

EUROMOD

COUNTRY REPORT



FRANCE (FR)

2011-2015

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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 28 Member States and is updated to recent policy systems using data from the French part of EU-SILC called SRCV: Statistiques sur les ressources et les conditions de vie – 2012, produced by INSEE and provided by ADISP-CMH. This report documents the work done in one annual update for France. 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 G3.0. 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: <https://www.euromod.ac.uk>

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

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BASIC INFORMATION

1.1 Basic information about the tax-benefit system

The tax-benefit system in France is mainly a national system where people are taxed the same way in whatever region they live. There are, however, exceptions for local taxes such as the land tax (“*taxe foncière*”) and the tax on occupied housing (“*taxe d’habitation*”), which are defined at the regional level. For local taxes, the rates are set every year by the local authorities.

The fiscal year runs from 1st of January to the 31st of December. The tax rules usually change in November each year defining the tax policy of the next year. The state pension age up to 30/06/2011 began at 60. To receive a full pension the state pension age was 65. Reforms after this date in 2011 increased the state pension age to 62 and 67 for the full-pension. In June 2012, this reform was reversed. The amount of pension paid depends on the number of quarters worked.

The minimum school leaving age is 16. The conditions to be considered as a socially dependent child are to be aged less than 20 and to earn less than 55% of the minimum wage (based on 169 hours of monthly work) or to be disabled and under 20. These conditions are used for the calculation of social benefits.

For both benefit and tax purposes, lone parents are the parents of resident dependent children aged under 18, who

- Do not cohabit with others adults who are not dependant (disabled)
- Cohabit with adults with whom they cannot marry (mother, brother, cousin...)

The income tax system is a joint system. It is based on a tax group: the “*foyer fiscal*”. Spouses are assessed together. People who are married or who have signed a contract of civil partnership (PACS) are considered spouses.

This tax group consists of one taxpayer plus the persons who are “*fiscally*” dependent like dependent children and dependent parents.

Children are considered to be fiscally dependent if:

- They are aged under 18 (automatically)
- They are aged under 21 (and they want to be declared with their parents)
- They are aged under 25 and they are students (and want to be declared with their parents)
- They are disabled (automatically whatever their age).

Other adults can be dependent if they are disabled.

All incomes of people in the tax group are combined to calculate income tax. In France, there is a family ratio system (“*quotient familial*”) which is applied before the calculation of income tax. This family ratio gives a weight to each person in the tax group. The family ratio is applied to the total income of the tax group before it is subjected to the tax schedule.

Taxpayers have to fill in a tax return with the total of the revenue of the previous year in May. There are two different ways to pay income tax.

- A monthly withholding, evaluated based on the amount paid the previous year. The difference between the amount actually paid and the amount payable is adjusted in September.
- 3 payments in the year evaluated on the amount paid the previous year (“*Tiers provisionnel*”). The third payment is reassessed in September depending on the amount effectively due for the year.

Most benefits in France are indexed every year to take account of inflation (particularly for social minima). In the same way, tax brackets and the amounts involved in tax computation are re-evaluated to take account of inflation.

Most benefits are assessed monthly based on past income (the previous year or before).

1.2 Social Benefits

There are broadly three types of social welfare payments operating in France: family benefits (means and non-means tested), replacement incomes and social assistance.

Family Allowance (“Allocations Familiales”, AF): Family allowance is the main child benefit in France. It is granted to household with two or more dependent children. The amount varies with the number of children and their age. There is no condition on the household income.

Mean-tested Young children allowances (“Prestation d’accueil du jeune enfant”, PAJE): This mean-tested benefit is for families with children under 3.

Family Complement (“Complément familial”): This mean-tested allowance is targeted at families with at least three dependent children aged 3 and over.

Mean-tested education related Family benefit (“Allocation de rentrée scolaire”, ARS): is an annual lump-sum allowance for school children, paid in September. It is paid for each dependent child aged between 6 and 18. There is an income threshold.

Family support allowance (“Allocation de soutien Familial”, ASF): is not mean-tested. The benefit is paid to children under 20 who are not raised by both parents.

Education allowance for handicapped children (“Allocation d’Education de l’Enfant Handicapé”, AEEH) : A family is entitled to the allowance if a child under 20 has at least a 79% disability or a disability between 50% and 80% while attending special school, or if the condition requires the use of special education. The benefit amount is increased for lone parents.

Disabled benefit (“Allocation aux adultes handicapés”, AAH): is an allowance for disabled working age adults who cannot work because of disability. It concerns people over 20 and under 60 years of age. It is paid to persons who suffer from permanent disability of at least 80% or between 50% and 79% and have difficulties in finding substantial and sustainable employment. There is an income threshold.

Solidarity Labour Income (“Revenu de solidarité active”, RSA): The RSA is a guaranteed minimum income and low-earnings top-up. It was tested in 34 counties from May 2007 and then generalized to the entire country from 1 June 2009. The RSA replaces the minimum income (RMI), the single parent allowance (API) (in this case the RSA is increased, and some lump-sum aids like the grant of temporary return to work).

Back-to-work allowance (“Prime de retour à l’emploi”): A back-to-work financial aid is allocated to the beneficiaries of RSA who find a job.

Solidarity allowance for the elderly (“Allocation de solidarité aux personnes âgées”, ASPA): provides a minimum pension for persons aged 65 and over with limited resources. It varies according to household income.

Since 1st of January 2006, the minimum pension for elderly (“Minimum vieillesse”, MV) was replaced by the solidarity allowance for the elderly (“Allocation de solidarité aux personnes âgées”, ASPA). ASPA replaces a dozen benefits merging into a single allowance (like the allowance for elderly employed persons, allowance for elderly non-employed persons, allowance for mother etc.).

Survivor Minimum Pension (“Allocation veuvage”): is a minimum pension limited in time (2 years) to a spouse of a previously insured person. It applies for persons who were widowed at less than 55 years old with resources under a threshold income.

Personalized housing benefit (“Aide personnalisée au logement”, APL): is an aid granted to persons whose principal residence meets certain conditions, to help reduce expenses related to their principal primary residence. It applies only to tenants living in subsidized housing or owners who have to repay certain types of loans (state-subsidized loan). The amount depends on the resources and the rent paid or loan repayment.

Housing benefit (“Allocation logement”, AL): applies to persons not eligible for the APL because their principal residence does not respect some conditions of the APL. This allowance is divided into “Allocation de logement familiale”, ALF and “Allocation de logement sociale”, ALS. ALF is for tenants and owners if they are eligible for other benefits like the Family allowance, Family support allowance, etc. ALS is granted only to tenants and changes according to resources of the household and the number of dependent persons.

Contributory Pensions: The pension system in France is based on a PAYG system, employees contributions are used to pay pensions for retirees. It is managed by a number of bodies known as pension funds and has two components: the basic pension and supplementary pension. Retirees receive a pension which is proportional to the amount of contributions made by them during their career.

Unemployment Benefit: the unemployment compensation system consists of two regimes: the unemployment insurance (RAC) and the National Solidarity Plan (RSN). The RAC is funded by contributions from employees and employers. RSN compensates the unemployed who have exhausted their rights to unemployment insurance.

The insurance agreement in force at the time of becoming unemployed defines the maximum duration of benefits and the amount of the allowance based on past wages.

Sickness Benefit: The Health Insurance body (“l’Assurance Maladie”) is one of the four branches of the “Sécurité Sociale” (the French social protection system). It manages, at the national level, the disease and accident branches and includes the three main insurance schemes (general, agricultural and independent). It provides protection against five risks: sickness, maternity, disability, death, accidents / illnesses. Its funding is mainly provided by social security contributions on wages (employee and employer charges) as well as social contributions (CSG). Contributors (employees, unemployed, pensioners, students) and their spouses and children are insured. Universal health coverage (CMU) offers basic health insurance for everyone (especially for people who do not meet the criteria for entitlement to Social Security) and supplemental health coverage for people whose incomes are lower.

- *Not strictly benefits*

Student grants (“Bourse étudiante”): The grant is non-taxable and is means-tested on parental income. Student must be under 28 years on 1 October of the academic year, and the training must qualify to receive the grant. The aid is then awarded based on three criteria: household income tax, the number of children in the family's tax burden and the remoteness of the place of study.

1.3 Social contributions

General Social Security Contribution (“Contribution sociale généralisée”, CSG): The general social security contribution is a levy with a social purpose. The CSG is allocated to the social security budget and, specifically, to the national family allowance fund, the old-age solidarity fund and compulsory health insurance schemes. The contribution is levied on individual members of a French compulsory health insurance scheme.

Social security debt repayment contribution (“*Contribution au remboursement de la dette sociale*”, CRDS): The CRDS is intended to clear the deficits of the social security system. Like the CSG, it is payable by individuals who are domiciled in France for tax purposes and who contribute to a French compulsory health insurance scheme.

Social contribution and other additional contributions: Individuals are liable to a social contribution (“*Prélèvement social*”), introduced in 1998, on income from personal assets and investment income. The proceeds are allocated to the old-age solidarity fund, the national retirement pension fund and the pension reserve fund. An additional contribution (“*Contribution additionnelle au prélèvement social*”) on income from personal assets and investment income, allocated to the national solidarity fund for autonomy (CNSA), was introduced in 2004. In 2009, a new additional contribution (“*Contribution additionnelle RSA*”) on income from personal assets and investment income was created, intended to fund the earned-income supplement (“*revenu de solidarité active*”, RSA). In 2013, this contribution has been removed and replaced by the solidarity contribution (“*Prélèvement de solidarité*”) based on the same incomes. The collection methods for contributions are similar to those for the CSG relating to the same income. These contributions are not deductible from the income tax base.

1.4 Taxes

To finance replacement incomes, family benefits and social assistance, a number of taxes and contributions have to be paid. Employees and employers pay contributions on their wages to cover a variety of risks: health, maternity, widowhood, pensions and unemployment whereas family benefits and housing are financed only by employer contributions.

Personal Income Tax (“*Impôt sur le revenu des personnes physiques*”, IRPP) :

Personal income tax is, in principle, a comprehensive tax levied on an individual's total income in a given year. All incomes, regardless of origin, are aggregated to give an overall net income to which a single tax scale is applied. The scale has progressive income bands. However, there are many provisions in the method for calculating income tax that allow taxation to be adjusted to personal circumstances. Personal income tax is assessed annually on a tax unit's (a “*foyer fiscal*”) taxable income in a calendar year. The system of taxation is based on the family quotient: the sum of all household incomes are added together and then divided by the number of shares before being submitted to the tax schedule.

Value Added Tax (“*Taxe sur la valeur ajoutée*”, TVA): There are 4 main rates: the standard rate of 20% since 01/01/2014 (19.6% before) applies to all taxable transactions for which no other rate exists, the reduced rate of 10 % since 01/01/2014 (before it was 7% since 01/01/2012) applies to goods and services such as restaurants, hotels, transport etc.. The second reduced rate of 5.5% applies to food, utilities etc. from 01/01/2012. Before this date, the reduced rate of 5.5% applied to restaurants, hotels etc. and food utilities etc. The specific rate of 2.1% essentially concerns certain medications and certain cultural products.

Excise Duty (“*Droit d'accises*”): They are charged on alcohol and alcoholic beverages, tobacco and fuel (TIPP).

Wealth tax (“*Impôt de solidarité sur la fortune*”, ISF): is an annual progressive tax payable by individuals on account of their ownership of personal assets, when the net value of these exceeds a certain amount (1,300,000 € Euros since 1 January 2012). The tax is assessed by household, which comprises spouses, cohabiting partners and minor children.

Exceptional contribution on high incomes (“*Taxe exceptionnelle sur les hauts revenus*”): is an annual tax based on the same incomes that personal income tax. It concern people whose incomes (incomes as “*revenu fiscal de référence, RFR*”) are higher than EUR 250, 000 for singles and EUR 500 000 for couples.

Inheritance tax (“Droits de succession”): It is charged using a progressive tax schedule. There are many exemptions and deductions related to the type of relationship with the previous owner (spouse, children) and the nature of the donation or bequest.

Housing Tax (“Taxe d’habitation”, TH): Residential premises are liable for housing tax. The tax is payable by any person who, on 1 January of the year of taxation, has taxable premises at their disposal, whatever their status (owner, tenant, free occupier). Housing tax is assessed on the value of residential premises resulting from valuations by the authorities. The amount of tax is calculated by multiplying the tax base by the rates voted by each beneficiary local authority for the year in question

Land Tax (“Taxe Foncière”, TF): is levied annually on land situated in France. Taxable property includes permanent constructions perpetually attached to the ground such as premises intended to accommodate people (residential properties) or business assets (workshops, sheds) etc. The tax base is equal to 50% of the value, which is regularly updated by the authorities. The amount of tax is calculated by multiplying the tax base by the rates voted by each beneficiary local authority for the year in question. The tax is payable by the owner of the property at 1 January of the year of taxation

Waste Tax (“Taxe sur les ordures ménagères”): Communes that collect household waste may introduce a household waste collection tax. When responsibility for waste disposal has been transferred to a public establishment for intercommunal cooperation, it may levy a tax provided that it at least collects the waste. The tax is assessed on the cadastral income used as the base for property tax on developed land.

Cap on Direct Taxes (“Bouclier Fiscal”): This "tax shield" is a device to cap direct taxes, in force since 2007. Direct taxes paid by a taxpayer may not exceed 60 % of their revenues. Taxes covered by the cap are: income tax, the ISF, the housing tax and land tax payable on the principal residence. Since October 2007, the ceiling is set at 50% of the amount of income tax, social contributions, the CSG, CRDS, the ISF, the housing tax and land tax payable on the principal residence. This tax cap was abolished in July 2011.

2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

We do not simulate the entire tax-benefit system in France in EUROMOD. In some cases, adequate data to feed into the simulations is not available. Some examples include lack of information on the contribution history to simulate long-term contributory benefits such as pensions, lack of information on wealth to simulate property taxes etc. As a result, some instruments are not simulated. Instead, the values reported by responded households are taken directly from the underlying microdata. Information about which tax-benefit instruments are simulated and which not, along with information about why some instruments could not be simulated is displayed in tables 2.1 and 2.2.

