,063	82,906
Unemployment contribution			
Unemployment fund members(voluntary)	1,972,587	1,975,987	1,999,451
Employee UB contribution (statutory)			
Sickness contribution (estimation)[1]	3,883,000	3,935,000	3,896,000

Note: [1] Include sickness daily allowance and health care contribution.
Sources:
*Finnish Center for Pensions, ETK: Statistical Database – Financing.
*Työttömyyskassat (2009), Unemployment Funds.
*Verotilasto (2008-2010), Tax statistics for 2007-2009: Tax Administration Publications.

Table 8. Social contributions: revenue in millions and as % of total revenue in 2007-2009

	2007		2008		2009	
	Mill. euro	**%**	**Mill. euro**	**%**	**Mill. euro**	**%**
Individual occupational pension contr.	3,758		3,865		4,047	
Private sector employees	2,027	34.9	2,087	35.9	2,132	35,7
Seamen	28	0.5	29	0.5	27	0.5
State employees	294	5.1	291	5.0	315	5.3
Municipality employees	579	10.0	596	10.3	653	10.9
Church employees	21	0.4	22	0.4	23	0.4
Entrepreneurs	660	11.4	691	11.9	735	12.3
Farmers	140	2,4	140	2.4	151	2.5
Others	10	0.2	10	0,2	11	0,2
Unemployment contribution	508		404		322	
Employee fund members (voluntary)	133	2,3	131	2,3	131	2,2
Employee contribution (statutory)	375	6,5	273	4,7	191	3,2
Individual sickness contribution[1]	1,539	26,5	1,543	26,5	1,609	26,9
Total revenue (paid by persons)	**5,805**	**100.0**	**5,812**	**100.0**	**5,978**	**100.0**

Notes and sources: See Table 7. Include additional calculations by Statistics Finland.

1.5 Taxes

The number of income taxpayers is shown in Table 9 and the composition of different taxes and social contributions in Table 10. Income taxes make up to 39 percent and social contributions 28 percent of the total tax revenue (2007). Excluding tax on deposit interest, corporate income tax, inheritance tax, gift tax, real estate tax and indirect taxes, the EUROMOD covers nearly 60 percent of the total tax and social contribution revenue. A short outline of all taxes is presented in this chapter.

- ***Direct taxes***

Income taxes *(tuloverot)* are the most important direct taxes. The corporate and individual taxation is based on net income ("pure income"), which is defined as income after all expenses related to that income are subtracted. In the dual tax system all personal incomes are divided into capital and earned income and taxed separately.

Corporate income is taxed with a flat tax rate (26%) in all policy years.

All personal *capital income* is taxed with the same tax rate as corporate income (28%). Interests paid to individuals from domestic bank deposits or from bonds offered to the public are also capital income and taxed with the same rate. As an exception to other capital incomes these interests are taxed at source. The capital income tax is levied by the state.

A progressive tax schedule is applied to personal *earned income* in state taxation and flat tax rates in local taxation. There are two kinds of local taxes: a municipal tax and "a church tax". Municipalities and churches decide the tax rates independently before the end of the year. The same local tax base is applied also to the health care contribution. Tax bases in state and local taxation are different because tax allowances in state and local taxation are different.

To divide income into capital and earned income on the basis of income source is not always straightforward. As described, income from self-employment is divided into capital and earned income in personal taxation. Also dividends from non-listed companies may be capital or earned income. Dividends from publicly listed companies are always capital income. Neither earned income or capital income dividends are fully taxable. Different rules concerning the tax liability are applied to dividends from publicly listed and from non-listed companies.

The taxation of capital and earned income is not totally separated. Some tax credits are subtracted both from capital and earned income taxes. Neither is the personal tax system entirely individual. There are tax credits which are possible to subtract from spouse's taxes if own taxes would become negative.

Inheritance tax *(perintövero)* is a tax on wealth received either as bequest or through testament. A progressive schedule on wealth is applied. The tax is levied by the state.

Gift tax *(lahjavero)* is applied to the value of the gifts according to the same principles as bequests.

Real estate tax *(kiinteistövero)* is levied on property. The most important exemptions are forests and agricultural land. The tax is based on taxable value of the property. It is paid to the municipality where the property is located. Municipalities decide the tax rates annually within certain limits that are decided in legislation.

- ***Indirect taxes***

Value added tax *(arvonlisävero)* is a general consumption tax on goods and services. There are three rates: a general rate of 22 percent (23% from 1.7.2010) is applied to most of the consumption goods, a reduced rate of 12 percent (13%) is applied to food and fodder and a reduced rate of 8 percent (9%) is applied to medicine, books, passenger transportation, accommodation, culture, sports, small repair services etc. The zero rate is levied on newspapers and magazines (up to 2011).

Excise duties *(valmisteverot)* are levied on e.g. alcohol and alcoholic beverages, tobacco products, liquid fuels, electricity and certain fuels, sweets, ice cream and soft drinks.

Taxes on special services *(veronluonteiset maksut)* consist of fees, which are in principal mandatory but are not enacted as taxes. These include pharmacy fee, television license, fire protection charge etc..

Car tax *(autovero)* is applied to cars registered in Finland for the first time. **Vehicle tax** (*ajoneuvovero)* is collected on annual basis.

- ***Customs duties***

Customs duties *(tullimaksut)* levied in Finland are based on a common customs tariff. EU-member states are entitled to a commission of 25 percent of the customs revenue.

- ***Scope and scale***

Table 9. Income taxes: number of taxpayers and taxpayers as % of population in 2007-2009

	2007		2008		2009	
	Number	**%**	**Number**	**%**	**Number**	**%**
Income taxes						
State tax on capital income	1,036,382	19.55	845,503	15.95	876,873	16.46
Tax on deposit interest	-	-	-	-	-	-
Corporate income tax	99,132	1.85	100,269	1.89	97,544	1.88
State tax on earned income	2,326,409	52.10	2,048,198	38.64	1,751,418	32.88
Municipal tax on earned income	3,870,937	73.19	3,914,206	73.85	3,865,567	72.57
Church tax on earned income	3,170,165	59.94	3,170,943	59.82	3,084,740	57.92

Source: Verotilasto (2008-2010), Tax statistics for 2007-2009: Tax Administration Publications.

Table 10. Taxes and social contributions: revenue in millions and as % of total revenue in 2007-2009

	2007		2008		2009	
	Mill. euro	**%**	**Mill. euro**	**%**	**Mill. euro**	**%**
Direct taxes, total	**33,065**	**41.9**	**32,135**	**41.6**	**29,354**	**38.5**
Income taxes	31,053	39.3	30,087	39.0	27,451	35.9
State tax on capital income	2,449	3.8	1,866	3.4	1,336	2.4
Tax on deposit interest	253	0.3	432	0.5	493	0.7
Corporate income tax	7,153	6.9	5,460	6.2	4,337	3.0
State tax on earned income	6,155	8.0	6,327	7.9	5,339	7.2
Municipal tax on earned income	14,216	20.2	15,134	20.8	15,100	22.5
Church tax on earned income	827	0.2	868	0.1	846	0.1
Inheritance taxes	384	0.5	545	0.7	368	0.5
Gift tax	75	0.1	106	0.1	72	0.1
Real estate tax (all taxpayers)	856	1.1	916	1.1	975	1.3
Other direct taxes	698	0.9	483	0.6	489	0.7
Indirect taxes, total	**23,241**	**30.1**	**23,917**	**30.0**	**23,213**	**31.4**
Value added tax	15,054	19.5	15,511	19.5	15,004	20.3
Excise duties	6,016	7.8	6,153	7.7	5,888	8.0
Taxes on specific services	1,533	2.0	1,584	2.0	1,635	2.2
Car and vehicle taxes	612	0.8	637	0.8	655	0.9
Other indirect taxes	26	0.0	32	0.0	31	0.0
Other taxes	**69**	**0.1**	**74**	**0.1**	**70**	**0.1**
Custom duties	**199**	**0.3**	**205**	**0.3**	**152**	**0.2**
Social contributions, total	**20,958**	**27.7**	**21,997**	**28.0**	**21,993**	**29.8**
Total tax revenue, total	**77,269**	**100.0**	**79,648**	**100.0**	**73,838**	**100.0**

Sources:
*OECD (2011): Statistics Database: Public Sector (OLIS). Last accessed March 2011.
*Verotilasto (2008-2010), Tax statistics for 2007-2009: Tax Administration Publications.
*Veronsaajien palvelut, Tax Administration website services.

2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

The most important taxes, social contributions and benefits are described in the previous section. All of them are not simulated by EUROMOD (see Tables 11 and 12). The main reason for this is that there is no information in the database or it is insufficient for simulation. In the latter case the available information is chosen directly from the database and used as output variable. The most important benefits which are not simulated are pensions, disability benefits, sickness benefit and general housing allowance.

Table 11. Tax instruments and their treatment in EUROMOD

	Treatment in EUROMOD	Variable name(s)	Why not fully simulated?/Other comments
Direct taxes			
State tax on capital income	S	tiniy_s	
Tax on deposit interest	E		No data
Corporate income tax	E		No data
National state income tax	S	tinna_s	
Municipal income tax	S	tinmu_s	Average rate applied
Church income tax	S	tincr_s	Voluntary but simulated as tax. Average rate.
Inheritance tax	E		No data
Gift tax	E		No data
Real estate tax	I		Lack of information
Indirect taxes			
Value added tax	E		No data
Excise duties	E		No data
Taxes on specific services	E		No data
Car tax and vehicle tax	E		No data
Custom duties	E		No data
Social contributions			
Employee contributions	S	tscee_s	
Entrepreneur contributions	S	tscse_s	Assumed: self-empl.income=YEL-income
Farmer contributions	S	tscfr_s	Assumed: self-empl.income=MYEL-income
Employer contributions	PS	tscer_s	Average tax rates are applied

Notes:
"E" policy is *excluded* from the model's scope as it is neither included in the microdata nor simulated by EUROMOD;
"I": *included* in the micro-data but not simulated;
"PS" policy is *partially simulated* as some of its relevant rules are not simulated;
"S" policy is *simulated* although some minor or very specific rules may not be simulated.

Table 12. Benefit instruments and their treatment in EUROMOD

	Treatment in EUROMOD	Variable name(s)	Why not fully simulated?
BENEFITS			
Old-age pension	I	poa	Lack of information. Incl. in variable *py100*
Part-time pension	I	poa	Lack of information. Incl. in variable *py100*
Unemployment pension	I	bunot	Lack of information. Incl. in variable *py090*
Disability pension	I	pdi	Lack of information. Incl. in variable *py130*
Survivor's pension	I	psu	Lack of information. Incl. in variable *py110*
Work injury pension	E		No data
Other pensions	E		No data
Basic unemployment allowance	S	bunnc_s	Eligibility is based on data
Earnings related unempl. allow.	S	bunct_s	Eligibility is based on data
Labour market subsidy	S	bunmt_s	Eligibility is based on data
Other unemployment benefits	I	bunot	Lack of information. Incl. in variable *py090*
Sickness leave benefit	I	bhl00	Lack of information. Incl. in variable *py120*
Work injury benefit	E		No data
Other sickness benefits	I	bhlot	Lack of information. Incl. in variable *py120*
Disability allowances	I	pdi	Lack of information. Incl. in variable *py130*
Rehabilitation allowance	I	poa	Lack of information. Incl. in variable *py100*
Pensioner's care allowance	I	poa	Lack of information. Incl. in variable *py100*
Home care allowance	I	poa	Lack of information. Incl. in variable *py100*
Parental benefits	I	bma	Lack of information. Incl. in variable *hy050*
Child benefit	S	bch_s	
Child home care allowance	S	bcc_s	Eligible families are based on data
Private day-care compensation	E		No data
Child day-care fee	E		No data
General housing allowance	I	bho00	Lack of information. Incl. in variable *hy070*
Pensioner's housing allowance	S	bhope_s	Asset test is not simulated
Student housing supplement	S	bhosd_s	Test of parental income is not simulated
Other housing benefits	I	bhoot	Lack of information. Incl. in variable *hy070*
Study grant	S	bed00_s	
Other education benefits	I	bedot	Lack of information. Incl. in variable *py140*
Local authority income support	S	bsa00_s	Eligibility is based on data
Other social assistance benefits	I	bsaot	Lack of information. Incl. in variable py*060*

Notes:
"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.

2.2 Order of simulation and interdependencies

Benefits, taxes and social contributions which are simulated in EUROMOD, are shown in Table 13. The level of accuracy in simulation varies with different taxes and benefits. One of the reasons is that some of the variables are imputed from aggregate variables and the information is inaccurate. However, these imputed variables are needed to make the simulation framework operational.

The employee, employer and self-employed social contributions are simulated first. The sickness health care contribution is an exception: it is calculated simultaneously with local taxes because it is based on the local tax base. Taxable benefits are simulated before income taxes and non-taxable benefits so that changes in benefits affect the tax base and means-tested benefits. There is one exception to this principle. The non-taxable student housing supplement is simulated simultaneously with the taxable student grant. This is for practical reasons: the calculation process, including the means-test, is similar in both benefits. The last to be simulated is the local income support where incomes after taxes are included.

Table 13. Order of policy simulation in EUROMOD, policy years 2007-2011

Section	Policy	Main output
2.4.1	Employee social insurance contributions	tscee_s
2.4.2	Employer social insurance contributions	tscer_s
2.4.3	Self-employed contributions, entrepreneurs	tscse_s
2.4.3	Self-employed contributions, farmers	tscfr_s
2.3.1	Study grant	bed00_s
2.3.2	Student housing supplement	bhosd_s
2.3.3	Basic unemployment allowance	bunnc_s
2.3.4	Earnings-related unemployment allowance	bunct_s
2.3.5	Labour market subsidy	bunlt_s
2.3.6	Child home care allowance	bcc_s
2.5.1	Capital income tax	tiniy_s
2.6.1	National state income tax	tinna_s
2.6.2	Municipal income tax	tinmu_s
2.6.3	Church income tax	tincr_s
2.6.4	Health care contribution	thl_s
2.3.7	Pensioner housing allowance	bhope_s
2.3.8	Child benefit	bch_s
2.3.9	Local authority income support	bsa00_s

It is convenient to simulate capital income taxes before earned income taxes because some interests are subtracted as natural deductions from capital income. If there is a deficit in the capital income source, the rest of these interests (multiplied by capital income tax rate) are deducted from earned income taxes.

Taxable benefits are always earned income. Thus changes in these benefits affect only to taxable earned income and personal taxes on earned income.

Changes in benefits do not usually affect social contributions paid by employees, self-employed or employers since the basis of these contributions is usually gross earnings from work. As described above there is an exception, the health care sickness contribution, which is based on the local tax base in earned income taxation.

2.3 Social benefits

2.3.1 Study grant (bed00_s)

- ***Brief description***

The studies are classified into two categories: a) higher level (university) studies and b) middle level studies (e.g. upper secondary school, vocational and supplementary studies). The study grant is paid only for a "customary" period which is usually needed for studies. For higher level studies the benefit is paid for a maximum of 70 "study months". The study months are defined as months a person is receiving the study grant or the student housing supplement.

- ***Eligibility conditions***

Eligible for the study grant are full-time students. Studying at higher-level is always considered as full-time studies. General conditions for the study grant are sufficient progress in studies and the need for economic assistance.

- ***Benefit amount 2007 – 2011***

The size of the study grant depends on the educational institution, age, economic circumstances, marital status and on whether the student lives alone or with parents. The basic amounts are different for middle and higher level studies. These are summarized in Table 14 for years 2007 and 2008-2011. The study grant is paid only for study months.

Table 14. The basic amount of study grant in 2007-2008 and 2009-2011, euro/month*

	2007-2008		2009-2011	
	Middle level	**Higher level**	**Middle level**	**Higher level**
18+ years, living alone, married or have child	213.60	259.01	246.00	298.00
Under 18 years, living alone	84.09	126.14	100.00	145.00
20+ years, living with parents	63.91	105.96	80.00	122.00
Under 20 years, living with parents	21.86	38.68	38.00	55.00

*The basic amounts changed 1.8.2008. While EUROMOD policy date is June 30, the changed parameters are applied from policy year 2009.

- ***Means-testing and taxation***

The study grant is affected by student's own and parents' income. Spouse's income has no effect on the study grant. The number of months the student receives study grant is affected by student's own income. Parents' incomes affect only at middle level and only if a student is less than 20 years old, not married and has no child. Parents' income has no effect at higher level. The wealth of the student, spouse or parents has no effect on the study grant (or housing supplement).

Own income

The study months and the corresponding income limits are shown in Table 15. Same income limits are applied to the student housing supplement.

Table 15. Free income limits of student grant and housing supplement in 2007 and 2008–2011

Study months	Free income limits 2007 euro/year	Free income limits 2008- 2011, euro/year
1	17,170	22,330
2	16,160	21,020
3	15,150	19,710
4	14,140	18,400
5	13,130	17,090
6	12,120	15,780
7	11,110	14,470
8	10,100	13,160
9	9,090	11,850
10	8,080	10,540
11	7,070	9,230
12	6,060	7,920

*The income limits changed 1.1.2008.

The amount of study grant is means-tested against student's all annual taxable income (excl. study grant) and scholarships. The means-testing affects the months the student can receive the benefit. A student has personal income limit, "free income", which is based on the number of months the student has received the grant. The annual free income limit is defined as 505 euro for every study months and 1,515 euro for every “unsupported” month (2007). The respective figures in 2008-2011 are 660 euro and 1,970 euro. The student may have income whenever during the calendar year. If the annual taxable income exceeds the free income, the student must pay back the benefit for equivalent amount of months. Assuming that student has received the benefit for nine months, annual earnings can be at most 9,090 euro (9x505+3x1,515) without having to repay the benefit.

Parents' income

Parents' income may *decrease* the amount of study grant if the student a) is at middle level institute; b) is less than 20 years old and c) is not married or responsible for a dependent child. In 2007 the study grant is paid in full if parent's annual earned and capital income, gross income minus natural deductions, is less than 31,400 euro (40,800 euro since 1.11.2007). The study grant is decreased by 5 percent for every 780 euro (1,010 euro) the parent's income exceeds the limit.

Parents' low incomes may also *increase* the amount of study grant if a) the student lives with parents or b) lives alone but is less than 18 years old. The full increase of the study grant is shown in the Table 16. In 2007 the increase is paid in full if parent's annual earned and capital income, gross income minus natural deductions, do not exceed 15,900 euro (20,700 euro from 1.11.2007 onwards). The full increase is decreased by 10 percent for every 1,590 euro/year (2,070 euro since 1.11.2007) the parent's income exceeds the limit. The total study grant is the basic amount plus the increase. The increased part of study grant is not simulated in the model.

Table 16. Increase in study grant due to low income of parents in 2007-2008 and in 2009-2011

	2007-2008		**2009-2011**	
	Middle level	**Higher level**	**Middle level**	**Higher level**
Under 18 years, living alone, basic amount	84.09	126.14	100.00	145.00
- increase	84.09	126.14	100.00	145.00
20+ years, living with parents, basic amount	63.91	105.96	80.00	122.00
- increase	84.09	126.14	100.00	145.00
17-19 years, living with parents, basic amount	21.86	38.68	38.00	55.00
- increase	42.05	58.87	58.00	75.00

*The amounts changed 1.8.2008.

- ***Relations to other benefits***

The study grant is not paid if a person receives unemployment benefit, pension, disability benefit or sickness benefit. A student may receive maternal, paternal or parental benefits simultaneously with study grant, but only the minimum amount of these benefits is paid. These relationships of simultaneously received benefits are not possible to simulate in the model. If a student is younger than 17 years and eligible for child benefit, the study grant is not allowed.

- ***Taxation***

The study grant is taxable income. If there is no other taxable income except the study grant, no income taxes is paid because of the study grant deduction in taxation.

- ***Changes in benefit rules 2008 - 2011***

No structural change has been done on rules during the policy years. Since March 2011 study grant and student housing supplement are the only benefits which are not indexed by legislation.

2.3.2 Student housing supplement (bhosd_s)

- ***Eligibility conditions***

A student is eligible for student housing supplement if he or she lives in a rented apartment, a "right-to-live" apartment or a partially owned apartment. A student living with parents, with own child or spouse's child in a same household or in own apartment, is not eligible for the housing supplement. Thus eligible for the benefit are single students and married or co-habiting students without children who live in a rented dwelling. If not eligible for the supplement, the student is eligible for the general housing allowance.

- ***Benefit amount***

The student housing supplement equals 80 percent of the reasonable (accepted) housing costs. The supplement cannot exceed 201.60 euro/month (2007). The case when a student lives in an apartment rented from parents, is not simulated in the model because of insufficient information in the data.

- ***Income test and taxation***

The student housing supplement is affected by student's, spouse's and parent's income. Own income is taken into account in the same way as in student grant: the number of benefit months depends on own income. The income limits are shown in Table 15.

The spouse' income decreases the student supplement by 10 percent for each 680 euro which exceeds 15,200 euro/year (2007). No housing supplement is paid if spouse' annual income is 22,000 euro or more.

Parents' incomes affect the student housing supplement if the student is less than 18 years old (20 years in study grant), not married and has no child. This income test is not applied to higher level students. It is not used in the model because of insufficient information.

The income test of the housing supplement and the study grant are convenient to calculate simultaneously in the model. Student has to pay back both the study grant and housing supplement if income exceeds the income limit.

The student housing supplement is not taxable income.

- ***Changes in benefit rules 2008 - 2011***

The spouse's income test was abolished 1.1. 2009.

2.3.3 Basic unemployment allowance (bunnc_s)

- ***Brief description***

Basic unemployment allowance is a non-contributory minimum benefit for unemployed persons who have enough work history but are not members of an unemployment fund. Students are not eligible for the allowance.

- ***Eligibility conditions***

Persons are entitled to the basic unemployment allowance if they are 17-64 years of age, available for work, registered at the employment office, seek full-time employment and satisfy the working condition. It is also required that no suitable job or training has been found.

- ***Working condition***

The working condition is satisfied when a person has worked at least 43 weeks within the 28 months immediately preceding the unemployment and the working time is at least 18 hours per week. The 28 month period may be extended e.g. because of illness, military service and studies. A self-employed person must have running the business for at least 2 years (24 months) in the last 4 years preceding the unemployment.

If the work income is very small the working condition will not be fulfilled.

- ***Benefit amount***

The amount of basic unemployment allowance consists of a flat amount and a child supplement. The amount of child supplement depends on the number of dependent children. It is paid to both spouses if both are unemployed. The benefit is paid only for working days (5 days in a week). It is assumed that there is 21.5 working days in a month. So, if an unemployed has one dependent child, the monthly benefit (in 2007) is 611.46 euro (21.5x(23.91+4.53)).

Table 17. Basic unemployment allowance in 2007–2011, euro/day

Year:	**2007**	**2008**	**2009**	**2010**	**2011**
Basic amount	23.91	24.51	25.63	25.63	25.74
Child supplement, 1 child	4.53	4.64	4.86	4.86	4.88
2 children	6.65	6.82	7.13	7.13	7.16
3+ children	8.58	8.79	9.19	9.19	9.23

The basic allowance is adjusted annually according to the so called KEL-index. This index is the change of consumer prices from the previous year's third quarter to present year's third quarter. The next year's benefits are then adjusted according to this KEL-index.

It is possible that an unemployed person receives wage and benefit at the same time. In this case the unemployed benefit is cut by 0.5 euro for each earned euro. This *conciliated adjustable unemployment benefit* is not possible to simulate because of insufficient information in the data.

- ***Means-testing and taxation***

The basic unemployment allowance is not means-tested. It is taxable income.

- ***Changes in benefit rules 2008 - 2011***

From 1.1.2010 the working condition for both employees and self-employed shortened. Employees need to have only 34 week-long work history (instead of 43 week) during the last 28 months preceding the unemployment. Self-employed persons need to have 1.5 years (instead of 2 years) work history in the last 4 years preceding the unemployment.

2.3.4 Earnings-related unemployment allowance (bunct_s)

- ***Brief description***

The earnings-related unemployment allowance is a contributory benefit for unemployed persons. The contribution to unemployment fund, in fact a membership fee, is voluntary.

- ***Eligibility conditions***

Eligible for the benefit are unemployed who fulfill both the criteria of unemployment fund membership and the working condition. They must be between 17-64 years of age, available for work, registered at the employment office and seek full-time employment. It is also required that no suitable job or training has been found. Students are not eligible for the benefit.

- ***Benefit amount***

The amount of daily benefit consists of four components:

a) *The basic component*, which is the same as the basic unemployment allowance
b) *The earnings-related component 1*, which is 45 % of the difference between daily wage and the basic allowance. The maximum previous daily wage (when calculating this component) is the basic allowance times 90 divided by 21.5 (the 90-limit)
c) *The earnings-related component 2*, which is 20 % of the difference between the previous daily wage and the 90-limit
d) *The child supplement*, which depends on the number of dependent children. The amount is the same as in basic unemployment allowance

The base for calculation is the regular monthly wage preceding the unemployment. Bonuses and holiday pays are not included. At first the employee's pension and unemployment insurance contributions (together 4.88 % in 2007) are deducted from this gross wage.

The benefit is calculated on daily basis. Wages are transformed into daily wages assuming that there are 21.5 working days in a month.

Example (2007): A person has 2 dependent children and the previous wage is 2,500 euro/month. After deduction of 4.88 % the monthly wage is 2,378 (0,9512 * 2,500) and the 90-limit is 100.09 (90*23.91/21.5). Euro/day.

Daily wage 2,378/21.5	110.60
Basic allowance	23.91
Earnings-related component 1: 0.45x(100.09-23.91)	34.28
Earnings-related component 2: 0.20x(110.60–100.09)	2.10
Child supplement (2 children)	6.65
Earnings-related allowance/day	66.94

The earnings-related unemployed allowance cannot be less than the basic allowance. The maximum amount of daily benefit is 90 percent of the previous daily wage (after the contribution deduction).

In some cases e.g. if a person has long work history or is participating in labour market training, an increased benefit is paid. The increased benefits are calculated using higher percentages in the earnings-related components (instead of 45% and 20%). These increased benefits are not possible to simulate because there is no information in the data about the people receiving these benefits.