Table 2.1 Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in EUROMOD					Why not fully simulated?
		2011	2012	2013	2014	2015	
Family allowance (AF)	bch00_s	S	S	S	S	S	
Means-tested allowances for young children (PAJE)	bchyc_s	S	S	S	S	S	
Free choice of activity-PAJE	bchcc_s	S	S	S	S	S	

Large family benefit (CF)	bchlg_s	S	S	S	S	S	
Means-tested education benefit (ARS)	bched_s	S	S	S	S	S	
Family support allowance (ASF)	bchor_s	S	S	S	S	S	Benefit can only be simulated for widows/widowers with underage children; children where one parent has deserted them, as well as children where both parents have died/abandoned the child cannot be identified in the data
Special education allowance (AEEH)	bchot	IA	IA	IA	IA	IA	No information on the disability status of children; included in other benefits for children
Disability benefit (AHA)	bdi_s	S	S	S	S	S	
Solidarity labour income (RSA)	bsa00_s	S	S	S	S	S	
Return to work allowance	bsaot	IA	IA	IA	IA	IA	No information about previous status before work; no information about continuous employment
Solidarity allowance for the elderly (ASPA)	bsaoa_s	PS	PS	PS	PS	PS	Eligibility is based on observed receipt in the data; although eligibility can be simulated fully, non-take-up of the benefit leads to severe overestimation
Survivor minimum pension (AV)	bsuwd	I	I	I	I	I	Simulated but turned off in the baseline; no information about when a person became widowed
Housing benefit (APL)	bhoot	IA	IA	IA	IA	IA	No information on subsidized loans; no information on eligible subsidized tenancies;
Housing benefit (AL)	bhotn_s	S	S	S	S	S	Benefit simulated for rent paying tenants only; benefits paid for owners are included in bchoot
Housing benefit (AL)	bhoot	IA	IA	IA	IA	IA	Benefits for homeowners cannot be simulated; they are included alongside other housing benefits
Contributory unemployment benefit (ARE)	bunct_s	PS	PS	PS	PS	PS	No information on contribution history; eligibility approximated by receipt in the data
Means-tested unemployment benefit (ASS)	bunmt_s	I	I	I	I	I	Simulated but turned off in the baseline; no information on when entitlement to the unemployment contributory benefit expires
Contributory pensions	poa	I	I	I	I	I	No information on contribution history and on past wages
Sickness benefits (AM)	bhl	I	I	I	I	I	No information on days of sickness; no information on previous contribution history
Disability pension	pdi00	I	I	I	I	I	No information on degree of disability; no information on contribution history
Survivor pensions	psu	I	I	I	I	I	No information about contribution history

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

Table 2.2 Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in EUROMOD					Why not fully simulated?
		2011	2012	2013	2014	2015	
Personal income tax (IRPP)	tin_s	S	S	S	S	S	Some tax allowances and tax credits cannot be simulated due to absence of relevant information in the data
Exceptional contribution on high incomes	tinto_s	-	-	S	S	S	Simulation is based in the current year only and no account of the averaging with the previous 2 years is taken into account

Generalised social insurance contributions (CSG)	tscxc_s	S	S	S	S	S	
Insurance contributions for the repayment of the deficit (CRDS)	tscdf_s	S	S	S	S	S	
Social insurance contributions paid on capital income	tsckt_s	S	S	S	S	S	
Social insurance contributions paid by employees	tscee_s	S	S	S	S	S	Only the general 'regime' is simulated; it is not possible to identify employees belonging to the various 'regimes'
Social insurance contributions paid by employers	tscer_s	S	S	S	S	S	Only the general 'regime' is simulated; it is not possible to identify employees belonging to the various 'regimes'
Social insurance contributions paid by the self-employed	tscse_s	S	S	S	S	S	
Wealth tax (ISF)	twl	I	I	I	I	I	Detailed information about asset values is not available in the underlying input dataset
Housing tax (TH)	tmu	I	I	I	I	I	Detailed information about housing values and municipality of residence are not available in the underlying input dataset
Land tax (TF)	tpr	I	I	I	I	I	Detailed information about assets and asset values as well as municipality of residence are not available in the underlying input dataset

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

• **Structural changes between 2011 and 2012**

Starting in 2012, households who slightly exceed the income threshold for the Back to School Allowance are eligible for the residual amount of this benefit (ARS différentielle, AD) if their revenue is less than the threshold, plus the relevant benefit amount, where N is the number of children.

$$(AD = \text{income threshold} + (\text{ARS}_{6-10} * N_{6-10}) + (\text{ARS}_{11-14} * N_{11-14}) + (\text{ARS}_{15-18} * N_{15-18})) - \text{income}) / N$$

In 2012, an end of year bonus was introduced for RSA recipients.

In 2012, a new income tax band was introduced. Incomes over EUR150, 000 are now subject to income tax at the rate of 45% instead of 41%.

Until 2011, dividends were subject to a 40% deduction in addition to a fixed deduction of EUR1, 525 for singles and EUR3, 050 for couples, before taxation. The fixed portion of the deduction was abolished in 2012.

• **Structural changes between 2012 and 2013**

In 2013, a new annual tax was introduced, the exceptional contribution on high incomes. It relates to people whose personal incomes are higher than EUR 250.000 for singles and EUR 500.000 for couples. For singles, the rate is 3% from EUR250, 001 to EUR500.000, and 4% above EUR500.001. For couples, the rate is 3 % from EUR500, 001 to EUR1.000.000, and 4% above EUR1.000.000.

However, a smoothing mechanism is applied for people receiving exceptional income.

- *Structural changes between 2013 and 2014*

In 2014, some benefits amount were increased or decreased depending on income. This is the case for mean-tested young children allowance (“PAJE”) or for family complement (“*complément familial*”). Other benefits such as solidarity labour income (“RSA”) got further increases. There is also a small change in the calculation of ARE, and a change in capital income taxation rate for dividends.

- *Structural changes between 2014 and 2015*

In 2015, concerning income tax, the first tax bracket has been removed and a « *décôte conjugale* » has been established (discount for couples). There has been a modification in the conditions for application of the reduced CSG rate for pensioners.

Concerning social benefits, there has been a modification in the supplement for free choice of activity of mean-tested young children allowance (Paje “CLCA”) and in July 2015 family allowance rules will be modified for couples who earn more than 6000€ per month.

There has been reductions for employers contributions for their employees with low wages called “*choc de compétitivité*”.

2.2 Order of simulation and interdependencies

- *Order of simulation in 2011- 2015*

The order in which the components of the tax benefit system in France are simulated is shown in Table 2.3 below. The order in which simulations take place is largely determined by the existing interactions within the system. For example, net taxable income which serves to determine eligibility for many means-tested benefits is simulated before these benefits. Contributory unemployment benefits which are liable to income taxation are simulated before income tax, etc.

Table 2.3 EUROMOD Spine: order of simulation, 2009- 2014

Policy	2011	2012	2013	2014	2015	Description	Main output
Setdefault_fr	on	on	on	on	on	Definition of default values for variables not present in the input dataset	
Uaa_fr	switch	switch	switch	switch	switch	Switch between uprating of pensions by indexation rules and by changes in the average pension	\$uaa
uprate_fr	on	on	on	on	on	Uprating of input data	
constdef_fr	on	on	on	on	on	Definition of constants used in the model	
ildef_fr	on	on	on	on	on	Definition of standardized income lists	
tundef_fr	on	on	on	on	on	Definition of assessment units used in the model	
random_fr	on	on	on	on	on	Generation of random numbers for the take-up of RMI/RSA	i_takeup & i_takeup2
yem_fr	off	off	off	off	off	Minimum wage	yem
neg_fr	on	on	on	on	on	Recoding of negative values of self-employment income	yse
bta_fr	switch	switch	switch	switch	switch	Master switch for controlling non take-up of RMI/RSA	
bunct_fr	on	on	on	on	on	Unemployment insurance benefit (Allocation de retour à l'emploi ARE)	bunct_s
bch00_fr	on	on	on	on	on	Universal child benefit (Allocation Familiale AF)	bch00_s
bchor_fr	on	on	on	on	on	Family Support Allowance (Allocation de soutien familial ASF)	bchor_s
tscee_fr	on	on	on	on	on	Employee social insurance contributions	tscee_s
tscer_fr	on	on	on	on	on	Employer social insurance contributions	tscer_s
tscse_fr	on	on	on	on	on	Self-employed social insurance contributions	tscse_s
tsckt_fr	on	on	on	on	on	Social insurance contributions paid on capital income	tsckt_s
bsuwd_fr	off	off	off	on	on	Minimum survivor pension (Allocation veuvage AV)	bsuwd_s
tinty_fr	on	on	on	on	on	Net taxable income	il_rniy
tscxc_fr	on	on	on	on	on	Generalized social insurance contributions (Contribution Sociale Généralisée CSG)	tscxc_s
tinkt_s	on	on	on	on	on	Personal income tax when using flat rate taxation of capital income (Prélèvement forfaitaire libératoire PFL)	temp_tingt1
tin_fr	on	on	on	on	on	Personal income tax when using the progressive tax schedule only and optimization of gross tax	temp_tingt2; tintg_s
tincot_fr	on	on	on	on	on	Tax credits other than PPE	tintch_s; tintcmi_s; tintced_s
tintcee_fr	on	on	on	on	on	Low earner refundable tax credit (Prime Pour L'Emploi PPE) & net tax	tintcee_s; tin_s
bdi_fr	on	on	on	on	on	Means-tested disability benefit (Allocation aux adultes handicapés AAH)	bdi_s
bunmt_fr	off	off	off	off	off	Unemployment assistance benefit (Allocation de solidarité spécifique ASS)	bunmt_s
bchyc_fr	on	on	on	on	on	Means-tested benefit for young children (Prestation d'Accueil du Jeune Enfant PAJE)	bchyc_s

bchba_fr	on	on	on	on	on	Means-tested birth grant (Prime de naissance PN)	bchba_s
bchcc_fr	on	on	on	on	on	Parental leave supplement (Complément de libre choix d'activité CLCA)	bchcc_s
bched_fr	on	on	on	on	on	Means-tested education grant (Allocation de rentrée scolaire ARS)	bched_s
bchlg_fr	on	on	on	on	on	Means-tested benefit for large families (Complément familial CF)	bchlg_s
bchor_fr	on	on	on	on	on	Non means-tested benefit for orphans (Allocation de soutien familial ASF)	bchor_s
bhotn_fr	on	on	on	on	on	Means-tested housing benefits (Allocation Logement AL)	bhotn_s
bsaoa_fr	on	on	on	on	on	Means-tested benefit for the elderly (Allocation de solidarité aux personnes âgées ASPA)	bsaoa_s
bsa00_fr	on	on	on	on	on	Minimum guaranteed income (Revenu minimum d'insertion RMI/Revenu de solidarité active RSA)	bsa00_s
tscdf_fr	on	on	on	on	on	Contribution for the deficit repayment (Contribution pour le Remboursement de la Dette Sociale CRDS)_	tscdf_s
output_std_fr	on	on	on	on	on	Standard output file at the individual level	
output_std_hh_fr	on	on	on	on	on	Standard output file at the household level	

2.3 Policy switches

Several policies have been implemented but their simulation is turned off in the baseline.

There are two policies that act as switches that can be turned off or on from the Run dialogue box. The first is `uaa_fr` that is turned off by default. Turning it on causes pension income to be updated by changes in the average pension rather than using indexation rules. The policy `bta_fr` controls the simulation of random non-take up the main social assistance benefit –Revenu de Solidarité Active (RSA). By default, it is turned on. Turning it off causes the simulation of RSA to assume zero non-take-up.

Minimum wage (`yem_fr`) has been simulated. Individual earnings in the micro-data have been checked against the minimum wage in force at the 30th of June of the respective policy years. The correction consists of increasing wages of individuals showing lower earnings (adjusted for hours worked and time in employment) than the minimum wage up to the minimum wage threshold. Because there may be many reasons for having earnings lower than the minimum wage, this policy is turned off in the baseline.

The Allocation Veuvage (AV) and Allocation de Solidarité Spécifique (ASS) are simulated using a number of assumptions due to lack of information in the micro dataset (See sections 2.4.7 and 2.4.12 respectively). As simulation results do not match very well administrative statistics, the simulation of AV is turned off in the baseline.

2.4 Social benefits

2.4.1 Family Allowance – bch00_s – (*Allocation Familiale, AF*)

- *Definitions*

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

- *Eligibility conditions*

The benefit is received by households with two or more dependent children. In case of legal separation or divorce of the parents, the beneficiary is the parent who is in charge of the child.

- *Income test*

There was no income test for this benefit until 1 July 2015. The benefit became means-tested starting on July 1st 2015 for families who earn more than a defined threshold.

- *Benefit amount*

The monthly amount depends on the number and age of dependent children in the household (gross from CRDS):

	2011	2012*	2013*	2014*	2015
<i>Monthly amount</i>					
2 dependent children	126.41	127.68	129.21	130	130
3 dependent children	288.38	291.27	294.77	296.53	296.53
Each child after the 3rd	161.98	163.59	165.55	166.55	166.55
Increase for child between 11 and 16 **	35.55	35.91	36.34	-----	-----
Increase for child over 16 **	63.21	63.84	64.61	64.99	64.99
Increase for child over 14***	63.21	63.84	64.61	64.99	64.99
Fixed amount paid to families of 3+ children with eldest of 20-21	79.93	80.73	81.70	82.19	82.19

*Before 2012, the amounts changed each 1st of January; since 2012, the amounts change each 1st of April except in 2015 (temporary freeze to reduce expenses) amounts change in October.

**for child born before 1st of May 1997.

*** for child born after 30th of April 1997.

----- end of this benefit.

For families with only 2 dependant children, the increase amount for children over 14 year concerns only the second child (same thing for families where is still in charge only 2 child (other child over 21 years or not in charge)).

The fixed amount paid to families of 3+ children is paid under two conditions:

- One of the children is 20, lives at home; if he works, he earn less than 55% of the minimum wage calculated on 169 hours/month. The threshold is:
- The family has received benefits for at least three children in the month before the 20th birthday.

Qualifying families receive a monthly lump sum of until the month before the child turns 21.

If there are only two children in the household, the increases for children between 11 and 16 and for children over 16 is not paid for the first child.

- ***Compatibilities***

This benefit is compatible with national or regional lump-sum child benefits.

- ***Taxation and income testing***

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- ***EUROMOD notes***

The benefit is simulated based on the age of children at the end of the income reference period. No benefit is simulated for children who reach the age threshold during the income reference period as their month of birth is unknown. Similarly, the age-based increase is simulated for the entire year for children who turn 11 and 14 respectively in the income reference period. The supplement for children aged 20 is simulated for the entire year whenever a person aged 20 (who is not head or partner) is living with at least two dependent children.

2.4.2 Mean-tested Young children allowance – *bchyc_s* – (*Prestation d’Accueil du Jeune Enfant PAJE, Allocation de base*)

Mean-tested young children allowance contains:

- The PAJE base amount (“*allocation de base*”): mean-tested benefit for children under 3.
- The baby bonus (“*prime de naissance*”): mean-tested bonus for childbirth.
- The supplement for free choice of custody (“*complément de libre choix du mode de garde*”): for families with children born after 2004 and aged less than 6 when parents work, are under the income threshold and employ a certified person for care their child.
- The supplement for free choice of activity (“*complément de libre choix d’activité*”): this allowance replaces the Parent education allowance (“*allocation parentale d’éducation*”, APE) for children born after 2004.