There is neither any information in the data about the previous wage of an unemployed. However, this wage is possible to calculate "backwards" using the information of the earnings-related unemployment allowance in the data, benefit months and benefit rules.

The basic allowance is adjusted annually according to the consumer price index (KEL-index). According to the rules the earning-related benefit will also be increased but less than the price index.

It is possible that an unemployed person receives wage and benefit at the same time. In this case the unemployment benefit is cut by 0.5 euro for each earned euro. This conciliated adjustable benefit is not possible to simulate in the model.

- ***Means-testing and taxation***

The earnings-related unemployment allowance is not means-tested. It is taxable income.

- ***Changes in benefit rules 2008 - 2011***

In 1.1.2010 the coefficient used to determine the upper limit of earnings-related component 1 (the 90-limit) is increased from 90 to 105.

In 1.1.2010 the rules for contribution deduction from wage were changed. Before only employee's pension and unemployment insurance contributions were takening into account. From 2010 also sickness daily allowance contribution was included, but only 60 percent of all of these contributions. In 2010 figures the deduction was earlier 4.9 percent (4.5%+0.4%) but after the change 3.5 percent (0.6x(4.5%+0.4%+0.93%)).

2.3.5 Labour market subsidy (bunmt_s)

- ***Brief description***

The labour market subsidy is designed for unemployed people who do not meet the working condition. It is also paid when a person has received basic or earnings-related unemployment allowance and the maximum of 500 days has expired. In these cases the labour market subsidy is not means-tested for the first 180 days. There is no time limit for the labour market subsidy.

- ***Eligibility conditions***

Persons are entitled to the labour market support if they are 17-64 years of age, available for work, registered at the employment office and seek full-time employment. It is also required that no suitable job or training has been found. Students are normally not entitled to the benefit during the time they are studying.

All unemployed who are not entitled to basic allowance or earnings-related allowance are in principle eligible for labour market support. However, there are some specific conditions for young people. It is required that persons under 25 years of age have completed vocational training or are in labour market training or on-job training. A six-week benefit suspension can be imposed if a person repeatedly refuses job training or education.

In some cases the labour market support can be paid to employer to subsidise the cost of employing a person.

- ***Full benefit amount***

The full amount of labor market subsidy equals the basic unemployment allowance (see table 17). Also the child supplement is the same as in basic unemployment allowance and earnings-related allowance schemes.

- ***Means-testing and taxation***

Labour market subsidy is mean-tested against person's own and spouse's income. The test is done on monthly basis. Basically all income is taken into account except child benefit, livelihood support, housing allowances, pensioner's care allowance and some injury-related benefits. For a single person only capital income is usually taken into account and this is how the benefit is simulated in the model. There is no information about possible wage income received simultaneously. For spouses only income exceeding 536 euro in month is taken into account.

For a single person the full labour market support is decreased by 75 percent on income exceeding 253 euro. For spouses and people with children it is decreased by 50 percent on income exceeding 848 euro. The income limit is increased by 106 euro for every dependent child.

Example (2007): A married person who has 2 dependent children. The spouse's income is 2,036. Euro/month and euro/day.

Spouse's monthly income	2,036
- spouse's income not taken into account	-536
Spouse monthly income taken into account	1,500
- income limit 848+2 x 106	-1,060
Monthly income exceeding the limit	440
Full daily benefit 23.91 + 6.65	30.56
Full monthly benefit 21.5 x 30.56	657.04
- deducted from full benefit 0.50 x 440	-220
Benefit/month 657.04 – 220	437.04
Benefit/day (divided by 21,5)	20.33

Labour market subsidy is adjusted annually according to the consumer price index (KEL-index). It is taxable income.

It is possible that an unemployed person receives wage and labour market support at the same time. In this case the labour market support is cut by 0.5 euro for each earned euro. This conciliated adjustable benefit is not possible to simulate in the model.

- ***Changes in benefit rules 2008 - 2011***

From 1.1.2011 the spouse's income limit which is applied in means-testing, increased from 536 euro to 660 euro and the additional limit for each child increased from 106 euro to 130 euro. Also the income limit of married persons and co-habiting increased from 848 euro to 1,044 euro.

2.3.6 Child home care allowance (bcc_s)

- ***Brief description***

The purpose of the child home care allowance is to give parents the possibility to arrange the child care as they want without significant economic consequences. The child home care allowance is "integrated" with the day care system in the sense that parents can choose whether to put their small children to municipal day care, arrange a private care or stay at home with them. The private care may be arranged by private day care centre or by private child-minder accepted by the municipalities. The families may choose separately for each child the type of child care they prefer.

- ***Eligibility conditions***

Parents are entitled to the child home care allowance if at least one child is less than 3 years. The allowance is paid for any other children under age of 7 years who are not in any subsidised day care. The child home care allowance is not available if the child is in municipal or private day care centre or at private child-minder.

The allowance is usually paid immediately after parental leave benefit. It is paid until the youngest child reaches the age of 3 years or moves into subsidised day care. The child home care allowance is paid if a parent or any other person (e.g. private baby-sitter) takes care of the child at home. The benefit is always paid to one of the parents.

Parents may choose which one of them is receiving the benefit. It is usually paid to the parent who is staying home with the children. In EUROMOD the benefit is given to the parent with lowest income - which is a reasonable assumption in most cases.

- ***Benefit amount***

The child home care allowance consists of basic amount which is a lump sum benefit and different for the first child under 3 years, other children under 3 years and other children between 3-6 years. For the first child the basic amount is 294.28 euro/month (2007). If there are other children under 3 years old, the benefit for each of them is 94.09 euro and if there are other children under 7 years old, the benefit for each of them is 60.46 euro.

Example (2007): A basic amount for a family with three children (aged 1, 2 and 4 years). Euro/month.

First child (1 year old)	294.28
Second child (2 years old)	94.09
Third child (4 years old)	60.46
Basic amount/month	448.83

The child home care supplement is means-tested and paid only for one child. The full rate of supplement is 168.19 euro/month.

- ***Means testing and taxation***

The amount of the child home care supplement depends on family monthly income and the size of the family. "The family" is in this case parents and children under 7 years but maximum of two of them. Thus, the minimum family size is two (1 parent, 1 child) and the maximum four (2 parents, 2 children).

The full supplement is paid if the family monthly income is below an income limit which varies with family size. When income exceeds the limit the supplement is reduced by a certain percentage of the exceeding amount. The limits and percentages are shown in Table 18 and are similar in all policy years 2007-2011.

Table 18. The income limits and percentages of child home care supplement in 2007-2011

Size of the family	Income level that entitles to a full supplement, euro/month	Reduction rate, %	Income level which entitles to no supplement, euro/month
2	1,160	11.5	2,622.48
3	1,430	9.4	3,219.21
4	1,700	7.9	3,828.93

The family income concept is the gross monthly earned and capital income subject to tax as well as some non-taxable incomes (not e.g. child benefit and housing benefits).

Example(2007): 2 parents and 2 children (1 and 3 years), family income 2,000 euro/month. Euro/month.

Basic amount (294.28+94.09)	388.37
Supplement	
- full supplement	168,19
- subtracted 7.9 % of (2,000-1,700)	23.7
- supplement 168.19 – 23.7	144.49
Home care allowance/month	532.86

The child home care allowance is subtracted from unemployment benefit regardless of which one of the parents is receiving the allowance. Students can also receive child home care allowance. In this case the allowance is regarded as income when determining the eligibility for student's financial support. However, such simultaneously received benefits are not possible to take into account in simulations.

Some municipalities pay additional child home care subsidies. These municipalities decide themselves the type, size and entitlement conditions of the subsidy.

The child home care allowance is taxable income.

- ***Changes in benefit rules 2008 – 2011***

In 1.1.2009 the amount of child home care allowance for the first child increased from 294.28 euro to 314.28 euro. No other nominal changes were made during the policy years until March 2011. Since that the child home care allowance is adjusted by consumer price index (KEL-index).

2.3.7 Pensioner's housing allowance (bhope_s)

- ***Brief description***

The pensioner's housing allowance is paid to pensioners with low incomes. All households must pay their own share of the housing costs. This share consists of three parts: a) costs exceeding the reasonable (accepted) housing costs, b) a flat "basic own responsibility" and c) a means-tested "additional own responsibility".

- ***Eligibility conditions***

To the benefit are entitled pensioners who are 16-64 years old and who receive national pension, survivor's pension, unemployment pension, disability pension or work injury pension. All persons who have reached the age of 65 years are entitled to the benefit. If spouses, or co-habiting persons, are both entitled to the housing benefit for pensioners, they apply it together. In this case the allowance is equally divided to both pensioners. If in the same household lives other persons than spouse or co-habiting, it is possible to receive the general housing allowance instead. However, this is usually not as favourable as the housing benefit for pensioners.

- ***Benefit amount***

The amount of pensioner's housing allowance is 85 percent of accepted housing costs exceeding the basic own responsibility and the additional own responsibility. The formula is

B = 0,85 x (c – r - a), where
B = benefit
c = reasonable housing costs
r = basic own responsibility

a = additional own responsibility

There are limits for the accepted annual housing costs. They differ in different areas and the country is divided into four municipal groups. While there are no data about the municipality groups, the parameters of the third municipal group are used in simulations. This is an approximation of the average in country. These accepted annual housing costs are: 5,406 euro (2007), 5,557 euro (2008), 5,812 euro (2009), 6,103 euro (2010) and 6,323 euro (2011). The amounts are increased by 20 percent if there are one or two children aged less than 16 years in the household and by 40 percent if there are more such children.

The basic own responsibility for all pensioners is 528.88 euro/year (2007). The corresponding figures for the following years are 542.10 euro (2008), 567.01 euro (2009), 567.01 (2010) and 569.28 euro (2011).

- ***Means-testing***

The pensioner's housing allowance is means-tested against all own and spouse's earned and capital income. The non-taxable incomes are usually not taken into account. The wealth, except own dwelling, is also included in means-testing but due to lack of information it is not taken into account in simulations. Means-testing is included in the additional own responsibility component. Additional own responsibility is 40 percent of the income exceeding the following income limits for different households types.

Table 19. The income limits of pensioner's housing allowance in 2007-2011, euro/year

	2007	**2008**	**2009**	**2010**	**2011**
Single	7.517	7,705	8,059	8,059	8,091
Married; spouse is not eligible for allowance	11,019	11,294	11,813	11,813	11,860
Married; spouse is eligible for allowance	12,074	12,376	12.945	12,945	12,996
Single, receiving survivor's pension	6,462	6,624	6,929	6,929	6,957
Married, receiving survivor's pension	9,962	10,211	10,680	10,680	10,723

Example (2007): A single person with annual housing costs of 5,250 euro and annual income of 7,700 euro. Euro/year.

Flat rate basic own responsibility	528.88
Additional own responsibility 0.40 x (7,700–7,517)	73.20
Own responsibility, total	602.08
Annual benefit 0.85 x (5,250–602.08)	3,950.73

The monthly benefit is the annual benefit divided by 12 (329.23 euro in the example).

Pensioner's housing allowance is not taxable income.

- ***Changes in benefit rules 2008 – 2011***

No structural change has been done on rules during the policy years.

2.3.8 Child benefit (bch_s)

- ***Eligibility conditions***

Child benefit is a universal flat-rate benefit paid for every child under 17 years of age and resident in Finland. The benefit is paid regardless of any other benefits (or any other reasons). Spouses may choose to which one of them receives the benefit.

- ***Benefit amount***

The amount of child benefit depends on the number of dependent children and the number of parents in family. It is larger per child if there are several children in the family (up to 5).

Table 20. The child benefit in 2007-2011, euro/month

	2007	2008	2009	2010	2011
1st child	100.00	100.00	100.00	100.00	100.40
2nd child	110.50	110.50	110.50	110.50	110.94
3th child	131.00	131.00	141.00	141.00	141.56
4th child	151.50	151.50	161.50	161.50	162.15
5th and so on	172.00	172.00	182.00	182.00	182.73
Single parent supplement	36,60	46,60	46,60	46,60	46,79

Single parents are entitled to child benefit supplement for each dependent child. Co-habiting but not married persons are not entitled to the supplement.

Example (2007): A single person with 3 children. Euro/month.

1st child (100.00+36.60)	136.60
2nd child (110.50+36.60)	147.10
3th child (131.00+36.60)	167.60
Benefit/month	451.30

- ***Means-testing and taxation***

The child benefit is not means-tested. It is usually not taken into account when calculating means tested-benefits with an exception of local income support.

The child benefit is not taxable income.

- ***Changes in benefit rules 2008 – 2011***

In 1.1.2008 the single parent supplement increased from 36.60 euro to 46.60 euro.

In 1.1.2009 the benefit for the third, fourth and fifth child increased to 141 euro (from 131), 161.50 euro (from 151.50) and 182.00 euro (from 172.00) respectively.

Since 1.3.2011 the child benefit is adjusted by consumer price index (KEL-index).

2.3.9 Local authority income support (bsa00_s)

- ***Brief description***

Local income support is the last resource safety net for all persons and families whose net-of-tax income is less than a certain minimum level. This minimum income level consists of *basic amount* and *additional expenditures*. The basic amount is designed to cover the expenditure of e.g. food, cloths, transport and minor health care costs. Additional expenditures may consist of reasonable housing costs, child day care fee etc. For income support a separate judgement on the claimant's whole economic situation is always done.

- ***Eligibility conditions***

The unit of entitlement and income assessment are single persons and families. The right to claim the benefit does not depend on the marital or socioeconomic status with the exception of students. Students are in principal entitled to the benefit only if their income is low enough when also the student loan - realized or not - is taken into account. During the period when they are not studying, they are entitled to the benefit like all other people.

The need for income support is determined as expenditures minus net income. Expenditures consist of basic amount and additional (accepted) expenditures. The net income consists of earned and capital income after taxes and contributions as well as non-taxable income, including also housing allowances and child benefit. There are only few exceptions when income is not taken into account when calculating the income support.

In the baseline the eligibility is restricted only to those individuals who receive the benefits in the input data. This is done in order to avoid over-simulation (that probably stems from imprecision of the input data or non-take-up). Full simulation of social assistance can be switched on if needed.

- ***Benefit amount***

The full basic amount of income support in the first municipality category is 389.37 euro and in the second category 372.62 euro (2007). The full basic amount is paid to single persons and to single parents. For other persons the basic amount is smaller, defined as a share of the full amount. While there is no information in data about municipal groups, average monthly basic amounts are used in simulations in 2007. From 2008 the categorization of municipalities into two groups was abolished. An age limit of 30 years is used for a child. The income support is calculated on monthly basis.

Table 21. The basic amounts of income support, euro/month, and % of full amount in 2007

	Share, %	Munic.group 1	Munic.group 2	Average
Single or single parent	100	389.37	372.62	381.00
Other person over 18 (e.g. spouse)	85	330.96	316.73	323.85
Child at least 18 year*	73	284.24	272.01	278.13
10-17 year child, first child	70	272.56	260.83	266.70
Child under 10, first child	63	245.30	234.75	240.03

* Up to 30 years of age in the model.

If there is more than one dependent child in the household, the basic amount for the second child is 5 percentage units less and for the third child or more 10 percentage units less than for the first child.

Example (2007): First municipal category, 2 parents, 3 children (3, 16 and 18 years). Euro/month.

Parents (2x330.96)	661.92
1st child (18 years)	284.24
2nd child (16 years), 0.70x389.37	272.56
3nd child (3 years), 0.58x389.37	225.83
Basic amount/ month	1,444.55

- ***Income test and taxation***

While the income support is basic amount plus accepted expenditures minus net income, increase in net income decreases the benefit by the same amount.

Example (2007): 2 parents, 2 children (14 and 8 years), municipal group 1, rent 500 euro, net unemployment benefit 800 euro, housing benefit 300 euro, child benefit 210.50 euro. Euro/month.

Expenditures:	
a) basic amount	
- parents (2*0.85*389.37)	661.93
- 1st child (14 year), 0.7x389.37	272.56
- 2nd child (8 year), 0.58x389.37	225.83
basic amount/month	1,160.32
b) housing costs (accepted)	500.00
Accepted expenditures/month	1,660.32
Incomes:	
Net benefit income	800.00
Housing benefit	300.00
Child benefit	210.50
Income/month	1,310.50
Income support/month (1,660.32-1,310.50)	349.82

The income support is not taxable.

- ***Changes in benefit rules 2008 – 2011***

In 1.1.2008 the categorization of municipalities was abolished and the basic amounts in the second category municipalities increased to the same level as in the first category municipalities. The full basic amounts in all municipalities are: 399.10 euro (2008), 417.45 euro (2009), 417.45 euro (2010) and 419.11 euro (2011).

2.4 Social contributions

2.4.1 Employee social contributions (tscee_s and thl_s)

- ***Brief description***

Employees are subject to social contributions on their gross wage (incl. taxable benefits-in-kind) and on their local tax base in earned income taxation. There are three contributions which are based on the gross wage:

- contribution to occupational pension insurance (18-67-year-olds)
- contributions to unemployment insurance (17-64-year-olds)
- contributions to daily sickness allowance insurance (16-67-year-olds from 2011)

There is one contribution based on the local tax base:

- contribution to health care insurance

All the contributions are statutory. The wage-based contributions are fully deductible in personal taxation while the health care contribution is "a tax-like payment" itself and is not deductible. The health care contribution is paid on all earned income, e.g. on wage, pension and other benefit income. The health care contribution and the daily allowance contribution are both sickness contributions.

The pension insurance contribution must be paid if an employee is 18-67 year-old. The monthly wage must be at least 46.08 euro (2007), 47.08 euro (2008), 49.93 euro (2009), 51.57 euro (2010) and 52.49 euro (2011). Responsible to pay the unemployment insurance contribution is an employee at the age of 17-64 years. For the daily sickness allowance contribution there is no income or age limits (until 2011). The health care contribution must always be paid regardless of the age or the size of local tax base.

The same income and age limits are applied to respective employer contributions.

- ***Rates and amounts***

The amounts of employee contributions are calculated as a percentage share of the gross taxable wage and the local tax base. In principal the same percentages are applied to all individuals and they are not depending on e.g. employee's pension insurance regimes. But there are two exceptions: 1) the pension contribution is higher for employees who are at least 53 years old and 2) the health care contribution is higher for benefit income (incl. pensions) than for work income (see Table 22). The work income includes wage and earned income from self-employment.

The principle behind the higher (increased) health care contribution is that it is paid only on income from which the daily sickness allowance contribution is not paid. This means that it is paid from the difference of the work income and the local tax base, if positive. The percentage of increased contribution is the difference of percentages which are applied to work income and benefit income, e.g. 0.17% in 2007 (1.45-1.28).

> *Example (2007):* The pension income is 21 000 euro, the wage 5 000 euro and the local tax base 24 000 euro. The daily sickness allowance contribution is 37.50 euro (5 000 x 0.75%). The "standard" health care contribution is 307.20 euro (24 000 x 1.28%) and the increased health care contribution from pension income is 32.30 euro ((24 000-5 000) x 0.17%). The total health care contribution is 339.50 euro.

Table 22. Social contribution rates of employees in 2007-2011, %

	2007	2008	2009	2010	2011
Contributions based on gross wage					
Pension insurance contribution, employee less than 53 years	4.3	4.1	4.3	4.5	4.7
, employee 53 years or more	5.4	5.2	5.4	5.7	6.0
Unemployment insurance contribution	0,58	0,34	0,2	0,4	0,6
Daily sickness allowance contribution	0.75	0.67	0.70	0.93	0.82
Contribution based on local tax base					
Health care insurance contribution, employment income	1.28	1.24	1.28	1.47	1.19
, pension and benefit income	1.45	1.41	1.45	1.64	1.36

- ***Changes in employee social contribution rules in 2008 – 2011***

From 1.1.2011 the daily sickness allowance contribution must be paid only if an employee is 16-67 year-old.

2.4.2 Employer social contributions (tscer_s)

- ***Brief description***

There are six statutory employer contributions:

- contribution to occupational pension insurance (18-67 year-olds)
- contribution to national pension insurance
- contribution to unemployment insurance (17-64 year-olds)
- contribution to sickness insurance (16-67 year-olds from 2011)
- contribution to work injury insurance
- contribution to group life insurance (-68 year-olds, not old-age pensioners)

The contribution to group life insurance is not statutory but based on trade union agreements. However, most employers are obligated to pay it.

The same age and income limits are applied to employer contributions as to employee contributions (see previous chapter). There is no age or income limits to national pension contribution and to work injury contribution. The contribution to group life insurance must be paid for all employees under 68 years of age, but old-age pensioners are excluded.

- ***Rates and amounts***

The base for all employer contributions is the gross wage paid to employees, including taxable benefits-in-kind.

The occupational pension contribution rates of employers differ depending on e.g. the number of employees, the age of employees, employer responsibilities to pay disability and unemployment pensions, the institutional sector and the wage sum paid by employer. The rates also differ in private, state and municipal sectors. Similarly national pension contribution differs in private, state and municipal sectors. In private sector the contribution is classified into three categories based on the wage sum and the depreciated value of fixed assets.

The unemployment contribution rate depends on the wage sum paid by employer. Also the work injury contribution and the group life insurance contribution differ across employers. Only sickness insurance contribution rate is the same for all employers.

In EUROMOD database there is no information on employer contribution rates, which would be necessary to model the contributions accuracy. There is no knowledge of whether the employer is in private, state or municipal sector. To model the employer contributions average weighted contribution rates are used. These are calculated in three steps. Firstly there are average contribution rates for employers in different sectors. They are usually calculated by insurance corporations (see Table 23). Secondly the relative size of private, state and municipal sectors based on the number of employees in each sector are taken into account (see Table 24). Finally, based on these, the weighted average contribution rates across sectors are estimated (see Table 25).

Table 23. Employer social contribution rates in 2007–2011, %

	2007	2008	2009	2010	2011
Pension contribution					
Private sector, average, %	16.7	16.8	16.8	16.9	17.1
State, %	19.8	19.4	20.1	20.7	21.6
Municipalities,%	23.9	23.8	23.6	23.6	23.6
National pension contribution					
Private sector, average, % [1]	1.58	1.48	0.68	0.00	0.00
State, %	1.951	1.851	1.05	0.00	0.00
Municipalities, %	1.951	1.851	1.05	0.00	0.00
Unemployment insurance contribution					
Wage sum limit, euro/year	840,940	1,686,000	1,788,000	1,846,500	1,879,500
Contribution under the wage sum limit, %	0.75	0.70	0.65	0.75	0.80
Contribution over the wage sum limit, %	2.95	2.90	2.70	2.95	3.20
Contribution, average, %[2]	2,29	2,09	1,94	2,14	2,33
Sickness insurance contribution	2.05	1.97	2.00	2.23	2.12
Work injury contribution, average, % [3]	1,0	1,0	1,0	1,0	1,0
Life insurance contribution, average, %[3]	0,08	0,08	0,07	0,07	0,07

Notes:
[1] 1.4.2009 the national pension contribution decreased by 0.801 percentage units. The decreased rates of year 2009 are estimated by making this subtraction from 2008 rates.

[2] Average in all sectors. The state employer is not obligated to pay the unemployement contribution.
[3] Average rate in private sector.
Sources: Työttömyysvakuutusrahasto (2009), Unemployment Insurance Fund and Insurance Companies.

Table 24. Number of employees by sectors (1000) and as % of all employees in 2007–2011

	2007	2008	2009	2010	2011
Employees (thousands of persons)					
Private sector	1,935	1,975	1,878	1,862	1,725
State	154	167	160	171	145
Municipalities	523	507	521	518	535
Total	2,612	2,649	2,559	2,551	2,405
Share of all employees, %					
Private sector	74.1	74.6	73.4	73.0	71.7
State	5.9	6.3	6.3	6.7	6.0
Municipalities	20.0	19.1	20.4	20.3	22.2
Total	100.0	100.0	100.0	100.0	100.0

Table 25. Averege estimated employer social contribution rates in 2007–2011, %

	2007	2008	2009	2010	2011
Occupational pension contribution	18.3	18.3	18.4	18.5	18.8
National pension contribution	1.68	1.57	0.28	0.00	0.00
Unemployment insurance contribution	2,29	2,09	1,94	2,14	2,33
Sickness insurance contribution	2.05	1.97	2.00	2.23	2.12
Work injury contribution	1,0	1,0	1,0	1,0	1,0
Life insurance contribution	0,08	0,08	0,07	0,07	0,07
Contribution, total	25.40	24.97	23.78	23.83	24.14

- ***Changes in employer social contribution rules in 2008 – 2011***

In 1.4.2009 the employer national pension contribution was decreased and abolished in 31.12.2009.

From 2011 employers, as employees, are obligated to pay the sickness insurance contribution only for employees who are 16-67 year-old.

2.4.3 Self-employed social contributions (tscse_s and tscfr_s)

- ***Brief description***

The base for all social insurance contributions of self-employd persons is ”the YEL-income” (entrepreneurs) and ”the MYEL-income” (farmers). These are not real incomes but ”hypothetical” corresponding the work income of self-employed. The size of this income is an estimation of what should be paid to a other person who would do the same work as the self-emplyed.

There are three statutory contributions which all self-employed have to pay:

- contribution to pension insurance (18-67 year-olds)
- contribution to daily sickness benefit insurance (16-67 year-olds from 1.1.2011)
- contribution to health care insurance

For farmers the *work injury contribution* and *contribution to group life insurance* are also statutory. The group life insurance is a very small fixed amount (e.g. 12 euro in 2012) and is not simulated in the model. Other insurance schemes, like unemployment contribution, are voluntary for self-employed.

The pension contribution is possible to pay and deduct either personally or alternatively in business or farming. If paid in business or farming, the contribution is not anymore deductible in personal taxation. Even if this is the usual case, it is assumed in EUROMOD that self-employed and farmers pay their pension contributions personally and are entitled to deduct them in their personal taxation. In simulations YEL- and MYEL-incomes are assumed to be the same as the actual earned income received from self-employment. The reason for these assumptions is the lack of information in the data about the treatment of the pension contribution. Same assumptions are applied to all contributions of self-employed.