Since 1st January 2015, the supplement for free choice of activity was modified and replaced by “*La prestation partagée d’éducation de l’enfant (PreParE)*”, see below.

- *Eligibility conditions*

PAJE: The benefit is received by households with children under 3.

Starting with April 1st 2014, the benefit was reformed. Children born after April 1st are subject to a new set of rules. The entitlement of children born before this date is unaffected, i.e. the old rules apply.

- *Definitions*

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage (calculated on a 169 h/month basis). The assessment unit includes parents (married or cohabiting) and their dependent children.

- *Income test*

Entitlement to the PAJE base amount is subject to an income test. Family income in year n-2 must be below the threshold. For children born before the 1st of April 2014, the following thresholds apply:

Ceilings A: For child born before 1st of April 2014:

Ceilings granting access to the benefit:

Yearly amount	2011	2012	2013	2014*	2015*
One earner couples					
One dependent child	33765	34103	34819	35480	35729
Two dependent children	40518	40924	41783	42576	42875
Three dependent children	48622	49109	50140	51091	51450
Each child after the third	8104	8185	8357	8515	8575
Two Earner couples or lone parent					
One dependent child	44621	45068	46014	46888	47217
Two dependent children	51374	51889	52978	53984	54363
Three dependent children	59478	60074	61335	62499	62938
Each child after the third	8104	8185	8357	8515	8575

*for child born before 1st of April 2014

For children born after 1st of April 2014, there are new ceilings. Also, the benefit is no longer flat rate but depends on income.

Ceilings B: For child born after 1st of April 2014,

Ceilings 1: Ceilings granting access to the benefit for child born after 1st of April 2014:

Yearly amount	2014	2015
One earner couples		
One dependent child	35480	35729
Two dependent children	41878	42172
Three dependent children	48276	48615
Each child after the third	6398	6443
Two Earner couples or lone parent		
One dependent child	45077	45393
Two dependent children	51475	51836
Three dependent children	57873	58279
Each child after the third	6398	6443

- ***Benefit amount***

Since the 1st of April 2014, the monthly amount depends on parents' income. If the income of the parents is below ceiling 2, the family is entitled to 100% of the benefit amount. If income is above ceiling 2 but below ceiling 1, the benefit is reduced to 50% of the full amount.

Children born before April 1st 2014 continue to receive the full amount if the income of the parents is below ceiling 1.

For children born after the 1st of April 2014, income ceilings for benefit amount calculation are:

Ceilings 2:

Yearly amount for full benefit	April 2014	January 2015
One earner couples		
One dependent child	29700	29907
Two dependent children	35056	35300
Three dependent children	40412	40693
Each child after the third	5356	5393
Two Earner couples or lone parent		
One dependent child	37733	37996
Two dependent children	43089	43389
Three dependent children	48445	48782
Each child after the third	5356	5393

The monthly amount per family (and not per child except for multiple births) is (gross from CRDS):

	2011	2012	2013	2014	2015
Monthly amount (full rate)	181.52	184.27	185.54	185.54	185.54
Monthly amount* (partial rate for birth after 04/01/2014 and income conditions)				92.77	92.77

*child born after 1st of April 2014 whose parents earn income above the second ceilings (ceilings 2) and below the first ceilings (ceilings 1).

No amount change in 2015.

- **Compatibilities**

This benefit is compatible with national or regional lump-sum child benefits, except for the Family Complement and Family Support Benefit (ASF).

- **Taxation and income testing**

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- **EUROMOD notes**

The income test is calculated based on yearly net taxable income during the income reference period (rather than past taxable income). The simulation is based on the age of children at the end of the income reference period. Consequently, no benefit is simulated for children turning three during the income reference period. Conversely, the benefit is simulated for the entire year for children born during the income reference period. The new rules are simulated for all children born in 2014 irrespective of their month of birth. Variable `bchyc_c` contains only the PAJE base amount. The baby bonus and the supplement of free choice of activity are simulated and stored in variables `bchba_s` and `bchcc_c` (see below). The supplement for free choice of custody is not simulated due to absence of information about child minding.

2.4.2.1 Baby bonus – `bchba_s` – (*Prime de naissance*)

- **Definitions**

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

- **Eligibility conditions**

Have a child born in the year, or have adopted a child under 20 years of age, comply with the conditions of eligibility to the “PAJE allocation de base”.

- **Income test**

For child born before 1st of April 2014, the annual family net taxable income must be below:

	2011	2012	2013	2014	January 2015
Couple with one revenue					
One dependent child	33765	34103	34819	35480	35729
Two dependent children	40518	40924	41783	42576	42875
Three dependent children	48622	49109	50140	51091	51450
Each child after the third	8104	8185	8357	8515	8575
Couple with two revenues or lone parent					
One dependent child	44621	45068	46014	46888	47217
Two dependent children	51374	51889	52978	53984	54363
Three dependent children	59478	60074	61335	62499	62938
Each child after the third	8104	8185	8357	8515	8575

For child born after 1st of April 2014, the annual family net taxable income must be below:

Yearly amount	2014	January 2015
One earner couples		
One dependent child	35480	35729
Two dependent children	41878	42172
Three dependent children	48276	48615
Each child after the third	6398	6443
Two Earner couples or lone parent		
One dependent child	45077	45393
Two dependent children	51475	51836
Three dependent children	57873	58279
Each child after the third	6398	6443

- ***Benefit amount***

The lump-sum is for each child born in the year (gross from CRDS):

	2011	2012	2013	2014	2015
Childbirth	907.60	921.30	927.71	927.71	927.71
Adoption	1815.21	1842.63	1855.42	1855.42	1855.42

- ***Compatibilities***

This benefit is compatible with national or regional lump-sum child benefits.

- ***Taxation and income testing***

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- **EUROMOD notes**

No information exists in the data about adoptions. Only the benefit for childbirth is simulated. The income test is based on current yearly net taxable income rather the previous taxable income.

2.4.2.2 Supplement for free choice of activity – *bhcc_s* – (*Complément de libre choix d'activité*)

- **Definitions**

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

- **Eligibility conditions**

- Have at least one child under 3 years of age
- Stop or partially stop working to take care of the child. The beneficiary must have made social security contributions for 8 quarters out of the previous two years if it is the first child, of the previous 4 years if it is the second child or of the previous 5 years if it is the 3rd + child.

- **Income test**

The benefit is not means-tested.

- **Benefit amount**

For the first child the benefit is paid for 6 months from the birth/end of maternity leave.

If there are two or more children, the benefit is paid from the birth/end of maternity leave until the month before the 3rd birthday of the youngest.

	2011	2012	2013	2014	2014*	2015	2015*
Non-receipt of PAJE base amount							
Full rate (stop working completely)	563.21	566.01	572.81	576.24	390.52	576.24	390.52
Reduce work to < 50%	428.26	430.4	435.57	438.17	252.46	438.17	252.46
Reduce work to 50-80%	323.85	325.47	329.38	331.35	145.63	331.35	145.63
Receipt of PAJE base amount							
Full rate (stop working completely)	381.69	383.59	388.19	390.52	390.52	390.52	390.52
Reduce work to < 50%	246.74	247.98	250.95	252.46	252.46	252.46	252.46
Reduce work to 50-80%	142.33	143.05	144.77	145.63	145.63	145.63	145.63

*child born after 1st of April 2014

If there are three children and the youngest was born after 01/07/2007, the family can opt for the optional complement for free choice of activity (COLCA) instead of the CLCA if one parent stops work completely for up to one year after the birth. This is paid for a maximum of 12 months after the birth of

the youngest child subject to the same contribution requirements as the CLCA at the following rate (gross from CRDS):

Optional free choice of activity	2011	2012	2013	2014	2014*	2015	2015*
Non-receipt of PAJE base amount	809.45	813.48	823.25	828.20	641.53	828.20	641.54
Receipt of PAJE base amount	627.02	630.14	637.71	641.53	641.53	641.54	641.54

*child born after 1st of April 2014

Since 1st January 2015, CLCA was replaced by the shared child-rearing benefit “prestation partagée d’éducation de l’enfant” (PreParE). This benefit concern parents of child born or adopted since January 1, 2015.

The eligibility conditions and the benefit amount are the same of CLCA, but the duration is different.

For the first child if parents are in couple, each parent can have the benefit for at most 6 months from the birth/end of maternity leave within the child’s first birthday. For lone parents the benefit is paid at most 12 months within the child’s first birthday.

If there are two or more children, the benefit is paid from the birth/end of maternity leave until the month before the 3rd birthday of the youngest but the benefit can be claimed (by either parent) for a maximum of 24 months. For lone parents the benefit is paid from the birth/end of maternity leave until the month before the 3rd birthday of the youngest.

If birth is given to triplets, the benefit is paid from the birth/end of maternity leave until the month before the 6th birthday but each parent can have this benefit only at most 48 months. For lone parents the benefit is paid from the birth/end of maternity leave until the month before the 6th birthday of the child.

Concerning child adoptions, if there is one child in the family, each parent can have the benefit for at most 12 months. If there are other children in the family, each parent can have the benefit for at most 12 months. If after this period, the child is less than 3 years old, the parents can have the benefit until the 3rd child birthday.

If an adoption concerns at least 3 children, parents can have the benefit for the first 36 months after adoption.

The “PreParE Majorée” replaces the COLCA for children born or adopted from 1 January 2015. Each parent can have the benefit for at most 8 months from the birth/end of maternity leave until the child’s first birthday. For lone parents, the benefit is paid for at most 12 months until the child’s first birthday.

- ***Compatibilities***

This benefit is not compatible with paid holidays, maternity/paternity/adoption leave, sick leave or unemployment benefit.

- ***Taxation and income testing***

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- ***EUROMOD notes***

Detailed information on contribution history is not available. Eligibility is based on fulfilling the contributory requirement of 2 years of contributions during the entire work history. Thus, the difference in contribution requirements between children of different birth orders is not simulated. Amounts are simulated based on earnings and current working hours. Entitlement to the out of work amount is based on absence of earnings during the entire income reference period. Reduced amounts corresponding to reduced working time are based on current (rather than contemporaneous) working hours. When only one

child is present, the benefit is simulated for 6 months during the income reference period conditional on the child being aged 0 (i.e. it is assumed the benefit is paid in the first year after birth) and no entitlement of children aged 1 & 2 is simulated when only one child is present. It is assumed a parent always takes up the optional CLCA if entitled. In practice, this means this benefit is simulated for all entitled parents (i.e. parents who fulfil the contribution requirements and stop working) whose third child is aged 0. It is assumed this benefit is not paid for children aged 1 and 2. The simulation is based on the ages of the children at the end of the income reference period, i.e. benefits received for only part of the year (before a child turns 3 or 1) are not simulated. New COLCA rules are used in the simulation for all children born in 2014 irrespective of their month of birth. Only the incompatibility with unemployment benefits and sickness benefits is simulated. Since the other benefits are short term ones and no information about their receipt within the year is available. Other incompatibilities are not simulated.

Higher benefits for adoption and longer benefits for triplets are not simulated.

2.4.3 Mean-tested education related Family benefit – *bched_s* – (*Allocation de rentrée scolaire, ARS*)

- *Definitions*

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

- *Eligibility conditions*

Have at least one child aged 6 to 18 who is attending school. The child must not earn more than 55% of the minimum wage.

- *Income test*

The income test depends on the number of dependent children:

Euros per year	2011	2012	2013	2014	2015
One dependent child	22970	23200	23687	24137	24306
Two dependent children	28271	28554	29153	29707	29915
Three dependent children	33572	33908	34619	35277	35524
Each child after the third	5301	5354	5466	5570	5609

Starting in 2012, households who slightly exceed the income threshold are eligible for the residual amount of this benefit (ARS différentielle. AD) if their revenue is less than the threshold, plus the relevant benefit amount, where N is the number of children.

$$(AD = \text{income threshold} + (ARS_{6-10} * N_{6-10}) + (ARS_{11-14} * N_{11-14}) + (ARS_{15-18} * N_{15-18}) - \text{income}) / N$$

with a minimum payment of €5

The income used here is the net taxable income.

- **Benefit amount**

The benefit is paid by child. The yearly amount depends on the child's age (gross from CRDS):

Benefit amount per child	2011	2012*	2013	2014	2015
6-10 years	286.40	357.98	362.28	364.45	364.45
11-14 years	302.17	377.73	382.27	384.53	384.53
15-18 years	312.67	390.82	395.52	397.88	397.88

* the allowance was increased by 25% following the 2012 presidential elections.

- **Compatibilities**

This benefit is compatible with national or regional lump-sum child benefits.

- **Taxation and income testing**

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- **EUROMOD Notes:**

The simulation is based on current rather than previous taxable income. It uses ages of children at the end of the income reference period rather than at the start of the school year.

2.4.4 Family support benefit – bchor_s – (*Allocation de soutien familial, ASF*)

- **Definitions**

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

- **Eligibility conditions**

Must be a lone parent or other (e.g. grandparent) where the other parent (or both) is deceased or has abandoned the child or does not pay alimony.

- **Income test**

This benefit is not means tested

- **Benefit amount**

The monthly amount per child is (gross from CRDS):

Benefit amount	2011	2012	2013	2014	2015
Child living with lone parent	88.88	89.78	90.85	96.00	100.58
Child living with no parents	118.51	119.70	121.14	127.96	134.05

- *Compatibilities*

This benefit is compatible with national or regional lump-sum child benefits.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- *EUROMOD notes*

The benefit is simulated only for children of widows/widowers. It is not possible to identify children whose parents have abandoned them. Likewise it is not possible to identify children whose both parents are deceased.

2.4.5 Family Complement – *bchlg_s* – (*Complément familial*):

- *Definitions*

Children are considered as dependent persons if they are aged under 21 and earning less than 55% of the minimum wage. Children under 21 who are themselves parents may be considered dependent if not receiving family allowances.

- *Eligibility conditions*

Have at least 3 children all aged 3 years or more. The amount is the same for all families regardless of the number of dependent children, but since 1st of April 2014, the monthly benefit amount depends on parents' income and on the number of dependent children.

The child must not earn more than 55% of the minimum wage.

- *Income test*

The income test depends on the number of parents who work. For two earner couples, a minimum threshold applies to the earnings of each parent in order to be considered a two earner couple. If each member of the couple earns less than the threshold (see below) they are considered as a one earner couple and the one earner threshold applies..

Annual individual income threshold for two earner couples:

	2011	2012	2013	2014	2015
Each member of the couple should earn more then	4670,40	4708	4808	4947	5036

Ceiling 1:

Yearly income for family with 3 children	2011	2012	2013	2014	2015
One earner couples	35493	35848	36599	37295	37555
Two earner couples or lone parent	43419	43853	44772	45623	45941
Increase for each dependent child after 3 rd	5915	5975	6100	6216	6259

The income used here is the net taxable income.