To be obligated to pay the pension insurance a self-employed must be 18-67 year-old. The annual entrepreneur income must be more than 6,054 euro (2007), 6,186 euro (2008), 6,560 euro (2009), 6,775 euro (2010) and 6,896 euro (2011). For farmers the respective income limits are 3,027 euro (2007), 3,093 euro (2008), 3,280 euro (2009), 3,387 euro (2010) and 3,448 euro (2011).

The base for daily sickness allowance contribution is also the YEL- and MYEL-income. In case a self-employed person has wage income from other sources (than self-employment), the daily sickness allowance contribution must also be paid from this income. The contribution rate from this wage income is the same as employee’s rate. To the YEL-income an increased sickness allowance rate is applied, e.g. 0.91% instead of 0.75% in 2007 (see Table 26). Farmers have the same contribution rate as employees.

The base for health care contribution is “a hypothetical” local tax base. To calculate this tax base the taxable earned work income is replaced by YEL- or MYEL-income and then tax deductions - except the pension contribution deduction - are subtracted from this income. As mentioned before, YEL- and MYEL-incomes are assumed to be the same as actual taxable earned self-employment income.

For daily sickness contribution and health care contribution of self-employed the same age limits are applied as for employees.

- ***Rates and amounts***

If a self-employed person is less than 53 years old, the pension contribution rate is 20.8 percent (2007). For person at least 53 years old the rate is 21.9 percent. For farmers both of these contribution rates are the same but are used only if the annual income exceeds 33,330 euro. If income is less than 21,210 euro, the contribution rates are 10.2 and 10.7 percents. Between 21,210 euro and 33,330 euro the farmer’s contribution rate is increased linearly, e.g. from 10.2 percent to 20.8 percent.

For the first four years as an entrepreneur the pension contribution rate is decreased by 25 percent. This is not possible to simulate in the model.

> *Example (2007):* Earned income from self-employment is 22,000 euro, the wage from other activity 5,000 euro and the YEL-income 20,000 euro.
>
> The “standard” daily allowance contribution is based on the YEL-income plus the wage (20,000+5,000) and the contribution is 187.50 euro (0.75x25,000). The increased contribution from YEL-income is 32.00 euro (0.16x20,000) and the contribution totally 219.50 euro.

The base for health care contribution is the YEL-income plus the wage income (25,000) from which the local tax deductions, except pension contribution, are subtracted. If the local tax base is 21,000 euro, the health care contribution is 268.80 euro (1.28x21,000).

Table 26. Social contribution rates and income limits of self-employed in 2007–2011, %

	2007	2008	2009	2010	2011
Pension insurance contribution					
Self-employed, less than 53 years, %	20.8	20.6	20.8	21.2	21.6
, at least 53 years, %	21.9	21.7	21.9	22.4	22.9
Farmers, less than 53 years, until 1st limit, %	10.2	10.1	10.2	10.4	10.6
, after 2nd limit, %	20.8	20.6	20.8	21.2	21.6
Farmers, at least 53 years, until 1st limit, %	10.7	10.6	10.7	10.9	11.2
, after 2nd limit, %	21.9	21.7	21.9	22.4	22.9
Farmers, 1st income limit, euro/year	21,210	21,673	22,984	23,736	24,160
, 2nd income limit, euro/year	33,330	34,058	36,118	37,300	37,966
Sickness insurance contribution					
Health care contribution, %	1.28	1.24	1.28	1.47	1.19
Daily allowance contribution, entrepreneurs, %	0.91	0.81	0.79	1.05	0.92
Daily allowance contribution, farmers, %	0.75	0.67	0.70	0.93	0.82
Work injury contribution for MYEL-income; %	1.47	1.20	1.20	1.50	1.65

- ***Changes in social contribution rules of self-employed in 2008 – 2011***

From 1.1.2011 the daily sickness allowance contribution must be paid only if a self-employed is 16-67 year-old.

2.5 Personal earned income taxes (tinna_s, tinmu_s and tincr_s)

2.5.1 Tax unit

In income taxation the tax unit is individual, with some exceptions.

2.5.2 Exemptions

Earned incomes are widely subject to tax. The most important exemptions are:

- Child benefit
- Housing allowances
- Livelihood support grant
- Some stipends and scholarships
- 30 % of dividends treated as earned income are non-taxable.
- Local income support

2.5.3 Tax allowances

Personal taxation is based on net income. This means that all expenses related to each income source, so called natural allowances, are deductible from gross income. This “pure income” is the base for other tax allowances. In other words all tax allowances are deducted from this pure income. Tax allowances are deducted either a) in state and local taxation, b) only in state taxation or c) only in local taxation.

Tax allowances simulated in EUROMOD are the following (all figures are annual in 2007):

- ***Allowances in state and local taxation***

Standard allowance for wage expenses is 100% of the wage income up to 620 euro, but not more than the gross wage. The allowance is deducted as natural allowance from wage income. Standard allowance is the only natural deduction simulated in the model. Others are travel expenses to work, trade union dues, fee of unemployment fund and other natural expenses. Other natural expenses are deductible only on that part which exceeds the standard allowance.

Pension contribution allowance is based on employee and self-employed statutory pension contribution. For employees the contribution equals 4.3 percent of gross wage. If the age is 53 years or more the contribution is increased by 1.1 percentage units (see Table 22). For self-employed the contribution rates are higher and different for YEL-income and MYEL-income (see Table 26). Contributions are fully deductible. However, when calculating the health care contribution of self-employed the contribution is not deducted. This exception is not taken into account in the model. It is assumed in simulations that entrepreneurs and farmers pay personally this contribution, and thus are entitled to deduction in personal taxation.

Unemployment contribution allowance is based on employee statutory unemployment contributions. The contribution equals 0.58 percent of gross wage. It is fully deductible. The contribution is voluntary for self-employed.

Daily allowance contribution deduction is based on an employee and self-employed statutory sickness daily allowance contribution. The contribution equals 0.75 percent of work income which covers all income based on work, e.g. wage, salary as well as earned self-employment income and earned dividend income. A higher percentage is applied for YEL-income. The contribution is fully deductible.

- ***Allowances in state taxation***

Pension income allowance is at the maximum the full national pension in the first municipal category multiplied by a coefficient of 2.22 minus the lowest income level in the state tax schedule (12,400 euro in 2007). The result is rounded up to the nearest 10 euro. The maximum allowance is thus 1,590 euro. The deduction cannot be more than the amount of pension income. If pure earned income exceeds the maximum the allowance is decreased by 70 percent of the exceeding amount.

Example (2007): Full pension allowance in state taxation	
The full national pension/year 524.85x12	6,298.20
The full allowance (2.22x6,298.20)-12,400	1,590.00

- ***Allowances in local taxation***

Low earned income allowance is 49 percent of gross work income which exceeds 2,500 euro up to limit of 7,230 euro. From income exceeding 7,230 euro the allowance is 26 percent. The maximum amount is 3,250 euro. The allowance starts to decrease by 4 percent when pure earned income exceeds 14,000 euro.

Pension income allowance is different for single person and spouses. The maximum amount is the full national pension in the first municipal category times 1.37. While the full national pension is different for single persons and spouses, also the maximum allowance is different, 7,150 euro for single and 6,140 euro for spouses. The allowance cannot be more than pension income. If pure earned income exceeds the maximum allowance, the allowance is decreased by 70 percent of the exceeding income.

Student grant allowance is at the maximum 2,200 euro but cannot be more than the amount of student grant. The allowance is reduced by 50 percent for every euro the pure earned income exceeds the full allowance.

Basic allowance equals earned income after all other local tax allowances if this income does not exceed 1,480 euro. If the income after other tax allowances exceeds 1,480 euro the basic allowance is reduced by 20 percent of the exceeding income.

- ***Changes in tax allowances in 2008 – 2011***

In 2009 the pension allowance for spouses changed in local taxation. The different treatment of single persons and spouses was abolished and the allowance of spouses increased to the level of single persons.

2.5.4 Tax base

The earned income tax base is the sum of earned income subject to tax minus natural allowances and other tax allowances. The income subject to tax is the same in state and local taxation, but tax allowances usually differ and thus also the tax bases.

2.5.5 Tax schedule and local tax rates

In state taxation a progressive tax schedule is applied to earned income tax base. The limits and the rates of the income bands in 2007-2011 are shown in Tables 27-31. If the taxable income (after deductions) is exactly the same as the lowest income limit the state tax is 8 euro. If the taxable income is for example 20,400 (2007), the tax is 8+0.09x(20,400-12,400)=728 euro.

Table 27. The progressive state tax schedule on earned income in 2007

Taxable income in state taxation (euro)	Tax on lower limit, euro	Rate above the lower limit, %
12,400 – 20,400	8	9
20,400 – 33,400	728	19.5
33,400 – 60,800	3,263	24
60,800 –	9,839	32

Table 28. The progressive state tax schedule on earned income in 2008

Taxable income in state taxation (euro)	Tax on lower limit, euro	Rate above the lower limit, %
12,600 – 20,800	8	8,5
20,800 – 34,000	705	19
34,000 – 62,000	3,213	23,5
62,000 –	9,793	31,5

Table 29. The progressive state tax schedule on earned income in 2009

Taxable income in state taxation (euro)	Tax on lower limit, euro	Rate above the lower limit, %
13,100 – 21,700	8	7
21,700 – 35,300	610	18
35,300 – 64,500	3,058	22
64,500 –	9,482	30,5

Table 30. The progressive state tax schedule on earned income in 2010

Taxable income in state taxation (euro)	Tax on lower limit, euro	Rate above the lower limit, %
15,200 – 22,600	8	6,5
22,600 – 36,800	489	17.5
36,800 – 66,400	2,974	21,5
66,400 –	9,338	30

Table 31. The progressive state tax schedule on earned income in 2011

Taxable income in state taxation (euro)	Tax on lower limit, euro	Rate above the lower limit, %
15,600 – 23,200	8	6,5
23,200 – 37,800	502	17.5
37,800 – 68,200	3,057	21,5
68,200 –	9,593	30

In local taxation municipal tax rates, church tax rates and sickness contribution percentages are applied to the tax base. Municipal tax rates and church tax rates are decided by municipalities and Churches and thus vary across municipals and Churches. There is no information in the EUROMOD data about these tax rates and thus weighted average tax rates are used in simulations. These rates for relevant policy years are shown in Table 32.

Table 32. Average municpal and church tax rates in 2007-2011

	2007	2008	2009	2010	2011e
Average municipal tax rate, %	18.45	18.55	18.59	18.98	19.17
Average church tax rate, %	1.33	1.33	1.32	1.33	1.34

2.5.6 Tax credits

There are three tax credits in the Finnish tax system, which are not included in the model: tax credit based on invalidity, on payments for maintenance of child and on domestic and reconstruction services. Other three tax credits are simulated and reported below. All the tax credits are non-refundable.

Low earned income tax credit *(työtulovähennys)* in state taxation is 3.6 percent of the work income exceeding 2,500 euro. The maximum amount of credit is 400 euro. If pure income exceeds 33,000 euro the tax credit decreases by 0.9 percent. The tax credit is subtracted from the state tax (up to 2008). Work income is defined as wage, earned self-employment income and earned dividends. The low earned income tax credit is subtracted before any other tax credits.

Table 33. Low earned income tax credit in 2007–2011

	2007	2008	2009	2010	2011
Amount of credit from work income, %	3.6	3.6	5.2	5.2	5.9
Starting income limit, euro	2,500	2,500	2,500	2,500	2,500
Maximum amount, euro	400	400	600	650	740
Limit of pure income, euro	33,000	33,000	33,000	33,000	33,000
Decreases from pure income; %	0.9	0.9	1.2	1.2	1.2

Deficit credit *(alijäämähyvitys)* is a deviation from the principle that capital and earned incomes are taxed separately. If natural allowances and deductible interests exceed the gross capital income, the exceeding amount is denoted as "a deficit in the capital income type". A person is entitled to subtract a share of this deficit (deficit credit) from earned income taxes (state tax, municipal tax, church tax and health care sickness contribution). The deficit credit is the deficit multiplied by capital income tax rate.

Deficit credit deviates also from the principle of individual taxation because there is an increase of deficit credit if there are children in the household. For spouses this increase is applied only to the spouse, whose state tax on earned income is larger. In addition the deficit credit, or a share of it, is possible to transfer to another spouse if it would be "unused" because of low taxes.

The maximum amount of deficit credit per person is 1,400 euro. This is increased by 400 euro if there is one child and by 800 euro if there are at least two children in the household. Thus, for a couple with two dependent children the maximum tax credit is 3,600 euro. That share of the deficit, which is based on interests of first owned dwelling, is multiplied by capital income tax rate plus 2 percentage points (30% instead of 28%). The same maximum limits are still applied. This additional part of the deficit credit is not possible to simulate in EUROMOD.

Deficit credit is subtracted from earned income taxes in the following way. First 75 percent is subtracted from state tax on earned income. The rest of the credit (25%) is then subtracted from state tax (what is left), municipal tax, church tax and health care contribution in the proportion of their respective shares. That share of the deficit credit, which is not deducted from earned income taxes, because no taxes are left, is converted into a loss. This loss is deductible from capital income over the next ten years.

For spouses with one child the calculation of the deficit credit is the following: If husband's state tax on earned income is bigger than wife's, his maximum tax credit is 1,800 euro (incl. child increase) and wife's 1,400 euro. If husband's earned income taxes are less than 1,800 euro, say 1,000 euro, the difference is transferable to the wife. This difference, 800 euro, is then subtracted from wife's taxes in the same way than from husband's taxes.