Ceiling 2 for receiving the increased amount after 1st April 2014:

Yearly income for family with 3 children	2014	2015
One earner couples	18648	18779
Two earner couples or lone parent	22812	22972
Increase for each dependent child after 3 rd	3018	3130

The monthly amount is per household (gross from CRDS):

	2011	2012	2013	2014	April 2015
Basic monthly amount	164.53	166.18	168.18	169.19	169.19
Increased monthly amount**				186.13	203.06

**increased monthly amount (after 1st of April 2014 for parents whose income are below ceilings 2).

- **Benefit amount**

Before 2014, the amount is flat rate for all families that qualify. Since 1st of April 2014, the monthly amount depends on parents income and new ceilings have been established to determine the benefit amount. If parents' income is below ceiling 2, the family receive the increased amount. If the income is between ceiling 1 and ceiling 2, it receives the standard amount.

- **Compatibilities**

This benefit is compatible with national or regional lump-sum child benefits except with the APE and PAJE (basic allowance). If the household is eligible to PAJE or APE, the CF is not paid.

- **Taxation and income testing**

Not taxable and not included in the income test of other benefits, but subjected to CRDS.

- **EUROMOD notes**

The simulation of the income test is based on current rather than previous net taxable income. The age condition relating to the definition of a child is implemented using the age at the end of the income reference period, i.e. children who turn 21 during the year are not considered to be dependent children. Thus, any partial year entitlements on account of such children are not simulated.

2.4.6 Disabled benefit – bdi_s – (Allocation aux adultes handicapés, AAH)

- **Definitions**

Adult: To be aged over 20 and less than 60.

Dependent children: aged under 20 and earning less than 55% of the minimum wage

- **Eligibility conditions**

The beneficiary must be disabled with a permanent disability of at least 80%, or a disability between 50 and 80% and be unemployable (for medical reasons). The income test is carried out using total couple income, including any income of dependent children.

- **Income test**

Annual income	2011	2012	2013	2014	2015
Single	8543.40	9119.76	9319.08	9482.16	9605.40
Couple	17086.80	18239.52	18638.16	18964.32	19210.80
for each child	4271.70	4559.88	4659.54	4741.08	4802.70

There is a 100% withdrawal rate if the (threshold – benefit) < income < threshold

- **Benefit amount**

The benefit is differential, the monthly benefit is:

$$AAH = (\text{Threshold} - \text{Income}) / 12$$

Family income is defined as the monthly net taxable income, used for the establishment of the income tax.

The monthly maximum benefit is:

	2011	2012	2013	2014	2015
Maximum Monthly benefit	711.95	759.98	776.59	790.18	800.45
Supplement for those disabled for at least one year	179.31	179.31	179.31	179.31	179.31

There are additional amounts which are allowed with an increasing level of disability. All cannot be simulated.

The increase for independent living (“*Majoration pour la vie autonome*”) is awarded to the disabled who receive AAH at a full rate or AAH as a complement to old age or invalidity (i.e. who do not work). The monthly lump-sum is:

	2011	2012	2013	2014	2015
Increase for independent living	104.77	104.77	104.77	104.77	104.77

Those who are eligible for the supplement and for the increase for independent living must choose between the two.

- *Compatibilities*

This benefit is compatible with national or regional lump-sum child benefits excepted with AEEH.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits. **Not subject** to CRDS.

- *EUROMOD notes*

No information on the degree of disability exists in the data. The benefit is simulated for all individuals who fulfil the income criterion and report themselves as being disabled (pl030=6). The income test is simulated on current rather than previous taxable income. The increase for independent living is simulated for individuals receiving AAH at the full rate, as well as for individuals reporting zero earnings. No other additional amounts are simulated.

2.4.7 Survivor Minimum Pension – *bsuwd_s* – (*Allocation veuvage, AV*)

- *Eligibility conditions*

Widow/er not remarried aged under 51 (55 after 2009). This pension is paid for 2 years.

- *Income test*

The monthly widow/er's income for the 3 last months must be below:

	2011	2012	2013	2014	2015
Monthly income	727.72	743	752.65	752.65	752.65

The income taken into account includes the net taxable income of the widow/er (i.e. earned income, pensions, unemployment benefit, self-employment and capital income, all in gross terms) excluding family benefits and AAH.

- *Benefit amount*

The monthly benefit given is:

	2011	2012	2013	2014	2015
Monthly benefit	582.18	594.4	602.12	602.12	602.12

- *Compatibilities*

This benefit is compatible with national or regional benefits.

- *Taxation and income testing*

Taxable like pension income for personal income tax but **not subject** to CRDS and CSG.

- *EUROMOD notes*

The simulation of this benefit is turned off and the original variable in the dataset used instead in the baseline. There is no information in the input dataset about the year a person has become widowed. As a result, the benefit is simulated for all widows/widowers who pass the income test. The income test is simulated using current rather than past taxable income. Since this benefit is part of taxable income, the original rather than the simulated AAH is used in the income test (As AAH depends on taxable income).

2.4.8 Solidarity Labour Income – bsa00_s – (RSA) from 2009

The RSA aims to ensure a minimum income per month. The amount of the benefit is equal to the difference between the maximum RSA (lump sum + 62% of net household income from work) and others household resources (including the package of housing assistance).

The lump-sum is determined by the household composition and the number of dependent children. The RSA is increased for those who meet the previous conditions for Mean-tested lone parents benefits (API).

- *Definitions*

Dependent Children: Children under 20. Children over 20 years and under 25 living at home may be considered dependent in the RSA sense provided their own income is very low (< 55% of SMIC).

- *Eligibility conditions*

Be over 25, or less than 25 with a dependent child or pregnant, and be aged under 65 (or not entitled to the Minimum Pension for Elderly). Youths 18-25 years of age and without children are eligible if they have worked for at least two years out of the last three years.

- *Benefit amount*

$RSA = (\text{Lump sum} + 62\% \text{ family quarterly working income}/3) - (\text{family quarterly income}/3 + \text{housing package})$

Family working income includes income from work (Wages, bonuses, overtime pay, unemployment benefits and sickness benefits), net of social security contributions (i.e. employment and self-employment income before taxes and transfers). The housing package is a lump-sum subtracted **only for people who received the AL**. The family quarterly income includes:

- the quarterly net taxable income (working income, invalidity pensions, alimonies, others pensions and incomes from capital (investment income, savings income and property income))
- all quarterly social minima (RSA, AAH), and family benefits (AF, ASF and CF only)

In 2013, the French government decided to increase the RSA amount by 10% until 2017. So the reform consist in increasing by 2 % the RSA amount each first of September.

This growth is independent from the annual increase that occurs in January (0.9 % in January 2015).

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	2011		2012		2013		2014	
	MI	HP	MI	HP	MI	HP	MI	HP
Everyone else								
Single								
Without dependent child	469.33	56.32	477.31	57.27	485.66	58.28	501.81	60.22
One dependent child	704.01	112.64	715.97	114.55	728.50	116.56	752.73	120.44
Two dependent children	844.81	139.39	859.17	141.76	874.20	144.24	903.27	149.04
Each child after 2 nd	187.73		190.92		194.27		200.72	
Couple								
Without dependent child	704.01	112.64	715.97	114.55	728.50	116.56	752.73	120.44
One dependent child	844.81	139.39	859.17	141.76	874.20	144.24	903.27	149.04
Two dependent children	985.61	139.39	1002.37	141.76	1019.89	144.24	1053.81	149.04
Each child after 2 nd	187.73		190.92		194.27		200.72	
End of year bonus *								
Single			153.21		153.21		153.21	
Couple with no child			229.81		229.81		229.81	
Couple with 1 child			275.78		275.78		275.78	
Couple with 2 children			321.75		321.75		321.75	
Each child after the third			61.28		61.28		61.28	

MI as Minimum Income, HP as Housing Package

	2015	
Everyone else	MI	HP
Single		
Without dependent child	516.46	61.97
One dependent child	774.69	123.94
Two dependent children	929.63	153.38
Each child after 2 nd	206.58	
Couple		
Without dependent child	774.69	123.94
One dependent child	929.63	153.38
Two dependent children	1084.57	153.38
Each child after 2 nd	206.58	
End of year bonus *		
Single		
Without dependent child	153.21	
One dependent child	229.81	
Two dependent children	275.78	
Each child after 2 nd	61.28	
Couple		
Without dependent child	229.81	
One dependent child	275.78	
Two dependent children	321.74	
Each child after 2 nd	61.28	

- **Compatibilities**

This benefit is compatible with national or regional lump-sum child benefits.

- **Taxation and income testing**

The RSA is not taxable and not included in the income test of other benefits but subjected to CRDS. However, if the household cumulates employment income and RSA, the amount of RSA is deducted from the following year's PPE ("*Prime pour l'emploi*")- a refundable tax credit.

- **EUROMOD notes**

No benefit is simulated for pregnant women. To simulate the benefit, age at the end of the income reference period is used. Lone parents are identified as parents of dependent children without a partner in the dataset. Children aged less than 25, earning less than 55% of SMIC and living with other adults are always considered as dependent. The income test is simulated using current yearly income rather than previous quarterly income. Thus, shorter periods of eligibility may be missed. Family total income is the sum of earnings, taxable pensions, benefits (unemployment, family, sickness and disability), other market incomes (property, investment etc.) minus social insurance contributions, CSG and CRDS . When a household receives housing benefits, the lower between the actual benefits and the housing package is deducted. A random non-take up of approximately 60% for those in employment and 30% for those not

in employment is also simulated. Entitlement to the end of year bonus is calculated based on annual average incomes and the benefit is then assigned to approx. 16% of those eligible to mimic the fact that only families receiving the benefit in November and December would be entitled.

2.4.9 Solidarity allowance for the elderly – bsaoa_s – (*Allocation de solidarité aux personnes âgées, ASPA*)

- *Eligibility conditions*

Persons aged 65 and over with limited resources and retired (not working).

- *Benefit amount*

The benefit is differential at the level of the couple:

ASPA= Monthly Maximum amount – Quarterly Family income/3

Family quarterly income does not include family benefits or housing benefits (i.e. the quarterly net taxable income + AAH)

The maximum income depends on the family situation:

	2011	2012	2013	2014	2015
Single	742.27	777.16	787.26	791.99	800
Couple	1181.77	1206.59	1222.27	1229.61	1242

The couple amount is applied if at least one person is aged 65 or over.

Compatibilities

This benefit is compatible with national or regional benefits.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits and **not subjected** to CRDS.

- *EUROMOD notes*

Eligibility for this benefit is restricted to individuals reporting receipt in the data. While it is technically possible to fully simulate the benefit, doing so results in substantial overstimulation of both number of recipients and amounts. The income test is carried out using current yearly income rather than previous quarterly income. The age condition is simulated using age at the end of the income reference period. Thus, a full year worth of benefits is simulated for individuals turning 65 during the income reference period who in reality, would have been entitled only during part of the reference year.

2.4.10 Housing Benefits – bhotn_s – (*Allocation Logement, APL and AL*)

- *Definitions*

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage.

Dependent persons : all the dependent children and disabled close family members (parents, grandparents, sisters, brothers...) or parents and grandparents over 65 living in the household who earn less than 55% of the minimum wage.

The unit of assessment is the entire household.

- ***Eligibility conditions***

Be a renter of subsidized housing, sub-renter or first time buyer.

- ***Benefit amount***

The general formula giving the amount of housing benefit is as follows (it is the same for APL and AL):

$$\mathbf{AL \text{ or } APL = L+C-Pp}$$

L: real rent up to the limit of a certain ceiling

C: lump-sum charge

Pp: minimal personal participation

The system presented here is the more “general” system relating to the rental sector. We do not take into account the specificities of the calculation on residential homes (“*Logement-foyer*”), roommates or specific loans.

(1) Real Rent (L):

The real rent is taken into account up to a limit of a monthly ceiling, depending on the number of dependent persons and on the geographical zone. Older children are not considered dependent persons but their incomes are included in the assessed household income.

Year	2011			2012		
Geographical Zone	I	II	III	I	II	III
Single	282.02	245.78	230.37	284.84	248.24	232.67
Couple without dependent person	340.13	300.84	279.27	343.53	303.85	282.06
Lone parent/couple with one dependent person	384.42	338.52	313.12	388.26	341.91	316.25
Lone parent/couple with two dependent people	440.18	387.79	358	444.58	391.67	361.58
Increase for each dependent person	55.76	49.27	44.88	56.32	49.76	45.33
Year	2013			Octobre 2014 to September 2015		
Geographical Zone	I	II	III	I	II	III
Single	290.96	253.58	237.67	290.96	253.58	237.67
Couple without dependent person	350.92	310.38	288.12	350.92	310.38	288.12
Lone parent/couple with one dependent person	396.61	349.26	323.05	396.61	349.26	323.05
Lone parent/couple with two dependent people	454.14	400.09	369.35	454.14	400.09	369.35
Increase for each dependent person	57.53	50.83	46.30	57.53	50.83	46.30
Year	October 2015					
Geographical Zone	I	II	III			
Single	292.62	255.03	239.02			
Couple without dependent person	352.92	312.15	289.76			
Lone parent/couple with one dependent person	398.87	351.25	324.89			
Lone parent/couple with two dependent people	456.73	402.37	371.45			
Increase for each dependent person	57.86	51.12	46.56			

The zone depends on the geographical area:

Zone I : Paris and region “*Ile de France*”

Zone II: cities with more than 100.000 inhabitants and Corsica

Zone III: all others cities.