The deficit credit is deducted after invalidity tax credit and maintenance tax credit. These tax credits are not simulated in EUROMOD.

Special deficit credit *(erityinen alijäämähyvitys)* is admitted on the base of voluntary pension insurance payments. Pension insurance payments are subtracted from capital income. If there is deficit in the capital income type, it is possible to subtract a share of voluntary pension insurance payment from earned income taxes. The special deficit credit is the insurance payment multiplied by capital income tax rate. The maximum deductible insurance payment is at most 5,000 euro and thus the maximum tax credit is 1,400 euro. If a single person has enough deductible interests and voluntary pension insurance payments, the maximum deficit credit and special deficit credit are both 1400 euro. There is no child increase in special deficit credit.

The subtraction of special deficit credit from earned income taxes differs slightly from deficit credit. At first 100 percent of the special deficit credit is subtracted from state tax. If the state tax is smaller than the deficit credit, the rest of it is subtracted from municipal tax, sickness insurance contribution and church tax in the proportion of their respective shares. The special deficit credit, or a share of it, is possible to transfer to a spouse if credit would be "unused" because of low taxes.

That share of the deficit in capital income type, which is not possible to deduct from earned income tax is converted into a loss. The loss is deductible from capital income over the next ten years.

The special deficit credit is deducted after the deficit credit.

- ***Changes in earned income tax rules in 2008 – 2011***

In 2007-2008 the low earned income tax credit was subtracted only from state tax. So if the state tax was smaller than the credit, the rest of the credit was lost. From 2009 onwards the rest of the credit is subtracted from municipal tax, sickness health care contribution and church tax in the proportion of their respective shares.

There have been no other structural changes in tax credits in 2008–2011.

2.6 Personal capital income tax (tiniy_s)

2.6.1 Tax unit

The tax unit is individual in capital taxation. Capital incomes are taxed only in state taxation.

2.6.2 Exemptions

Capital incomes are widely subject to tax. The most important exemptions are:

- Dividends received from non-listed companies and treated as capital income, may be non-taxable up to 90,000 euro if the net wealth of a company is large.
- 30 % of dividends received from listed or non-listed companies (treated as capital income) are non-taxable.
- Imputed rent of ownedoccupied dwelling

2.6.3 Tax allowances

Some interests are subtracted from capital income as natural deductions. Most important natural allowances are interest expenses on mortgage, study and investment loans.

In the EUROMOD the following tax allowances are subtracted from capital income:

Interest on mortgage loan is subtracted from capital income as a natural deduction. There is no limit for deduction.

Voluntary pension insurance payment allowance is deducted from capital income with a limit of 5,000 euro.

2.6.4 Tax base

The capital income tax base is the sum of capital incomes subject to tax minus natural allowances, deductible interests and losses. The losses are not included in simulations.

2.6.5 Tax rate

Capital income is taxed with a flat tax rate of 28 percent in all policy years 2007–2011.

2.6.6 Tax credits

The tax credit for domestic and reconstruction services is the only tax credit which is subtracted (partly) from capital income tax. Firstly it is subtracted from capital and earned state taxes in relation to their amounts. Secondly if there is tax credit left, it is subtracted from other earned income taxes in the proportion of their respective shares. These tax credits are not simulated in the model.

- ***Changes in capital income tax rules in 2008 – 2011***

There have been no structure changes in capital income taxation in 2008–2011.

3. DATA[2]

3.1 General description

The Finnish database is drawn from the UDB version of the European Statistics on Income and Living Conditions survey (EU-SILC) in 2008. EU-SILC is the main source of comparative statistics on income distribution and social exclusion in Europe.

The survey is constructed by combining information from registers and interviews. Most of the information is from administrative registers, such as Statistics Finland's population statistics and Tax register. Typically many of the household classifications and some expenditures are based on interviews.

The target group of the survey are households residing permanently in Finland. Excluded are persons living in Finland temporarily or without address, institutionalized, living permanently abroad and asylum seekers.

The Finnish EU-SILC is a cross-sectional data based on nationally representative sample of individuals living in private households. The sample is based on a rotating panel where the same household is included in two consecutive years. About half of the households in the final sample are new and half were included already in the previous year.

The sample design is a two-phase stratified sampling. In the first phase a so-called master sample is created by drawing 50,000 target persons aged at least 16 years. People living in the same household with the target person are identified using the domicile codes. In the second phase the actual sample is drawn from the master sample using the stratification rules.

The stratification is performed according to the available socio-economic information. The sample is divided into 13 groups of which four are employees, two self-employed, two farmers, two pensioners, two other groups and one no tax record-group. The stratification of the sample is unequal in the sense that it takes a person with highest earnings as the reference person and emphasizes farmers and entrepreneurs in the allocation. Income class classification is used to allocate the sample to cover more high income earners. At the same time, an entrepreneur or a farmer needs not to have the highest earnings in the household to be defined as entrepreneur or farmer household. Besides the stratification criteria, the probability that a household is included in the sample depends on the number of persons in the household aged at least 16 years.

[2] Sources used in this chapter are *The Final Quality Report relating to the Finnish EU-SILC 2008 and *Tulonjakotilasto 2007 (Income Distribution Survey), Statistics Finland.

Table 34. EUROMOD database description

	Year 2008
EUROMOD database	FI_2008
Original name	EU-SILC
Provider	EUROSTAT
Year of collection	2008
Period of collection	01/2008 – 05/2008
Income reference period	2007
Coverage	Private households
Actual sample size	13,049 households 1st wave: 7,500 observations 2nd wave: 5,549 observations
Accepted households	10,472 households 1st wave: 5,484 observations 2nd wave: 4,988 observations
Non-response rate	1st wave: 25.6 % 2nd wave: 9.2 %

3.2 Sample quality and weights

3.2.1 Non-response

The EU-SILC sample is selected from the Population Register. The sampling frame included 4,264,197 persons aged 16 or more.

The total household non-response rate to interviews in the first wave was 18.6 percent (25.6 % in the 1st wave and 9.2 % in the 2nd wave). Non-response rates of the 13 population groups interviewed in the first wave are reported in Table 34.

Table 35. Non-response rates of the stratificated population groups in the first wave

Stratificated group	Non-response rate
Employees 1	27.7
Employees 2	23.9
Employees 3	23.8
Employees 4	23.1
Self-employed persons 1	26.2
Self-employed persons 2	28.4
Farmers 1	16.4
Farmers 2	15.0
Pensioners 1	29.0
Pensioners 2	16.7
Others 1	39.4
Others 2	27.1
No tax record	69.6
National average	25.6

Source: Tulonjakotilasto 2007, Income Distribution Survey.

The non-response rates of employee and self-employed groups are near to the national average. Farmers and Pensioners 2 responded more often than other groups. The variations of the non-response rates are highest in groups “Pensioners” and “Others”. “No tax record”-group have the highest non-response rate due to their heterogeneity comparing to other groups.

3.2.2 Weights

The grossing-up weights are used to scale sample information to represent the overall population. The weights are given to every household member accepted in the data. The weights of the master sample are determined according to the following process:

- Base weights are determined by using the probability the households are included in the sample
- Base weights are adjusted by multiplying them with the inverse of the response-rate of the stratification group in which the household belongs to
- The adjusted weights are calibrated with CALMAR-macro to correspond to the known basic distributions of the population. The macro is used to mitigate the selection bias generated by the non-response and to provide accurate estimates for the most important variables in the sample

Table 36. Descriptive Statistics of the Grossing-up weight

Number	26,481
Mean	197.2
Median	158.4
Maximum	1,541.1
Minimum	2.0
Max/Min	755.72
Decile 1	41.6
Decile 9	534.2
Dec 9 / Dec1	12.84

Note: Statistics of grossing-up weights are calculated from the Finnish EU-SILC data. Number of persons, mean and median are unweighted figures.

The original sample size includes 26,481 individuals and 10,472 households. Applying weights to gross up to population figures gives 5,222,056 individuals and 2,483,500 households.

3.2.3 Item non-response and under-reporting

Almost all income information in the Finnish data is drawn from registries which do not normally include item non-response. Consequently, income components do not have normally item non-response. The exception is interest income taxed at source which is based on interview information.

3.3 Imputations and assumptions

3.3.1 Time period

The income reference period of the EU-SILC 2008 is the calendar year 2007. Most income variables were collected from registries and refer to this period, i.e. the twelve month period before the survey year. The interview information was collected during the first five months of year 2008. The reference period of income variables and the period of socio-demographic and labour characteristics is thus different. However, the Finnish data collecting principle diverge in this sense from general EU-SILC instructions and the relevant interview information refers also to the income reference period (e.g. labour market status). Table 36 introduces the reference periods used and the data information reported at each period.

Table 37. Definitions for the reference periods in Finnish EU-SILC 2008

Current, time point of the interview for the respondent in year 2008
- Non-monetary household deprivation indicators
- Housing (amenities in dwelling)
- Education
- Health

Current, last day of the income reference period (31th December 2007)
- Basic data
- Physical and social environment
- Housing (dwelling type, tenure status and housing conditions)

Current, last month of the income reference period (December 2007)
- Child care
- Labour information on current activity status and current main job, including information on last job before unemployment
- Detailed labour information
- Housing costs (a part of housing costs)

Last 12 months preceding the time point of interview
- Health (access to health-care)

Income reference period (calendar year 2007)
- Income
- Labour information on activity status during income reference year
- Housing and non-housing related arrears
- Housing costs (a part of the housing costs, e.g. income related items)

The target variables of activity status during the income reference period and the detailed subgroups interviewed are shown in Table 37. EU-SILC does not provide activity information for other income and benefit variables.

Table 38. Target variables of person's activity status during the income reference period

Number of months at full-time work (pl070)
- Employee working at least 30 hours a week
- Entrepreneur or unpaid worker in family enterprise working full-time

Number of months at part-time work (pl072)
- Employee working part-time (less than 30 hours a week)
- Entrepreneur or unpaid worker in family enterprise working part-time

Number of months in unemployment (pl080)
- Unemployed persons

Number of months in retirement (pl085)
- Pensioners

Number of months studying (pl087)
- Pupils and students

Number of months in inactivity (pl090)
- On unpaid sickness leave, etc.
- Others
- In military service

All monetary incomes in the EUROMOD database are converted into monthly terms. In calculations it is implicitly assumed that income is received at the same rate throughout the year.

3.3.2 Gross incomes

In the EU-SILC 2008 all income variables are in gross terms. No net-to-gross imputations have been done.

3.3.3 Imputed variables

In the EU-SILC data interest income taxed at source includes imputed components because information is missing due to item non-response. A statistical imputation method (hot deck method) is used in imputation.

Some monetary variables have been imputed into EUROMOD database from aggregate EU-SILC variables. These imputations are often necessary to make the simulations possible. E.g. the investment income (*hy090g)* includes capital, earned and non-taxable income which are necessary to separate in order to simulate taxes and contributions. In addition there is information in the original UDB variables, which is not possible to decompose into any relevant and homogenous variables. The content of these "residual variables", or "other income components", is probably heterogeneous. The imputations have been performed by using the Income Distribution Survey as background information. However, because of the reasons mentioned above, the imputations are not precise. Table 39 shows the aggregate EU-SILC variables which have been imputed to disaggregated variables.

Table 39. Imputed variables

Aggregate variable	Description of aggregate variable	Imputed variable	Description of imputed variable
yse	Self-employment income	yse00	Earned income as self-employment income
		yse01	Capital income as self-employment income
yiy	Investment income	yiytx00	Earned income as investment income
		yiytx01	Capital income as investment income
		yiynt	Tax-free income as investment income
bun	Unemployment allowances	bunnc	Basic unemployment allowance (s)
		bunct	Earnings-related unemployment allowance (s)
		bunmt	Labour market subsidy (s)
		bunot	Other unemployment allowances
bed	Education related allowances	bed00	Study grant (s)
		bedot	Other education related allowances
bfa	Family and children related allowances	bma	Parental leave benefits
		bcc	Child home care allowance (s)
		bch	Child benefit (s)
		bfaot	Other family related allowances
bsa	Social exclusion	bsa00	Local authority income support (s)
		bsaot	Other social assistance benefits
bho	Housing allowances	bho00	General housing allowance
		bhosd	Student housing supplement (s)
		bhope	Pensioner housing allowance (s)
		bhoot	Other housing allowances

Note: Variables with (s) are simulated in EUROMOD.

3.4 Updating

The factors which are used to update monetary variables from the base year 2007 up to 2011 are shown in Table 40. No other updating adjustments are employed to the monetary variables. Neither is any structural change done to the demography or labour market characteristics. As a result the distribution of each income source that is not simulated remains the same through the whole period.