(2) Lump-sum charge (C):

The monthly amount depends on the number of dependent persons:

	2011	2012	2013	2014-2015
Single person/couple without dependent person	51.3	51.82	52.93	53.23
Single person/couple with one dependent person	62.92	63.56	64.92	65.29
Increase for each dependent person	11.62	11.74	11.99	12.06

(3) Minimal personal participation (Pp):

Pp is computed as follow:

$$P_p = P_0 + T_p * R_p$$

P0 : minimal participation

Tp: Personal participation rate

Rp : Resources

- P0 minimal participation:

$$P_0 = [8.5 \% * (L+C)]$$

	2011	2012	2013	2014	2015
P0 (€ per month)	33.47	33.80	34.53	34.73	34.73

- Tp Personal participation rate:

Tp is computed as:

$$T_p = T_f + T_l$$

Tf is given by:

	2011	2012-2015
Single	2.83%	2.83%
Couple without dependents	3.15%	3.15%
Lone parent/couple with one dependent person	2.70%	2.70%
Lone parent/couple with two dependent persons	2.38%	2.38%
Lone parent/couple with three dependent persons	2.01%	2.01%
Lone parent/couple with four dependent persons	1.85%	1.85%
Lone parent/couple with five dependent persons	1.79%	1.79%
Increase for each dependent person	-0.06%	-0.06%

Tl:

Tl is computed as follow:

$$T_l = L / \text{Rent Baseline.}$$

The rent Baseline is:

	2011	2012	2013	2014-2015
Single	245.78	248.24	253.58	255.03
Couple without dependent	300.84	303.85	310.38	312.15
Lone parent/couple with one dependent	338.52	341.91	349.26	351.25
Lone parent/couple with two dependents	387.79	391.67	400.09	402.37
Increase for each dependent	49.27	49.76	50.83	51.12

Finally, TI is obtained by the value of RL as follows:

$$TI = \text{Rate} * RL - \text{Rate Min}$$

With :

RL	2011		2012-2014		2015	
	Rate	Rate Min	Rate	Rate Min	Rate	Rate Min
0-45%	0%	0%	0%	0%	0%	0%
45-75%	45%	20.25%	45%	20.25%	45%	20.25%
>75%	68%	37.50%	68%	37.50%	68%	37.50%

- *Rp Resources:*

Rp is defined as the difference between the family income and a lump-sum R0.

R0 is given by (yearly amounts):

	2011	2012	2013	2014	2015
Single	4321	4373	4438	4514	4593
Couple without dependent person	6187	6261	6355	6463	6576
Lone parent/couple with one dependent person	7380	7468	7581	7709	7844
Lone parent/couple with two dependent persons	7508	7614	7728	7883	8031
Increase for each dependent child	241	265	268	303	321

The family income is the “*Revenu Brut global*” used in the income tax.

- *Compatibilities*

This benefit is compatible with national or regional benefits.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits but subjected to CRDS.

- *EUROMOD notes:*

Only the general benefit for tenants paying rent is simulated. Benefits for home owners/ tenants in free accommodation are not simulated due to absence of required information in the dataset. The three zones upon which the benefit depends are imputed based on geographical region (db040) and population density (db100). The income used in the income test is yearly rather than quarterly. Also rent paid is calculated using a monthly average of rent paid throughout the entire year.

2.4.11 Unemployment Benefit – *bunct_s* – (*Allocation de retour à l’emploi, ARE*)

- **Eligibility conditions**

People who have been in activity at least 4 months during the last 28 months are eligible to receive unemployment benefits if they did not leave their job voluntarily and are actively looking for work.

- **Income test**

There is no income test for this benefit. The benefit amount depends on the salary earned during the last 12 months.

- **Benefit amount**

The benefit amount depends on:

- the sum of gross earned income received during the last 12 months before the last day worked
- the mode of activity : full-time, part-time.

The calculation of this amount is based on the gross daily reference wage (“*Salaire journalier de référence*”, *SJR*) with:

$$\text{SJR} = \frac{\text{sum of gross earned income during the last 12 months before the last day worked}}{(365 - \text{days of absence or without a contract})}$$

The amount of the benefit is 40.4% of the SJR + the fixed allocation (11.72 per day in 2015). The benefit cannot be lower than the minimum benefit mentioned in the table below (28.58*RF euros for 2015) and cannot be higher than 75% of the SJR.

Since 1st of July 2014, the amount is the higher amount between 40.4% of the SJR + the fixed allocation or 57% of the SJR.

For part-time workers, we compute the reduction factor as:

$$\text{RF} = \frac{\text{(number of hours worked in part-time work)}}{\text{(legal number of hours)}}$$

Parameters	2011	2012	2013	2014	2015
Fixed allocation	11.17*RF	11.34*RF	11.57*RF	11.64*RF	11.72*RF
Minimum Benefit	27.25*RF	27.66*RF	28.21*RF	28.38*RF	28.58*RF

Since July 2011, the amount is increased each first of July. In this table it’s the amount at 30th June.

The monthly benefit is the daily benefit multiplied by the number of days in the month.

Since 2009, the benefit duration is based on the rule “one day worked, one day of compensation”. The only condition is to have worked at least 4 months in the last 28 months. The maximum duration is 24 months for people under 50 and 36 over 50.

- **Taxation and income testing**

Taxable and included in the income test of other benefits, subjected to CRDS and CSG.

- **EUROMOD notes:**

No information exists in the dataset on contribution history. As a result, simulation of eligibility approximates to a large extent observed receipt in the data. The age condition is simulated using age at the end of the income reference period. Thus, individuals who have turned 65 during the period and might

have been entitled to the benefit for part of the year are considered ineligible. Previous earnings have been imputed from the observed amount of the received benefit by inverting the benefit rules. The difference between full-time and part-time workers is not simulated as the number of hours worked in the previous year is not observable in the data. All entitled individuals are considered to have worked full time. If the upper limit of the benefit (75% of SJR) is lower than the minimum benefit, the upper limit is enforced based on the assumption that such a situation may arise only for part-time workers for whom the minimum benefit is not properly simulated (i.e. it is over simulated). Duration of the benefit is simulated assuming the same number of months has been worked in each year as in the current year. Duration of benefit receipt is simulated to be at least the number of months in receipt observed in the data.

2.4.12 Unemployment assistance Benefit – bunmt_s – (*Allocation de solidarité spécifique, ASS*)

- **Eligibility conditions**

People who have exhausted their rights to unemployment insurance, who have been in activity for at least 5 years during the last 10 years, are aged under 60 and actively looking for a job are eligible for unemployment assistance.

- **Income test**

The income taken into account for the income test is the couple's net taxable income (RNI) except the unemployment benefit previously earned, but including the ASS itself.

The monthly income should be under:

Monthly income	
Single	70 times the daily amount
Couple	110 times the daily amount

The computation method also depends on the same couple's income. The benefit is either a lump-sum (full rate) or calculated differentially. The thresholds for receiving the full rate are:

Monthly income	Full rate
Single	Under 40 times the daily amount
Couple	Under 80 times the daily amount

- **Benefit amount**

The daily benefit amount is :

	2011	2012	2013	2014	2015
Daily amount	15.37	15.63	15.90	16.11	16.25

The monthly amount is obtained by multiplying the daily amount by 30.

If the couple's income is below the full rate threshold (i.e. 40 times the daily amount for a single person, 80 times for a couple), the monthly benefit is the daily amount multiplied by 30.

If the couple income is above the threshold for the full rate amount, the benefit will be

30*daily amount – (Couple’s income – Full rate threshold)

- **Compatibilities**

This benefit is not compatible with unemployment benefit ARE and RSA.

- **Taxation and income testing**

Taxable and included in the income test of other benefits subjected to CRDS.¹

- **EUROMOD notes:**

There is no detailed information about contribution history in the data. The condition of 5 years worked in the last 10 is approximated by checking that the individual has worked at least 5 years throughout his entire work career. It is assumed that all potential recipients are actively looking for work. The exhaustion of contributory unemployment benefits (ARE) is checked by comparing months in unemployment with the imputed/ simulated number of months receiving ARE. The income test is simulated based on current yearly income. Due to time period mismatched, the simulated benefit does not approximate well observed receipt in the data. Incompatibilities with RSA are not simulated. Instead, ASS is included in the income test of RSA.

2.5 Social contributions

Discrepancies exist in regimes of social security depending on the employment status of individuals and sometimes on the sector they work in.

There are 4 main social systems in France:

- The general regime for employees
- The regime for the self-employed (TNS) run by independent groups (RAM – CAMPI)
- The agricultural system managed by *Mutuelle Sociale Agricole* (MSA)
- The local *Alsace-Moselle* plan
- Some more specific schemes (SNCF. EDF...)

The most important regime (“*régime général*”) covers employees against the financial consequences of different risks (illness, accident) or situations (family, old age, widowhood).

These systems are financed by contributions from both employees and employers (sometimes either one or the other) on wages and related income.

2.5.1 Employee social contributions (tscee_s)

Employee social contributions are mainly aimed at financing the Social Security system (*Sécurité Sociale*). Different types of contributions are paid by employees on their whole gross income:

- Employee contributions for health insurance and widowhood
- Employee contributions for old age
- Employee contributions for unemployment insurance

¹ **Simulation assumption:** ASS is taxable and at the same time its income test depends on taxes. In order to deal with this circularity, taxes (including income tax and CRDS) are calculated using the data variable and not the simulated variable. The simulated variable is calculated after taxes are computed.

- **Liability to contributions**

All employees pay social contributions but there are some exemptions or rates reductions for certain contributions in order to help employment:

- For entrepreneurship when they invest in disadvantaged areas or were unemployed or were employed and create or take over a business.
- For hiring an employee with low-income or in a disadvantaged area, or for young innovative

The monthly different ceilings of income groups are:	2011	2012	2013	2014	2015
Income group A	0 to 2946	0 to 3031	0 to 3086	0 to 3129	0 to 3170
Income group B	2946 to 11784	3031 to 12124	3086 to 12344	3129 to 12516	3170 to 12680
Income group C	11784 to 23568	12124 to 24248	12334 to 24688	12516 to 25032	12680 to 25360
Income group 1	0 to 2946	0 to 3031	0 to 3086	0 to 3129	0 to 3170
Income group 2	2946 to 8838	3031 to 9093	3086 to 9258	3129 to 9387	3170 to 9510

enterprises

- For the employment of young people or unemployed people who have particular employment contract like “*Contrat d’apprentissage*”, “*Contrat de professionnalisation*” or “*Contrat d’accompagnement dans l’emploi*”.
- For the employment of home help for the elderly or disabled, or child custody.
- Between 2009 and 2012, overtime pay is exempted from social insurance contributions. Since 2013, overtime pay is again subject to the standard social insurance contributions rates.

- **Income base used to contributions**

The tax base depends on the gross income and on the type of contribution. Some contributions are taxed on whole incomes, others are capped (i.e. only one part of the income is taxed). The ceiling depends on the monthly social security ceiling. Depending on the contribution concerned, the ceiling of social security is increased by multiplying it by 1, 3, 4 or 8.

The income considered in the base column of the next table, is the gross income on the payroll for all jobs, part-time or full-time, occasional or not. The monthly ceilings are:

- **Contribution rates**

The different rates depend on the employment status and on the regime. The different employee social contributions are summarised below.

• *EUROMOD notes*

There is not enough information in the dataset to identify to which specific contribution regime an individual contributes to. As a result, only the “*regime general*” is simulated for all employees. The simulation of the contributions takes into account the number of months an individual has been working during the income reference period recorded in the data but does not take into account any variation in earnings that may have occurred throughout the year. White collar workers have been approximated based on occupation (senior officials and managers and professionals). No exemption from contributions with the exception of overtime pay or entitlement to lower rates is simulated due to absence of information in the underlying micro-data. Complementary pensions for white-collar employees are simulated based on the assumption that the split of contributions between employer and employee on Income Group C is similar to the one pertaining to income Group B. In practice, a portion of this split is subject to firm level negotiations.

2.5.2 Employer social contributions (tscer_s)

Like employees, employers are liable for social contributions on medical insurance, pensions, unemployment insurance and additional contributions such as family contributions and housing.

	Base	2011	2012	2013	2014	2015
		0.75				
Sickness	Whole income	%	0.75%	0.75%	0.75%	0.75%
		6.65				
Old age	Income group A	%	6.65%	6.75%	6.80%	6.85%
		0.10				
	Whole income	%	0.10%	0.10%	0.25%	0.30%
Complementary pension for non-white collars	Income group 1	3%	3%	3%	3.05%	3.10%
	Income group 2	8%	8%	8%	8.05%	8.10%
Complementary pension for white collars	Income group A	3%	3%	3%	3.05%	3.10%
		7.70				
	Income group B	%	7.70%	7.70%	7.75%	7.80%
		7.70				
	Income group C	%	7.70%	7.70%	7.75%	7.80%
		0.80				
AGFF (Old age)	Income group 1/A	%	0.80%	0.80%	0.80%	0.80%
		0.90				
	Income group 2/B	%	0.90%	0.90%	0.90%	0.90%
Unemployment insurance	Income group A/B	2.40				
		%	2.40%	2.40%	2.40%	2.40%
White collar (APEC)	Income group B					
	Income group A+B	0.02				
		%	0.024%	0.024%	0.024%	0.024%
	Annual lump-sum (euros)	n/a	n/a	n/a	n/a	n/a
	Income group A/B/C	0.13				
Outstanding contribution (CET)		%	0.13%	0.13%	0.13%	0.13%

• *Liability to contributions*

The definitions are the same as those for employee social contributions mentioned in the previous section.

• *Income base used to calculate contributions*

The definitions of income groups are the same as those for employee social contributions mentioned in the previous section. Likewise, the income base refers to gross employment income.

• *Contribution rates*

	Base	2011	2012	2013	2014	2015
Sickness*	whole income	12.80%	12.80%	12.80%	12.80%	12.80%
Family benefits*	whole income	5.40%	5.40%	5.40%	5.25%	5.25%
Housing						(3.45%**)
FNAL firms with less than 20 employees*°	Income group A	0.10%	0.10%	0.10%	0.10%	0.10%
FNAL firms with more than 20 employees*°	Whole income	0.50%	0.50%	0.50%	0.50%	0.50%
Old age*	Income group A	8.30%	8.40%	8.40%	8.45%	8.50%
	whole income*	1.60%	1.60%	1.60%	1.75%	1.80%
CSA (autonomy solidarity)*°	whole income	0.30%	0.30%	0.30%	0.30%	0.30%
Complementary pension for non white collars	Income group 1	4.50%	4.50%	4.50%	4.58%	4.65%
	Income group 2	12%	12%	12%	12.08%	12.15%
Complementary pension for white collars	Income group A	4.50%	4.50%	4.50%	4.58%	4.65%
	Income group B	12.60%	12.60%	12.60%	12.68%	12.75%
	Income group C	12.60%	12.60%	12.60%	12.68%	12.75%
AGFF (old age)	Income group A/1	1.20%	1.20%	1.20%	1.20%	1.20%
	Income group 2/B	1.30%	1.30%	1.30%	1.30%	1.30%
White collars contingency	Income group A	1.50%	1.50%	1.50%	1.50%	1.50%
Unemployment insurance	Income group A+B	4%	4%	4%	4%	4%
Wage guarantee fund	Income group A+B	0.30%	0.30%	0.30%	0.30%	0.30%
APEC	Income group A+B	0.036%	0.036%	0.036%	0.036%	0.036%
Outstanding contribution (CET) (white collars only)	Income group A/B/C	0.22%	0.22%	0.22%	0.22%	0.22%
Professional training	Whole income					
-less than 10 employees		0.55%	0.55%	0.55%	0.55%	0.55%
-10-19 employees		1.05%	1.05%	1.05%	1.05%	1.05%
-more than 19 employees		1.6%	1.6%	1.6%	1.6%	1.6%
Apprenticeship tax	Whole income	0.68%	0.68%	0.68%	0.68%	0.68%
Participation in the construction effort (more than 20 employees)	Whole income	0.45%	0.45%	0.45%	0.45%	0.45%
Contribution to professional and unions organizations	Whole income					0.016%
Arduousness contribution (for exposed employees only)	One factor of arduousness					0.10%
	Several factors					0.20%

* subject to “Réduction Fillon”, *° subject to “Réduction Fillon” since 2015

** rate for those eligibles to “Réduction Fillon”

• *Reductions in employers’ social security contributions (“Réduction Fillon”)*

Since 2003, a general reduction on employers contributions paid for low-income employees exists (“Reduction Fillon”). This reduction is decreasing and varies with the level of the employee’s income, the coefficient is maximum at the minimum wage (SMIC). It applies to all employees whose income is less than 1.6 SMIC whatever form or nature of the employment contract and working hours, the amount being maximum for employees paid at the minimum wage. It applies for each calendar year for each employee.

This reduction was amended in 2011, 2012 and in 2015. Since 2011, the reduction is calculated on the yearly income, before it was calculated on the monthly income (it involves changes when the annual income includes bonus as the 13th month). In 2012, overtime was included in the yearly income (they were excluded before). In 2015, there is a target of 0% of charges for employees on low incomes under certain conditions.

The social contributions affected by the “Reduction Fillon” are sickness, family benefits, and old age. Since 1st of January 2015, housing (FNAL), solidarity autonomy (CSA) and occupational diseases and work accident (the rate of this contribution changes according to the company) are also included.

The reduction concerns private companies who paid unemployment insurance and must do salary negotiation each year (for companies with more than 50 employees where there are trade-union representatives). The reduction only concerns work contracts that do not qualify for other social security exemptions (generally, cumulating exemptions is not possible : cumul with standard deduction of employer contributions for overtime, exemption for employees of home help).

The reduction amount is the product of the yearly gross income by a coefficient who changes with the number of the company employees at December 31.

The reduction is calculated on an annual basis, but the application is made in advance. The reduction is applied each month on contributions paid (it is then based on the monthly SMIC and monthly remuneration) and regularized if necessary (eg if the monthly pay varies during the year, when there are bonuses). The regularization on contributions is made in December for monthly employers, in the 4th quarter for the quarterly employers, if the contract ends during the year, the regularization applies to the last month or quarter due.

The reduction is calculated per employee, the reduction amount could not be superior to contributions due.

The coefficients:

- Companies with fewer than 20 employees

	2011	2012	2013	2014	2015
Income ≤ 1.6 SMIC					
C	$=(0.281/0.6)*[(1.6*(SMIC\ gross\ annual\ amount/gross\ annual\ income\ subject\ to\ social\ security\ contributions))-1]$ with a cap of the coefficient to 0.281	$=(0.281/0.6)*[(1.6*(SMIC\ gross\ annual\ amount/gross\ annual\ income\ subject\ to\ social\ security\ contributions))-1]$ with a cap of the coefficient to 0.281	$=(0.281/0.6)*[(1.6*(SMIC\ gross\ annual\ amount/gross\ annual\ income\ subject\ to\ social\ security\ contributions))-1]$ with a cap of the coefficient to 0.281	$=(0.281/0.6)*[(1.6*(SMIC\ gross\ annual\ amount/gross\ annual\ income\ subject\ to\ social\ security\ contributions))-1]$ with a cap of the coefficient to 0.281	$=(0.2795/0.6)*[(1.6*(SMIC\ gross\ annual\ amount/gross\ annual\ income\ subject\ to\ social\ security\ contributions))-1]$ with a cap of the coefficient to 0.2795

for a **full time job**, the SMIC gross annual amount = 1820 * gross hourly SMIC, or the sum of 12 identical fractions corresponding to its value multiplied by the 52/12^e of the legal weekly working hours.

for a **part time job**, the SMIC gross annual amount is calculated *prorata temporis*, depending on the work duration : for 50 %, the gross hourly SMIC is multiplied by 1820/2.

The gross annual income taken into account includes all cash or in-kind compensation elements.

- Companies with 20 employees and more

	2011	2012	2013	2014	2015
Income ≤ 1.6 SMIC					
C	$=(0.26/0.6)*[(1.6*(SMIC \text{ gross annual amount/gross annual income subject to social security contributions})-1]$ with a cap of the coefficient to 0.26	$=(0.26/0.6)*[(1.6*(SMIC \text{ gross annual amount/gross annual income subject to social security contributions})-1]$ with a cap of the coefficient to 0.26	$=(0.26/0.6)*[(1.6*(SMIC \text{ gross annual amount/gross annual income subject to social security contributions})-1]$ with a cap of the coefficient to 0.26	$=(0.26/0.6)*[(1.6*(SMIC \text{ gross annual amount/gross annual income subject to social security contributions})-1]$ with a cap of the coefficient to 0.26	$=(0.2835/0.6)*[(1.6*(SMIC \text{ gross annual amount/gross annual income subject to social security contributions})-1]$ with a cap of the coefficient to 0.2835

- **EUROMOD notes**

There is not enough information in the dataset to identify to which specific contribution regime an individual contributes. As a result, only the “*régime général*” is simulated for all employees. The simulation of the contributions takes into account the number of months an individual has been working during the income reference period recorded in the data but does not take into account any variation in earnings that may have occurred throughout the year. White collar workers have been approximated based on occupation (senior officials and managers and professionals). No exemption from contributions with the exception of overtime pay or entitlement to lower rates is simulated due to absence of information in the underlying micro-data.

2.5.3 Self-employed social contributions (tsce_s)

- **Liability to contributions**

All self-employed in activity must pay the social contributions, but there are some exemptions or rates reductions for certain contributions in order to help employment:

- For entrepreneurship when they invest in disadvantaged areas or were unemployed or were employed and create or take over a business.
- For hiring an employee with low-income or in a disadvantaged areas, or for young innovative enterprises
- For the employment of young people or unemployed people who have particular employment contract like “*Contrat d’apprentissage*”, “*Contrat de professionnalisation*” or “*Contrat d’accompagnement dans l’emploi*”.

- For the employment of home help for the elderly or disabled, or child custody.

- ***Income base used to calculate contributions***

The tax base depends on the gross self-employment activity income (i.e. gross profit) and on the type of contribution. Some contributions are taxed on whole income, others are capped (i.e. only one part of the income is taxed). The ceiling depends on the annual social security ceiling. Depending on the contribution concerned, the ceiling of social security is increased by a multiplicative factor.

PSS is the annual Social Security ceiling (“*plafond de la sécurité sociale*”):

	2011	2012	2013	2014	2015
Annual PSS	35352	36372	37032	37548	38040

• *Contribution rates*

For self-employment, the social contributions rates are (depending on the type of self-employment):

Artisan				
	2010-2012	2013	2014	2015
Family benefits	5.40%	5.40%	5.25%	5.25% if $r > 1.4$ PSS 2.15% if $r \leq 1.1$ PSS if $1.1 \text{ PSS} < r \leq 1.4$ PSS: Rate= $5.25\% - [2.15\% / (0.3 * \text{PSS} * (r - 1.1 * \text{PSS}) + 2.15\%)]$
Sickness	0.6% of $r < \text{PSS}$ + 5.9% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$	$6.5\% * r$. minimum payment calculated on $0.4 * \text{PSS}$	$6.5\% * r$ (minimum calculated on $0.4 * \text{PSS}$)	$6.5\% * r$ (minimum calculated on $0.4 * \text{PSS}$)
Supplementary sickness	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$ (107€ in 2015)
Pension	16.65% of $r < \text{PSS}$ (min contribution based on 200* minimum hourly wage)	16.95% (min contribution based on $5.25\% * \text{PSS} = 328\text{€}$)	16.95% of $r < \text{PSS}$ and 0.2% of $r > \text{PSS}$ (min contribution based on $5.25\% * \text{PSS} = 338\text{€}$)	17.05% of $r < \text{PSS}$ and 0.35% of $r > \text{PSS}$ (min contribution based on $7.7\% * \text{PSS} = 510\text{€}$ in 2015)
Complementary pension	7.2% of $r < \text{PSS}$ 7.6% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on 200* minimum hourly wage)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on $5.25\% * \text{PSS}$)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on $5.25\% * \text{PSS}$)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on $5.25\% * \text{PSS} = 140\text{€}$ in 2015)
Professional training contribution	0.29% of PSS	0.29% of PSS	0.29% of PSS	0.25% of PSS
Invalidity + death insurance	1.8% of $r < \text{PSS}$ (min contribution on $800 * \text{minimum}$ hourly wage)	1.6% of $r < \text{PSS}$ (min contribution on 0.2 PSS)	1.6% of $r < \text{PSS}$ (min contribution on 0.2 PSS)	1.3% of $r < \text{PSS}$ (min contribution based on 0.2 $\text{PSS} = 99\text{€}$ in 2015)

Industry and trader				
	2011-2012	2013	2014	2015
Family benefits	5.40%	5.40%	5.25%	5.25% if $r > 1.4$ PSS 2.15% if $r \leq 1.1$ PSS if $1.1 \text{ PSS} < r \leq 1.4 \text{ PSS}$: Rate= $[(5.25\% - 2.15\%)/(0.3 \cdot \text{PSS})] \cdot (r - 1.1 \cdot \text{PSS}) + 2.15\%$
Sickness	0.6% of $r < \text{PSS}$ + 5.9% of $r < 5 \cdot \text{PSS}$. Minimum payment calculated on $0.4 \cdot \text{PSS}$	6.5% of r . Minimum payment calculated on $0.4 \cdot \text{PSS}$	6.5% of r . Minimum payment calculated on $0.4 \cdot \text{PSS}$	6.5% of r . Minimum payment calculated on $0.4 \cdot \text{PSS}$
Supplementary sickness	0.7% of $r < 5 \cdot \text{PSS}$. Minimum payment calculated on $0.4 \cdot \text{PSS}$	0.7% of $r < 5 \cdot \text{PSS}$. Minimum payment calculated on $0.4 \cdot \text{PSS}$	0.7% of $r < 5 \cdot \text{PSS}$. Minimum payment calculated on $0.4 \cdot \text{PSS}$	0.7% of $r < 5 \cdot \text{PSS}$. Minimum payment calculated on $0.4 \cdot \text{PSS}$
Pension	16.65% of $r < \text{PSS}$ (min contribution based on 200* minimum hourly wage =300€en 2009)	16.95% of $r < \text{PSS}$ (min contribution based on $5.25\% \cdot \text{PSS} = 328\text{€}$)	16.95% of $r < \text{PSS}$ and 0.2% of $r > \text{PSS}$ (min contribution calculated on $5.25\% \cdot \text{PSS} = 338\text{€}$)	17.05% of $r < \text{PSS}$ and 0.35% of $r > \text{PSS}$ (min contribution calculated on $7.7\% \cdot \text{PSS} = 510\text{€}$ in 2015)
Complementary pension	6.5% of $r < 3 \cdot \text{PSS}$ (min contribution based on 200* minimum hourly wage)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 \cdot \text{PSS}$ (min contribution based on $5.25\% \cdot \text{PSS}$)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 \cdot \text{PSS}$ (min contribution based on $5.25\% \cdot \text{PSS}$)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 \cdot \text{PSS}$ (min contribution based on $5.25\% \cdot \text{PSS}$)
Professional training contribution	0.15% of	0.25% of PSS	0.25% of PSS	0.25% of PSS
Invalidity + death insurance	1.3% of $r < \text{PSS}$ (min contribution based on $800 \cdot \text{smic}$ horaire=300€en 2009)	1.1% of $r < \text{PSS}$ (min contribution based on 0.2 PSS)	1.1% of $r < \text{PSS}$ (min contribution based on 0.2 PSS)	1.3% of $r < \text{PSS}$ (min contribution based on 0.2 PSS)

Farmer					
	2011	2012	2013	2014	2015
Family benefits	5.40%	5.40%	5.40%	5.25%	5.25% (3.45%)*
Sickness	10.84%	10.84%	10.84%	10.84%	10.84%
Pension	14.37% of $r < \text{PSS}$ 1.64% of $r > \text{PSS}$	14.40% of $r < \text{PSS}$ 1.64% of $r > \text{PSS}$	14.57% of $r < \text{PSS}$ 1.64% of $r > \text{PSS}$	14.57% of $r < \text{PSS}$ 1.64% of $r > \text{PSS}$	14.67% of $r < \text{PSS}$ 1.94% of $r > \text{PSS}$
Complementary pension	3% in 2011	3%	3%	3%	3%

*for income $\leq 1.6 \text{ SMIC}$

Note: r =gross self-employment income

The rates for professionals are not reported here because there are many professional categories, not subjected to the same system. We can assume that it is the same system as Industry and Trader (the only difference is the pension and complementary pension, which is a lump-sum depending on the professional class).

• **EUROMOD notes**

The three types of self-employment have been approximated based on industry (Agriculture vs. non agriculture) and occupation (non –agricultural craft and trade workers are assumed to be artisans; the rest are assumed to be contribute to the industry & trade regime). Contributions are simulated based on the current yearly self-employment income.

2.5.4 General Social contribution – tscxc-s – (Contribution Sociale Généralisée CSG)

CSG applies to:

- Employment income
- Self-employment income
- Pension Income
- Unemployment Benefit (ARE)
- Capital income
- Sickness Benefit (only the daily allowances but not the reimbursement for medical procedures)

The tax base is gross income after a reduction of 1.75% (3% before 2012) for professional expenses (on Employment Income, Pension Income and Unemployment Benefit but not on Capital Income and Sickness benefits).

Benefits like ASPA or RMI (RSA) and, more generally, minimum incomes (AAH and AV), all the family benefits and housing benefits are excluded from the tax base.

The tax rate depends on the income category as follow:

	2011		CSG	Reduced rate	2012-2015
	CSG	Deductible CSG			Deductible CSG
Employment income	7.50%	5.10%	7.50%		5.10%
Pension Income	6.60%	4.20%	6.60%	3.8%	4.20%
Unemployment benefit	6.20%	3.80%	6.20%	3.8%	3.80%
Sickness benefit	6.20%	3.80%	6.20%		3.80%
Capital Income	8.20%	5.80%	8.20%		5.10%

A fraction of the CSG can be removed from the tax base before income tax.

Pensioners with low incomes are exempted from CSG and CRDS. The income threshold depends on the tax unit (“*Quotient Familial*”). The income here is the household net taxable income:

Annual Tax Base	2011	2012	2013	2014	2015
1 share	9876	10024	10224	10633	10633
Each 0.5 share	2637	2676	2730	2839	2839

If pensioners exceed the ceiling above but income tax is less than 61 Euros the CSG rate is decreased to 3.8% and totally deductible from income for the tax calculation. Otherwise the CSG is paid at a rate of 6.6%. If a pensioner has several types of income, only the pension incomes are exempted from CSG but the income threshold takes into account all his types of income. The reference income (RFR) is the n-2 income.