Table 40. Updating factors

Variable	Income source	Index type	2008	2009	2010	2011
default		Index of earnings	1.056	1.040	1.026	1.026
yem	Income - Employment	Index of earnings	-	-	-	-
kfb	In-kind - Fringe benefits	Index of earnings	1.056	1.040	1.026	1.026
ypp	Income - Private pension	Occupational pension index	1.024	1.050	1.003	1.014
yse	Income - Self-employment	Index of earnings	1.056	1.040	1.026	1.026
yiy	Income - Investment	Index of investment income	1.090	0.910	1.150	1.150
ypr	Income – Property	Rent index	1.034	1.04	1.027	1.020
kivho	income – Imputed housing	Index of earnings	1.056	1.040	1.026	1.026
ypt	Income - Private transfers	Consumer price index	1.041	1.000	1.012	1.035
yot	Income - Other	Consumer price index	-	-	-	-
bedot	Benefit - Other education	Consumer price index	-	-	-	-
bunot	Benefit - Other unemployment	Consumer price index	-	-	-	-
bhl	Benefit - Sickness	Consumer price index	-	-	-	-
bma	Benefit - Parental	Consumer price index	-	-	-	-
bfaot	Benefit - Other family	Consumer price index	-	-	-	-
bsaot	Benefit - Other social assistance	National pension index(KEL)	1,025	1,046	1,000	1,004
bho00	Benefit – General housing all.	Consumer price index	1.041	1.000	1.012	1.035
bhoot	Benefit - Other housing	Consumer price index	-	-	-	-
pdi	Benefit - Disability	Occupational pension index	1.024	1.050	1.003	1.014
poa	Benefit - Old-age	Occupational pension index	-	-	-	-
psu	Benefit - Survivor	Occupational pension index	-	-	-	-
tpr	Tax - Real estate	Rent index	1.076	1.150	1.070	1.020
afc	Assets - Financial capital	Index of investment income	1.090	0.910	1.150	1.150
xmp	Expenditure.- Mainten. payments	Index of earnings	1.056	1.040	1.026	1.026
xpp	Expenditure - Private pension	Occupational pension index	1.024	1.050	1.003	1.014
xhc	Expenditure - Housing cost	Rent index	1.076	1.150	1.070	1.020
xhcrt	Expenditure – Rent	Rent index	-	-	-	-
xhcmomi	Expenditure -:Mortgage interest	Index of mortgage interest	1.220	0.670	0.720	1.170
xhcot	Expenditure – Other housing cost	Rent index	1.076	1.150	1.070	1.020

Sources: *Statistics Finland, *Social security Institution ,KELA, *Ministry of Finance
*Mortgage interest forecasts used in TUJA-model and based on statistics of Bank of Finland.

4. VALIDATION

In this chapter statistics on EUROMOD benefits and taxes are compared with external sources. Tables 41-43 show the validation results of the tax-benefit instruments which are included in EUROMOD but are not simulated. Tables 44-46 compare the tax-benefit instruments which are simulated in EUROMOD. The numbers of income recipients and taxpayers as well as aggregate amounts are presented.

The sources of external statistics are based on administrative registers, like Tax register, databases of Social Security Institution (KELA), of Finnish Center for Pensions (ETK) and of Statistics Finland. For some incomes and taxes there is no information on recipients or taxpayers available. The reason is that in register the information is often broken down into details. People may receive different incomes, or pay taxes, simultaneously and the recipients or tax payers are not possible to sum up.

While the EUROMOD data is mainly collected from registers, the overall match should be quite good. However, the income concepts of the survey and administrative registers are not always comparable. And the precise content of some imputed variables may not be known.

4.1 Aggregate Validation

4.1.1 Non simulated incomes and taxes

Table 41 shows that earnings across all employees in EUROMOD is close (99%) to the register sources in the base year 2007. Investment income and pensions are covered less well (93%) and self-employment income is somewhat over-represented (104%). The discrepancies are larger when different components of investment and self-employment incomes are compared.

The recipients of pension income and aggregate pensions are too low in the model. One reason is that people living in institutions are not included in data. Old age pensions are over-estimated, and survivor's pensions under-estimated, because old age pensions include survivor's pensions in data if they are paid after the standard retirement age. Disability pensions are overestimated while they include also other benefits than pensions.

The number of recipients of parental leave benefit is one third less than in the register source. In the model the benefit is assigned to the head of the household. Usually this is a father. The external statistics shows higher number of recipients, because both maternity and paternity recipients are included. In the EUROMOD there is only one recipient in the household. The property tax is clearly under-estimated in the model because real estate tax paid by households does not cover the owner-occupied flats.

Table 41. EUROMOD validation: tax-benefit instruments included but not simulated in 2007

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	**External**	**Ratio**	**EUROMOD**	**External**	**Ratio**
Employment income	2,737	2,809	0,97	66,728	67,638	0,99
Fringe benefits	642	642	1,00	916	972	0,94
Self- employment income	480			6,551	6,307	1,04
Earned income share	380			4,730	4,269	1,11
Capital income share	396			1,821	2,038	0,89
Investment income	2,951			4,129	4,436	0,93
Earned income (taxable)	146	129	1,13	285	332	0,86
Capital income (taxable)	1,486			1,819	2,202	0,83
Tax free income (dividends)	2,914	971	3.00	2,025	1,902	1,06
Property Income	285	243	1,17	1,047	1,089	0,96
Private pensions	212	182	1,16	1,059	964	1,10
Pensions	1,352	1,390	0,97	18,270	19,572	0,93
Old-age pensions	950	978	0,97	14,546	13,012	1,12
Disability pension	367	272	1,35	3,398	3,122	1,09
Survivor's pension	55	288	0,19	326	1,478	0,22
Sickness leave benefits	172	177	0,97	407	424	0,96
Parental leave benefits	106	152	0,7	690	656	1,05
General housing allowance[1]	195	142	1,37	417	431	0,97
Property tax (households)	987			220	390	0,56

Note: [1] In external source the number of recipient households 31.12.

Sources:

*Verotilasto(2008-2010), Tax statistics for 2007-2009: Tax Administration Publication.

*Veronsaajien palvelut, Tax Administration website services.

*Social Security Institution, KELA: Statistical Yearbooks 2007-2009.

*Social Security Institution, KELA, Statistical Database.

*Finnish Center for Pensions, ETK, Statistical Database.

*Statistics Finland, TK, Statistical Database.

*National Institute for Health and Welfare, THL: Local income support 2007-2009.

*Financial Supervisory Authority website, Finanssivalvonta: Statistics - Unemployment Insurance.

*OECD (2011): Statistics Database (OLIS)

The discrepancy of self-employment income is larger in 2008-2009 when sales from forest became partly non-taxable. The effect is opposite for interests taxed at source when investment income has increased more than in the model. The reason for these discrepancies in statistics and EUROMOD is that the incomes in the model have been updated only by the indices.

Table 42. EUROMOD validation: tax-benefit instruments included but not simulated in 2008

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	External	Ratio	EUROMOD	External	Ratio
Employment income	2,737	2,846	0,96	70,398	72,285	0,97
Fringe benefits	642	674	0,95	966	936	1,03
Self- employment income	480			6,912	5,974	1,16
Earned income share	380			4,990	4,381	1,14
Capital income share	396			1,921	1,593	1,21
Investment income	2,951			4,500	5,320	0,85
Earned income (taxable)	146	76	1,92	310	346	0,90
Capital income (taxable)	1,486			1,982	2,918	0,68
Tax free income (dividends)	2,914	819	3.56	2,207	2,056	1,07
Property income	285	253	1,13	1,127	1,171	0,96
Private pensions	212	165	1,28	1,085	1,013	1,07
Pensions	1,352	1,414	0,96	18,709	20,281	0,92
Old-age pension	950	1,005	0,95	14,895	13,790	1,08
Disability pension	367	273	1,35	3,479	3,061	1,14
Survivor's pension	55	287	0,19	334	1,521	0,22
Sickness leave benefits	172	168	1,02	423	423	1,00
Parental leave benefits	106	155	0,68	718	695	1,03
General housing allowance[1]	195	139	1,40	434	428	1,01
Real estate tax (households)	987			237	418	0,57

Notes and sources: See Table 41

Table 43. EUROMOD validation: tax-benefit instruments included but not simulated in 2009

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	External	Ratio	EUROMOD	External	Ratio
Employment income	2,737	2,787	0,98	73,201	71,452	1,02
Fringe benefits	642	668	0,96	1,004	931	1,08
Self- employment income	480			7,187	5,260	1,37
Earned income share	380			5,189	4,151	1,25
Capital income share	396			1,998	1,109	1,80
Investment income	2,951			4,096	5,184	0,79
Earned income (taxable)	146	48	3,04	282	331	0,85
Capital income (taxable)	1,486			1,804	2,855	0,63
Tax free income (dividends)	2,914	958	3.04	2,009	1,998	1,01
Property income	285	263	1,08	1,296	1,236	1,05
Private pensions	212	160	1.32	1,139	1,014	1.12
Pensions	1,352	1,443	0,94	19,640	21,981	0,89
Old-age pension	950	1,048	0,91	15,637	15,268	1,02
Disability pension	367	272	1,35	3,653	3,159	1,16
Survivor's pension	55	287	0,19	351	1,600	0,22
Sickness leave benefits	172	163	1,06	423	451	0,94
Parental leave benefits	106	157	0,68	718	761	0,94
General housing allowance[1]	195	162	1,21	434	482	0,90
Real estate tax (households)	987			272	445	0,61

Notes and sources: See Table 41

4.1.2 Simulated taxes and benefits

Table 44-46 show the validation results of simulated benefits, taxes and social contributions. As described above the external numbers of recipients are not always available. For employers there is no external information about payers of social contributions.

The recipients of earnings-related unemployment benefit are overestimated because the model variable includes some benefits, which are not included in external statistics. The means-tested benefits are often overestimated while 100% take-up is assumed. The local income support is underestimated because in the baseline eligibility is based on the input data.

Self-employed persons are clearly under-estimated in the data. However, the overall aggregate self-employment income is relatively close (108%) to the register source. Farmers work injury and life insurance contributions are not presented because of their minor importance in aggregate level. For instance in 2007 these expenditures were 12.1 million euro and 1.6 million euro.

Table 44. EUROMOD validation: simulated tax-benefit instruments in 2007

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	External	Ratio	EUROMOD	External	Ratio
Benefits						
Basic UB allowance	40	45	0.89	82	95	0.87
Earnings-related UB allow.	396	233	1.70	1,460	1,515	0.96
Labour market subsidy	174	203	0.86	568	706	0.80
Child home care allowance	114	113	1.01	281	331	0.85
Child benefit[1]	568	565	1.00	1,395	1,411	0.99
Student housing supplement	171	213	0.80	287	243	1.18
Pensioner's housing allow.[1]	240	174	1.39	412	334	1.23
Local income support/hholds	71	218	0.33	209	476	0.44
Study grant	342	316	1.08	612	406	1.51
Social contributions						
Occupational pension contr.				16,264	15,704	1.04
Employees	2,543	2,415	1.05	3,075	2,958	1.04
Self-employed	185	275	0.67	863	800	1.08
Entrepreneurs	134	188	0.71	693	660	1.05
Farmers	51	87	0.59	169	140	1.21
Employers				12,327	11,946	1.03
National pension contrib.				1,136	1,104	1.03
Employers				1,136	1,104	1.03
Unemployment contribution				1,929	1,721	1.13
Employees (statutory)	2,636	2649	1.00	390	375	1.04
Employers				1,539	1,346	1.14
Sickness contribution				2,991	2,908	1.03
Individuals				1,605	1,539	
Daily allow. contribution	2,943	2,987	0.99	549	541	1.01
Health care contribution	3,845	3,883	0.99	1,056	998	1.06
Employers				1,387	1,369	1.01
Work injury contribution				693	585	1.18
Life insurance contribution				53	40	1.34
Income taxes						
State tax on capital income	1,278	1,036	1.23	1,175	2,449	0.48
State tax on earned income	2,525	2,326	1.09	6,567	6,155	1.07
Municipal tax	3,868	3,871	1.00	14,797	14,216	1.04
Church tax	3,847	3,170	1.21	1,064	827	1.29

Notes and sources: See Table 41

Capital income taxes are significantly under-estimated in the base year 2007. This is mainly because external statistics include taxes paid from capital gains. These capital gains have decreased in 2008-2009 and the discrepancy between simulated taxes and external statistics has become smaller. In the model nearly all who pay local taxes are also members of Church, which is not the case in reality.

Table 45. EUROMOD validation: simulated tax-benefit instruments in 2008

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	External	Ratio	EUROMOD	External	Ratio
Benefits						
Basic UB allowance	40	45	0.88	84	96	0.88
Earn. related UB allowance	396	225	1.76	1,507	1,445	1.04
Labour market subsidy	172	183	0.94	577	645	0.89
Child home care allowance	114	114	1.01	277	325	0.85
Child benefit	568	597	0.95	1,411	1,425	0.99
Student housing supplement	185	210	0.88	322	242	1.33
Pensioner housing allow.[1]	240	175	1.40	448	349	1.28
Local income support	78	216	0.36	214	526	0.46
Study grant	397	322	1.23	703	441	1.59
Social contributions						
Occupational pension contr.				17,013	16,808	1.01
Employees	2,544	2,338	1.09	3,102	3,034	1.02
Self-employed	187	276	0.68	906	831	1.09
Entrepreneurs	136	192	0.71	726	691	1.05
Farmers	51	84	0.61	180	140	1.28
Employers				13,005	12,943	1.00
National pension contr.				1,120	1,076	1.04
Employers				1,120	1,076	1.04
Unemployment contribution.				1,723	1,611	1.07
Employees (statutory)	2,636	2,615	1.01	241	273	0.88
Employers				1,482	1,343	1.10
Sickness contributions				2,990	2,950	1.01
Individuals				1,585	1,543	
Daily allow. contribution	2,943	3,008	0.98	517	516	1.00
Health care contribution	3,820	3,935	0.97	1,068	1,027	1.04
Employers				1,406	1,407	1.00
Work injury contribution				728	384	1.25
Life insurance contribution				56	40	1.41
Income taxes						
State tax on capital income	1,268	846	1.50	1,257	1,866	0.67
State tax on earned income	2,186	2,048	1.06	6,794	6,327	1.07
Municipal tax	3,850	3,914	0.98	15,567	15,134	1.03
Church tax	3,824	3,171	1.21	1,113	868	1.28

Notes and sources: See Table 41.