Since 2015, ceilings have changed, a ceiling threshold was introduced for pensioners. Now, the income tax amount is no longer considered for application of reduced rate of 3.8 %. The reference income (RFF “Revenu fiscal de référence”) is the only thing taken in account. If pensioners's income (RFF) in n-2 exceeds the RFF lower threshold below but are under the ceiling below, the rate is decreased to 3.8% and totally deductible from income for the tax calculation.

RFF	2015 lower threshold	2015 ceiling threshold
1 share	10633	13900
Each 0.5 share	2839	3711

• **EUROMOD notes**

CSG is simulated on current yearly incomes. The full exception from CSG for pensioners with low incomes is simulated. However, entitlement to the lower CSG rate that is fully deductible for income tax purposes is not simulated.

2.5.5 Social security debt repayment contribution – tscdf_s – (CRDS)

Like CSG, CRDS is levied on different income categories:

- Employment income
- Self-Employment income
- Pension income
- RSA
- Unemployment income
- Family benefits (AF, ARS, CF, PAJE)
- Capital income
- Housing benefits
- Sickness Benefits (only the daily allowances but not the reimbursement for medical procedures)

Unlike CSG, Family benefits are subjected to CRDS. The rate applied is the same for all these income categories and amounts to 0.5%. CRDS applies globally on the same basis as CSG, paid on gross income after a reduction of 1.75% (except for capital income and sickness benefits). The CRDS is not deductible for tax purposes.

• *EUROMOD notes*

CRDS is simulated using observed incomes (where they are not simulated in the model) and simulated benefits. The simulation is done using current yearly incomes.

2.5.6 Social contribution on capital income (tsckt_s)

Others additional social contributions apply on capital (investment & property) incomes as follows:

	2011	2012	2013	2014	2015
Social contribution	3.40%	5.40%	4.50%	4.50%	4.50%
Additional contribution	0.30%	0.30%	0.30%	0.30%	0.30%
RSA contribution	1.10%	1.10%	-	-	-
Solidarity contribution	-	-	2.00%	2.00%	2.00%

In 2013, a new contribution has been created to replace the RSA contribution, it is called the Solidarity contribution. However, the overall rate of the social contributions on capital income has not changed, it remained at 6.8% since 2012 without CSG and CRSD, and 15.5% otherwise (8.2 % for CSG and 0.5 % for CRDS).

These contributions are not deductible for tax purposes.

• *EUROMOD notes*

These contributions are simulated using observed investment and property income. Current yearly income is used.

2.6 Personal income tax

2.6.1 Tax unit

Personal income tax (IRPP):

The tax unit for income taxation is neither individual nor based on the household. It is known as “*Foyer fiscal*” which is a sub-group of the household. It consists of one taxpayer plus the persons who fiscally depend on him.

Spouses (if they are married or have signed a contract of civil partnership (PACS)) and all dependent children / persons are grouped in the same unit.

Dependent children are:

- Children under 18 (automatically)
- Children strictly under 21 (and they agree to be declared with their parents)
- Children strictly under 25 who are students (and they agree to be declared with their parents)
- Disabled Children (automatically whatever their age).

Other adults can be dependent if they are disabled.

2.6.2 Exemptions

All the Family benefits, social minima (RMI, RSA) and social assistance benefits (AAH) are exempted from taxation.

The only taxable allowance is the survivor’s pension (AV) which has to be considered a pension.

As mentioned in the social contribution part, a share of the CSG can be deducted from income before taxation.

Not all the sickness benefits are taxable. These benefits are composed of cash benefits for the maintenance of an earned income called daily allowances (in case of sick leave, injury on duty leave or maternity leave) and of the reimbursement of medical, surgical or maternity procedures. Only the daily allowances are taxable except in the case of workplace accidents and benefits paid to people with a disease with prolonged treatment and a particularly costly therapy. This amount is added to the earned income.

Between 2009 and 2012, overtime payments are not subject to tax or to employee/employer contributions. Overtime is paid at a standard rate in France (25% extra for the first 8 hours after 35 hours and 50% extra for the next hours of overtime). Since 1 January 2013, overtime payments are subject to standard income tax and to employee/employer contributions.

In 2009, there was an income tax holiday for low earners in France. Those whose incomes did not exceed the first tax band per households unit (i.e. EUR 11.893 in 2012) were given relief on two thirds of their income tax bill (“*les deux derniers tiers provisionnels*”).

2.6.3 Tax allowance

- There are deductions (“*abattement*”) for certain categories of income such as category C1 (earned income, pension and unemployment). The deduction amounts to 10% with ceilings (for each earner/ pensioner/ UB recipient):

Yearly amounts		Income 2010 and 2011 Taxation 2011 and 2012	Income 2012 Taxation 2013	Income 2013 Taxation 2014	Income 2014 Taxation 2015
		Earned income	Min	421	421
	Max	14157	12000	12097	12157
Unemployment benefit	Min	924	924	931	936
	Max	14157	12000	12097	12157
Pension*	Min	374	374	377	379
	Max	3660	3660	3689	3707

* for pension, the minimum is for one person and the maximum is for all the people in the same tax declaration.

In category C3 (capital income), property income (rent) can also be deducted by 30% if the annual property income < EUR15.000 annually. The income limit has not changed between 2006 and 2015. There are more complicated deductions for property income > EUR 15.000 annually (not simulated).

- There is a deduction for private retirement savings (“*épargne retraite*”) per person which is equal to 10% of earned income from the previous years (less the deduction for professional expenses) within the following limits:

	Income 2010 Taxation 2011	Income 2011 Taxation 2012	Income 2012 Taxation 2013	Income 2013 Taxation 2014	Income 2014 Taxation 2015
Maximum	27696	28282	29098	29626	30038
Minimum	3462	3535	3637	3703	3755

2.6.4 Tax base

To calculate the tax base called Net taxable income (“*Revenu net imposable*”), intermediate incomes have to be calculated.

- « *Revenu Brut global* »

The tax base differs according to the income category.

The existing classes are:

- Earned income, pensions (with the exception of ASPA, AAH) and unemployment benefit (C1)
- Self-employment (C2)
- Capital income (C3)

For each class, the non-deductible CSG is added to gross income minus the social insurance contributions (as mentioned in the previous section on social contribution).

The « *Revenu Brut global* » is equal to the sum of all the income classes for all the persons of the tax unit:

SUM (

C1-deduction

+ C2

+ C3

+ Non deductible CSG and CRDS (on C1. C2 et C3))

- « *Revenu Net global RNG* »

From the « *Revenu Brut global* », we obtain the “*Revenu Net global*” by removing certain charges (such as alimony, investments in particular sectors, hospitality expenditures for people over 75, etc.)

Revenu Net global = *Revenu Brut Global* - Particular charges (these cannot be simulated)

For alimony paid for minor children or ascendants, the deductible amount is not limited and totally deductible.

For alimony paid for each adult child (who is declared with their parent and has a separate home), the amount of the deduction is capped.

The deductible amount is capped at:

Income	2010	2011	2012	2013	2014
Taxation	2011	2012	2013	2014	2015
Complementary reduction	5698	5698	5698	5698	5726

A fixed amount can be deducted as a payment in kind for ascendants or major children living in the household (tax unit):

Income	2010	2011	2012	2013	2014
Taxation	2011	2012	2013	2014	2015
	3359	3359	3359	3386	3403

For each person 65 and over or disabled in the tax unit, an amount can be deducted which depends on “Revenu Net Global” (RNG) being below some thresholds as follow:

2011		2012	
Deduction	RNG	Deduction	RNG
2312	<14220	2312	<14220
	14220 < r <		
1156	22930	1156	14220 < r < 22930

2013		2014		2015	
Deduction	RNG	Deduction	RNG	Deduction	RNG
2312	<14510	2332	<14630	2344	<14710
1156	14510 < r < 23390	1166	14630 < r < 23580	1172	14710 < r < 23700

- **Net taxable Income (“Revenu net imposable”)**

Net taxable income = “Revenu Net global” – special deductions (disabled people...)

- **Family ratio:**

To take into account the family size, the taxation system gives a weight to each member of the family, and adds them together to compute the Family Ratio (“*Quotient Familial*” QF).

Person in the tax unit	Weight
Taxpayer	1
Partner (if married)	1

First child	0.5
Second child	0.5
Each child after the second	1

Supplementary weights can be added in specific cases:

- Widow/er with at least one dependent child : +1 (from 2008 onwards)
- Each Disabled adult / Child: +0.5
- Lone parent : +0.5 (if not a widow/er)

QF is the total weight obtained for each tax unit.

- **Tax Base**

The amount which is submitted to the tax schedule is the net taxable income divided by the QF.

Tax Base = Net Taxable Income / QF.

- **Capital Income:**

The “*prélèvement forfaitaire libératoire*” (PFL) is a levy that a taxpayer may choose to pay instead of a progressive tax on income from its investments. Its rate does not depend on the taxpayer's total income. It is determined by type of investment.

	2011	2012-2013	2014-2015
All capital income	19%		
Fixed rate investment income		24%	24%
Dividends		21%	Normal taxation*
Interest of dividends			Normal taxation*

Before 01/01/2013, dividends are subject to a particular treatment if the PFL is not chosen. They are subject to a 40% deduction in addition to a fixed deduction of EUR1.525 for singles and EUR3.050 for couples before taxation. The fixed portion of the deduction was abolished in 2012.

*Since 1 January 2014, individuals may opt to be taxed under PFL or under progressive taxation, subject to their RFF income in n-2 being less than a threshold (75000€ for a couple and 50000€ for a single person). IF they choose to be taxed under progressive taxation, a 40% deduction applies on the gross amount of dividend income. Interest income from dividends is treated the same way but the rate is 24% and the income limits are 25000€ for a single and 50000€ for a couple.

2.6.5 Tax schedule

The tax schedule is progressive, as shown in the table below. Income brackets apply to annual income.

Taxation 2011 (income 2010)		Taxation 2012 (income 2011)	
Income bracket	Marginal Tax Rate	Income bracket	Marginal Tax Rate
0 to 5963	0%	0 to 5963	0%
5963 to 11896	5.50%	5963 to 11896	5.50%
11896 to 26420	14%	11896 to 26420	14%
26420 to 70830	30%	26420 to 70830	30%
Over 70830	41%	70830-150.000	41%
		>150.000	45%

Taxation 2013 (income 2012)		Taxation 2014 (income 2013)	
Income bracket	Marginal Tax Rate	Income bracket	Marginal Tax Rate
0 to 5963	0%	0 to 6011	0%
5963 to 11896	5.50%	6011 to 11991	5.50%
11896 to 26420	14%	11991 to 26631	14%
26420 to 70830	30%	26631 to 71397	30%
70830 to 150.000	41%	71397-151.200	41%
>150.000	45 %	>151.200	45%

Taxation 2015 (income 2014)	
Income bracket	Marginal Tax Rate
0 to 9690	0%
9691 to 26764	14%
26765 to 71754	30%
71755 to 151956	41%
>151956	45%

The tax amount obtained is then multiplied by QF to give the total tax for the tax unit.

Limit on Tax reduction due to Family Ratio (“Plafonnement du quotient familial):

There are corrections to make on the “gross tax” above. The aim is to limit the benefits of dependent children’s weight (or dependent adults).

Tax cuts for these additional weights are capped at:

	2011	2012	2013	2014	2015
The two first 0.5 for lone parent	4.040	4.040	4.040	3540	3558
Each 0.5 after the second for lone parent	2.336	2.336	2.000	1500	1508
Each 0.5	2.336	2.336	2.000	1500	1508

To compute the final gross tax liability, we must recalculate the tax with a new QF:

- 1 for single
- 2 for couples (married or who have signed a PACS)

and subtracting the caps from the table above:

I_{max} = “new tax” calculated - ceiling

The tax to pay is therefore the maximum between the “normal” tax liability and “ I_{max} ”.

Complementary reduction (réduction complémentaire):

If the tax to pay was corrected because of Limit on Tax reduction due to Family Ratio, the income tax is reduced for disabled people. The amount of tax is reduced by the following amounts for each disabled person:

Complementary reduction	Income 2010	Income 2011	Income 2012	Income 2013	Income 2014
Yearly amounts	Taxation 2011	Taxation 2012	Taxation 2013	Taxation 2014	Taxation 2015
disabled	661	661	997	1497	1504
Widower with dependent child	661	661	672	1672	1680

Tax rebate (“D cote”):

A (non-refundable) tax rebate is given to any tax unit whose tax to pay is under:

	Income 2010	Income 2011	Income 2012	Income 2013	Income 2014
	Taxation 2011	Taxation 2012	Taxation 2013	Taxation 2014	Taxation 2015
Tax rebate	878	878	960	1016	1135
couple					1870

The rebate amount is the difference between this amount divided by 2 and the tax to pay divided by 2. After all of this, we obtain the gross tax to pay. In 2015, for couple a different rebate amount was introduced.

2.6.6 Tax credits

The final tax payable is the gross tax minus:

- Tax reductions
- Tax credits
- Employment Bonus (Prime pour l’emploi PPE)

Tax reductions:

Reductions are allowed for charitable spending, school fees for dependent children, specific investments.

There is also a reduction for families who have children at school. This deduction has not changed between 2009 and 2015:

- 61 EUR per child in junior high school (11-14)
- 153 EUR per child in upper high school (15-18)
- 183 EUR per child in third level education

Tax credits:

The main tax credits are:

- Tax credits allowed for green investments (purchase of a clean vehicle, solar panels, etc.).
- Tax credit for interest paid on the loan for the acquisition of housing. Since May 2007, people who bought their principal residence can deduct approximately 40% of the interest on their mortgage for 5 years.
- Tax credit for childcare fees. Households employing people for the custody of their child can deduct 50% of the amount paid up to a ceiling of EUR 2300 per child per year.
- Tax credit for home service employment (tutoring, homemaker...)

- Tax credit for energy transition, “*crédit d’impôt transition énergétique* » (CITE). The tax credit covers the work to improve the energy efficiency done in the main house. The tax benefit is 30% of expenses incurred, capped at 8000 euros (16000 for a couple, plus 400 euros per dependent) over a period of five years.
- Tax reduction for some rental property investments, subject to fulfilling the conditions linked to the tenant and rent, several devices have existed through time: Robien, Duflot, Pinel etc. This reduction depend on the device, conditions and rates reduction have changed between these devices, the time during which the tax reduction is applied is changing also according to the differents devices.
- PPE

The PPE is an individual tax credit established in order to encourage the return to employment and improve earnings from working.