Because of recession in 2009 the recipients of unemployment benefits increased. Because no demographic or other structural changes are included in the model the number of recipients became close with external statistics. On the other hand the aggregate amount becomes clearly under-estimated.

Table 46. EUROMOD validation: simulated tax-benefit instruments in 2009

	Recipients/payers (thousands)			Expenditure (euro million/year)		
	EUROMOD	External	Ratio	EUROMOD	External	Ratio
Benefits						
Basic UB allowance	40	64	0.62	88	166	0.53
Earn.-related UB allowance	396	367	1.08	1,582	2,090	0.76
Labour market subsidy	171	184	0.93	600	710	0.85
Child home care allowance	114	115	1.00	287	349	0.82
Child benefit	568	596	0.95	1,428	1,437	0.99
Student housing supplement	220	219	1.00	404	267	1.51
Pensioner housing allow.[1]	266	178	1.49	513	370	1.39
Local income support	85	239	0.36	315	615	0.51
Study grant	386	332	1.16	801	504	1.59
Social contributions						
Occupational pension contr.				17,919	16,841	1.06
Employees	2,544	2,310	1.10	3,373	3,161	1.07
Self-employed	186	274	0.68	949	886	1.07
Entrepreneurs	135	191	0.71	762	735	1.04
Farmers	51	83	0.62	187	151	1.24
Employers				13,597	12,794	1.06
National pension contrib..				208	632	0.33
Employers				208	632	0.33
Unemployment contribution				1,578	1,471	1.07
Employees (statutory)	2,635	2,626	1.00	147	191	0.77
Employers				1,431	1,283	1.12
Sickness contributions				3,407	3,027	1.05
Individuals				1,605	1,609	1.05
Daily allow. contribution	2,943	2,947	1.00	559	533	1.05
Health care contribution	3,808	3,896	0.98	1,130	1,076	1.05
Employers				1,484	1,418	1.05
Work injury contribution				757	550	1.38
Life insurance contribution				51	41	1.25
Income taxes						
State tax on capital income	1,298	877	1.48	1,293	1,336	.0.97
State tax on earned income	1,943	1,751	1.11	6,252	5,339	1.17
Municipal tax	3,828	3,866	0.99	15,984	15,100	1.06
Church tax	3,809	3,085	1.23	1,133	846	1.34

Notes and sources: See Table 41.

4.2 Income distribution

All results presented here concerning poverty and income distribution are computed for individuals according to their household disposable income (HDI) equivalised by the "modified OECD" equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions. The weights in the OECD equivalence are: first adult=1; additional people aged 14+=0.5; additional people aged under 14=0.3. In all simulations 100% take-up of means-tested benefits is assumed.

Table 47 provides the comparison of EUROMOD simulations and the EUROSTAT data for income years 2007-2009. Means and medians are lower in EUROMOD. Poverty rates, S80/S20-ratios and Gini-coefficients are lower than in the EUROSTAT statistics. Women's poverty rates are, however, somewhat lower in the model. The comparison show the effects of variable imputations and simulations itself while the base data are the same.

Table 47. EUROMOD validation, income distribution and poverty statistics in 2007-2009

	EUROMOD			EUROSTAT			Ratio		
Year	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
Mean									
Total	20,912	22,081	23,142	22,008	23,119	23,528	0.95	0.96	0.98
Males	21,399	22,596	23,674	22,558	23,616	24,043	0.95	0.96	0.98
Females	20,444	21,588	22,633	21,481	22,642	23,033	0.95	0.95	0.98
Median									
Total	18,915	19,936	20,977	19,794	20,962	21,349	0.96	0.95	0.98
Males	19,537	20,616	21,664	20,513	21,490	21,802	0.95	0.96	0.99
Females	18,363	19,347	20,354	19,180	20,334	20,854	0.96	0.95	0.98
Poverty rate									
Total	12.3	12.4	12.1	13.6	13.8	13.1	0.90	0.90	0.92
Male	11.9	12	11.7	12.7	12.9	12.4	0.94	0.93	0.94
Female	12.6	12.8	12.4	14.5	14.7	13.8	0.87	0.87	0.90
Ratio S80/S20	3.5	3.5	3.5	3.8	3.7	3.6	0.93	0.96	0.96
Gini coeffiecient	25.2	25.4	24.9	26.3	25.9	25.4	0.96	0.98	0.98

Note: Means and medians are in equivalised disposable income (current prices) per year using the modified OECD equivalence scale. Poverty risk is defined as the percentage of people with household income below 60 % of median household equivalised income.
Source: Eurostat (2012) Statistics Database. Last accessed February.2012.

In Table 48 simulations are compared with Income Distribution Survey (IDS) as external source. As expected the means and median are clearly higher in IDS where imputed income from owner occupied dwellings and capital gains are included. The effect of decreased capital gains and dividends in 2008-2009 shows lower Gini-coefficients in IDS and closer ratios.

Table 48. EUROMOD validation, income distribution and poverty statistics in 2007-2009

	EUROMOD			IDS			Ratio		
Year	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
Mean									
Total	20,912	22,081	23,142	26,007	25,705	26,375	0.80	0.86	0.88
Males	21,399	22,596	23,674	26,655	26,252	26,930	0.80	0.86	0.88
Females	20,444	21,588	22,633	25,388	25,181	25,842	0.81	0.86	0.88
Median									
Total	18,915	19,936	20,977	22,684	22,964	23,712	0.83	0.87	0.88
Males	19,537	20,616	21,664	23,301	23,461	24,212	0.84	0.88	0.89
Females	18,363	19,347	20,354	22,135	22,460	23,274	0.83	0.86	0.87
Poverty rate									
Total	12.3	12.4	12.1	13.5	13.3	13.1	0.91	0.93	0.92
Male	11.9	12	11.7	13	12.9	12.5	0.92	0.93	0.94
Female	12.6	12.8	12.4	14.1	13.6	13.6	0.89	0.94	0.91
Ratio S80/S20	3.5	3.5	3.5	4	3.8	3.7	0.88	0.93	0.94
Gini coeffiecient	25.2	25.4	24.9	28	26.8	25.9	0.90	0.95	0.96

Note: See Table 47.
Source: Tulonjakotilasto 2007-2009, Income Distribution Survey.

4.2.1 Poverty

In Table 49 poverty rates with several poverty lines and different age groups are presented. As shown in Table 47 the overall poverty rates at the 60% threshold approximate quite well the EUROSTAT data (except for females). The differences are larger with lower poverty lines. With 60% threshold the variations are largest for youngest and eldest persons. The EUROMOD overall relative poverty rates are slightly lower than the poverty rates reported in EUROSTAT.

Table 49. EUROMOD validation: poverty rates at different poverty lines in 2007-2009

	EUROMOD			EUROSTAT			Ratio		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
40% median HDI									
Total	1.6	1.7	1.7	2.5	2.5	2.4	0.64	0.68	0.71
Males	1.8	1.9	1.9	2.6	2.7	2.7	0.69	0.70	0.70
Females	1.3	1.4	1.4	2.3	2.3	2	0.57	0.61	0.70
50% median HDI									
Total	4.9	5.0	4.8	6.5	6.4	5.5	0.75	0.78	0.87
Males	5.3	5.4	5.1	6.6	6.4	5.6	0.80	0.84	0.91
Females	4.6	4.7	4.4	6.4	6.4	5.3	0.72	0.73	0.83
60% median HDI									
Total	12.3	12.4	12.1	13.6	13.8	13.1	0.90	0.90	0.92
Males	11.9	12.0	11.7	12.7	12.9	12.4	0.94	0.93	0.94
Females	12.6	12.8	12.4	14.5	14.7	13.8	0.87	0.87	0.90
70% median HDI									
Total	21.8	21.9	21.4	22.2	22	21.4	0.98	1.00	1.00
Males	20.2	20.2	19.7	20.4	20.1	19.8	0.99	1.00	0.99
Females	23.4	23.5	23.1	23.8	23.9	22.9	0.98	0.98	1.01
60% median HDI									
0-17 years	11.0	11.2	11.5	12	12.1	11.4	0.92	0.93	1.01
18-24 years	21.3	20.8	20.7	26.2	26.2	26.8	0.81	0.79	0.77
25-49 years	9.0	9.1	8.9	9.2	9.5	9.9	0.98	0.96	0.90
50-64 years	9.6	9.9	9.8	10	10.9	10.3	0.96	0.91	0.95
65+ years	19.2	19.8	17.7	22.5	22.1	18.3	0.85	0.90	0.97

Notes: Computed for individuals according to their household disposable income (HDI) in current prices per year using the modified OECD equivalence scale. Poverty risk is defined as the percentage of people with household income below 40-70 % of median household equivalised income.
Source: Eurostat (2012) Statistics Database. Last accessed February.2012.

4.2.2 Income inequality

Table 50 shows the main inequality indices from EUROMOD and IDS. The simulated disposable equivalised (median) income is underestimated at each income deciles in all policy years (as the total median in Table 48). The ratios are lowest (0.81-0.92) in 2007. As said before, the main reasons are different income concepts in these two data, imputed variables in EUROMOD and the simulations itself.

The deciles income shares and Gini-coefficients are quite close, except in the 1st decile in all years and the top decile in 2007. The difference in the first decile comes from overstimulation of means-tested benefits under 100% take-up assumption. The difference in the top decile is related to capital gains which were significantly larger in 2007 than in 2008-2009. These incomes are concentrated to the top decile.

Table 50. EUROMOD validation, income inequality in 2007-2009

	EUROMOD			IDS			Ratio		
Year	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
Decile medians									
1	9,489	9,960	10,591	10,334	10,786	11,318	0.92	0.92	0.94
2	11,910	12,512	13,290	13,529	14,341	14,865	0.88	0.87	0.89
3	13,829	14,579	15,474	16,191	17,078	17,756	0.85	0.85	0.87
4	15,931	16,816	17,720	18,527	19,421	20,238	0.86	0.87	0.88
5	17,967	18,962	19,926	20,730	21,806	22,591	0.87	0.87	0.88
6	20,011	21,114	22,157	23,017	24,049	24,995	0.87	0.88	0.89
7	22,179	23,373	24,576	25,584	26,610	27,783	0.87	0.88	0.88
8	24,857	26,252	27,484	28,821	29,855	30,782	0.86	0.88	0.89
9	28,528	30,123	31,624	33,715	34,785	35,840	0.85	0.87	0.88
10	37,624	39,762	41,706	46,287	46,697	48,674	0.81	0.85	0.86
Decile shares, %									
1	4.3	4.3	4.3	3.9	3.9	4.0	1.10	1.09	1.08
2	5.7	5.7	5.7	5.4	5.6	5.6	1.05	1.01	1.03
3	6.6	6.6	6.7	6.5	6.6	6.7	1.02	1.00	1.00
4	7.6	7.6	7.7	7.4	7.6	7.7	1.03	1.00	1.00
5	8.6	8.6	8.6	8.3	8.5	8.6	1.04	1.01	1.00
6	9.6	9.5	9.6	9.2	9.4	9.5	1.04	1.02	1.01
7	10.6	10.6	10.6	10.2	10.4	10.5	1.04	1.02	1.01
8	11.9	11.9	11.9	11.6	11.6	11.7	1.03	1.03	1.02
9	13.8	13.7	13.7	13.6	13.6	13.7	1.01	1.01	1.00
10	21.4	21.5	21.1	23.9	22.8	22.0	0.89	0.94	0.96
Gini coeffiecient	25.2	25.4	24.9	28.0	26.8	25.9	0.90	0.95	0.96

Note: Computed for individuals according to their household disposable income (HDI) in current prices per year using the modified OECD equivalence scale.
Source: Tulonjakotilasto 2007-2009, Income Distribution Survey.

4.3 Summary of "health warnings"

This final section summarizes the main findings in terms of particular aspects of the Finnish part of EUROMOD or its database. These should be borne in mind when using the model and interpreting the results.

- No adjustments have been made for demographic changes or changes in the composition of incomes since the base year 2007 (except those updating by indices)
- The assumption of 100% take up of means-tested benefits overestimates the number of recipients and amounts of these benefits
- In the baseline local income support is simulated based on the eligibility from data
- Some income variables are imputed from aggregate EU-SILC variables. The information of these variables may be inaccurate and the content heterogeneous
- One should be careful when interpreting the results for small subgroups
- Some tax credits are not simulated or included in the data.

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