The amount depends on:

- o The earned income (employee and self-employment)
- o The tax unit income
- o The number of hours worked

To be eligible for the PPE, the household “*Revenu Brut Global*”, must be under:

PPE	Income 2010 to 2014
Yearly amounts	Taxation 2011 to 2015
Single person	16251
Couple	32498
Increase for each dependent child	4490

The PPE is also based on the individual earned income, corresponding to employment income and self-employment income.

For part-time workers, this earned income is converted to full-time equivalent.

The conversion coefficient is defined as: 1820/ yearly number of hours worked for employees or 365/yearly number of days worked for self-employees.

We obtain the earned income full-time equivalent as earned income * conversion coefficient.

To be compared, the self-employment income is multiplied by 1.1111.

The individual earned income threshold is:

Individual earned income threshold	Income 2010 to 2014
Yearly amounts	Taxation 2011 to 2015
Minimum income	3743
Single person/couple with two earned revenues	17451
Couple with one earned revenue/lone parent	26572

Note that to be considered as in activity, the earned income has to be higher than the minimum income above.

The PPE is measured by the following formulas, where R is revenue in full-time equivalent:

Single or couple with two revenues	$M \leq R \leq P_0$	$R * 7.7\%$	$ME * \text{number of dependent children}$
	$P_0 < R \leq P_1$	$(P_1 - R) * 19.3\%$	$ME * \text{number of dependent children}$
Couple with one revenue	$M \leq R \leq P_0$	$R * 7.7\% + MF$	$ME * \text{number of dependent children}$
	$P_0 < R \leq P_1$	$(P_1 - R) * 19.3\% + MF$	$ME * \text{number of dependent children}$
	$P_1 < R \leq P_2$	MF	ME
	$P_2 < R \leq P_3$	$(P_3 - R) * 5.1\%$	ME
Lone parent	$M \leq R \leq P_0$	$R * 7.7\%$	$ML * \text{first dependent child} + ME * \text{number of children after first}$
	$P_0 < R \leq P_1$	$(P_1 - R) * 19.3\%$	$ML * \text{first dependent child} + ME * \text{number of children after first}$
	$P_1 < R \leq P_3$	0	ME

With:

Parameters	Income 2010 to 2014 Taxation 2011 to 2015
M	3743
P0	12475
P1	17451
P2	24950
P3	26572
ML	36
MF	83
ME	72

We obtain here the individual **PPE in full-time equivalent**.

To compute the final individual PPE for part-time workers, the PPE in full-time equivalent is divided by the conversion coefficient.

There are two cases for part-time workers:

- If the conversion coefficient is higher than 2, the PPE is increased by 85% :

$$\text{Individual PPE} = \text{the PPE in full-time equivalent} / \text{conversion coefficient} * 1.85$$

- If the conversion coefficient between 1 and 2, the PPE is computed as:

$$\text{Individual PPE} = \text{the PPE in full-time equivalent} / \text{conversion coefficient} * 0.15$$

+the PPE in full-time equivalent*0.85

The household PPE is the sum of all the individual PPE increased by the amounts allowed as mentioned in the previous table. The PPE is not payable below 30 Euros.

The income tax may be negative because of various tax credits. Indeed, if the amount of tax credits is greater than the amount of tax due, the difference is refunded to the taxpayer from EUR8.

Tax is not payable if less than 61 Euros.

Exceptional contribution on high income (“*Contribution exceptionnelle sur les hauts revenus*”):

In 2013, creation of a new annual tax based on the same incomes that personal income tax, the “*revenu fiscal de reference, RFR*” (RFR is calculated as RNI plus taxable capital income). It concern people whose incomes are higher than EUR 250 000 for singles and EUR 500 000 for couples.

The fraction of income above the set threshold is taxed as follows:

The tax rates are:	Single	Couple
RFR≤250 000	0%	0%
250 000<RFR≤500 000	3%	0%
500 000<RFR≤1 000 000	4%	3%
RFR>1 000 000	4%	4%

When it concerns exceptional income (sale of property, etc.), a smoothing mechanism of the annual RFR is established under two conditions:

1. The RFR of the taxation year must be greater (or equal) than one and a half times the average of the previous two years RFR.
2. The RFR of the previous two years must be less (or equal) than the release threshold for the exceptional tax on high incomes.

The tax is then calculated similarly to the “*quotient familial, QF*” system:

$$\text{Tax base} = M + [(RFR_n - M)/2]$$

With

M: $(RFR_{n-2}+RFR_{n-1})/2$, the average of the last two years RFR

RFR_n: RFR of the taxation year

Then, the rate of 3% and 4 % are applied on this tax base. The tax amount is twice this result.

Cap on Direct Taxes (“*Bouclier Fiscal*”):

This "tax shield" is a device to cap direct taxes. Since 2007, direct taxes paid by a taxpayer may not exceed 50 % of its revenues. The tax is reduced sequentially on the ISF (wealth tax), the *taxes d'habitation & foncière* (housing taxes) and CSG.

The 50% relates to:

- Income tax
- ISF
- Housing Tax
- Land tax payable for principal residence
- Employee contributions including CSG and CRDS

This tax cap was abolished in July 2011.

- ***EUROMOD notes***

All children under 21 and all students under 25 co-residing with their parents are assumed to be declared on their parents' tax return. No account can be taken of children under 21 /students under 25 who are not co-residing with their parents, as they are not observed in the data. All alimonies paid are assumed to be paid for underage children and thus, they are considered to be fully deductible from the tax base. All children aged 18 and above and dependent adults are assumed to entitle the taxpayer to the specific allowance that may be claimed on their behalf. Disability is based on observed status in the data (pl030=6). In the case of capital income, an optimization is simulated. Both flat rate taxation and inclusion into total income subject to progressive taxation are simulated and the option which yields the lower tax liability is chosen. No information exists on the source of investment income. Consequently, the tax deduction for dividends when not applying the PFL regime is simulated for all types of investment income.

The following tax credits have been simulated-tax credit for child care fees, tax credit for mortgage interest expenditure, tax credit for children of school age and the refundable employment credit (PPE). Tax credits for child care expenses are simulated for all families where both parents are in work and there is a child younger than 6. The maximum yearly deduction is simulated in all cases. The tax credit on mortgage interest expenditure is approximated based on the age of the head. Households paying mortgage interests with a head under 45 are assumed to be eligible for this credit. More accurate simulations actually replicating existing rules are simulated but can be run only with national SILC data.

The employment bonus (PPE) is simulated based on current rather than previous year's income. If an individual has both employment and self-employment income, the conversion factor is calculated by summing the partial income source specific factors. In calculating the conversion coefficient, account is taken only on the number of months worked and not on the number of hours. Persons who are married but whose partner is missing from the data are considered to be part of a two earner couple.

The smoothening mechanism of the exceptional contribution on high incomes is not simulated due to absence of information on the RFF income in the previous years.

The cap on direct taxes is not simulated.

3. DATA

3.1 General description

The French database corresponds to the French part of the European Union Statistics on Income and Living Conditions (EU-SILC) called SRCV: "Statistiques sur les ressources et les conditions de vie,

produced” by INSEE and provided by ADISP-CMH. This is a rotating panel survey (9 rotational groups), representative of the French population in private households (all persons aged 16 and over within the household are eligible), excluding French Overseas Departments and territories (DOM). The French survey is used to build the dataset.

The reference population is estimated from the 1999 population census and the dwellings built since then. Around 10.000 households are surveyed each year, of which approximately 7.000 have been surveyed the previous year (participation in this survey is obligatory for four consecutive years). The sample is stratified to be representative of the French population at the national level. Data collection is annual. The survey is conducted over a period of six weeks in May and June. The unit of assessment is the sociological household, defined as persons living at the same dwelling.

SRCV sample statistics project to a reference population of 61.687.733 individuals (50.213.086 over 16 years).

Since 2008, statistical matching is performed with tax sources and the amount of (taxable) income and social benefits actually received by the households over the reference year is collected directly from the public finance body, the DGFIP and the three main Benefit funds in France: the national family allowances fund (CNAF), the national old-age insurance fund (CNAV) and the central agricultural social insurance fund (CCMSA).

For more information on technical issues:

<http://www.insee.fr/fr/methodes/default.asp?page=sources/sou-enq-dispositif-srcv.htm>

EUROMOD database description

EUROMOD database	FR_2012_b1
Original name	SRCV2012
Provider	ADISP-CMH
Year of collection	2012
Period of collection	May to June 2012
Income reference period	Year 2011
Sample size	28534 IND 11999 HH
Response rate	88.9 %

3.2 Data adjustment

Adjustments to variables are kept to a minimum. There is some minor data cleaning that is done to make sure that the households and relationships of individuals within households, are coherent (for example, that young children are not living alone or family relations are coherent).

In order to guarantee consistency between demographic variables and income variables which refer to the previous year (and on which EUROMOD simulation are based), all children born between the end of the income reference period and the data of interview have been dropped from the sample (132 observations deleted).

Item non-response is treated by means of a re-weighting procedure for the first period and by re-interrogation for the following periods in the original SRCV data.

The following variables are used to compute the new weight: age, population density home, household type, number of men and women by age category, reference person’s education, profession of reference person.

The mean annual gross employment income in France in 2012 was 35,151 EUR according to OECD statistics. The SRCV/EU-SILC estimate of employee cash or near cash gross monthly (weighted) income is 28748 EUR. This indicates a large discrepancy although these income definitions may not be strictly comparable. The OECD definition divides the total wage bill from the national accounts by the number of employees in the total economy and multiplies by the ratio of average usual weekly hours worked for full-time dependent employees in their main job to average usual weekly hours worked for all dependent employees in their main job. Performing a comparable calculation in SRCV/EU-SILC, we have an average gross income of 22,757, multiplied by 42/35 (the average full-time hours divided by the average hours from SRCV/EU-SILC), to give a figure of 27,302 which is more comparable with the official data.

3.3 Imputations and assumptions

3.3.1 Time period

The SRCV information on demographic variables refers to the time of data collection (May-June, 2012).

However, some information also indicates the status quo at the end of the income reference period (2011). For example, there are two age variables: one of them indicating age at the time of the survey implementation and one at the end of 2011. A similar situation is observed for some socio-economic and labour variables.

For example, variable rb210 (basic activity status) refers to the data collection time, while variable pl073 indicates number of month in full time work during the income reference period (the calendar year of 2011). If possible, the corresponding demographic, labour and socio-economic information in the EUROMOD dataset was based on the SRCV/EU-SILC variables referring to the income reference period.

The SRCV/EU-SILC UDB information on incomes refers to the calendar year of 2011, based on a 12-month receipt period. All monetary incomes in the EUROMOD database are converted into monthly terms. In the EUROMOD calculations it is implicitly assumed that income is received at the same rate throughout the year.

3.3.2 Gross incomes

The SRCV survey contains information on both gross and net monetary incomes, if applicable. The survey also contains flag variables, which indicate if the observation has been collected either in gross or net form. In most of cases, the incomes are collected in net terms (excepted for work income which is collected net of CSG and non-deductible CRDS). The gross incomes were recalculated by INSEE by adding the social contributions CSG, CRDS and employee social contributions (if applicable for work income). These contributions are estimated using inversion of the tax rules. More information can be found in the Country Quality Report:

<https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>

3.3.3 Disaggregation of harmonized variables

A number of variables necessary for the simulation of tax-benefit system in France are not available in the SRCV/EU-SILC UDB and, as such, have been fully imputed in the EUROMOD dataset. A list of these variables and the way they have been derived follows:

- 1) The unemployment benefit in the SRCV has been disaggregated into a contributory unemployment benefit (corresponding to ARE) and a means-tested unemployment benefit (corresponding to ASS). The disaggregation has been performed based on benefit rules.
- 2) There are two family benefits in SRCV corresponding to benefits received for young children and the rest. These variables have been further disaggregated. The variable containing benefits for early childhood has been split into the means-tested early childhood benefit (PAJE) and paid parental leave benefit (CLCA) based on PAJE rules (CLCA is calculated as a residual).
- 3) The other family benefits variable has been split into the universal child benefit (AF) and two means-tested family benefits (CF and ARS) based on policy rules. Residual amounts have been included in a separate variable-other child benefits.
- 4) Means-tested disability benefits (AAH) are collected at the household level; an imputation procedure is used to split the household amount between eligible individuals
- 5) A similar procedure has been used to split the means-tested benefit for the elderly (ASPA) based on the household level amount and the number of people receiving the benefit.
- 6) Means-tested survivor minimum pension (AV) has been separated from contributory survivor benefits by applying benefit rules.
- 7) Contributory old-age pensions have been derived by subtracting ASPA amounts from total old age benefits.
- 8) Employment income during the previous year -for individuals receiving unemployment insurance benefits- has been imputed by inverting unemployment benefit rules.
- 9) The geographical zone variable used in the calculation of the housing benefit (AL) has been imputed based in the region (NUTS 2 level db040) and urbanization (DB100).
- 10) The housing benefit in SILC has been disaggregated in two variables-benefits received by tenants and benefits received by the rest based on tenure status.
- 11) Employment income has been split into pay on account of ‘regular hours’ and overtime pay. The split has been based on the current number of hours paid reported in SILC. ‘Regular hours’ are assumed to be 35 hours per week for every employee (i.e. including part-time). An average hourly pay has been calculated based on yearly employment pay, number of months spent in employment and hours worked per week. The disaggregation takes into account the statutory rules on overtime pay (i.e. extra 25% pay for the first 8 hours per week and 50% 4extra thereafter). Overtime pay is assumed to be zero for employees working less than 35 hours per week and for employees observed to be working less than 12 months in the income reference period (the information on number of hours worked is considered too unreliable to perform the split for the latter category).

3.4 Updating

EUROMOD currently permits the simulation of 8 policy years, i.e. 2006-2015. Currently, all the simulations are done using three datasets, namely FR-SILC 2007, FR-SILC 2010 and FR-SRCV2012, which contain 2006, 2009 and 2012 incomes. Thus the data year and policy years are aligned only in 2006, 2009 and 2011. To account for any time inconsistencies between the input dataset and the policy year, a set of uprating factors is used. These factors typically correct for changes in the average incomes between the data year and the policy year or indexation rules. Separate factors are used for most income components. No attempt has been made to correct for demographic and other population changes between the data year and the policy year. The list of updating factors for the 2012 dataset as well as the sources used to derive them can be found in annex 1. Note however that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the uprated

original variables in the dataset. Uprating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable.

4. VALIDATION

4.1 Aggregate Validation

The definition of disposable income used in EUROMOD differs slightly from the concept of disposable income calculated in SILC. More specifically, in EUROMOD we add income from private pension plans and since all taxes and benefits are calculated ‘exactly’ via simulation we disregard tax adjustment repayments. We also do not add the value of the company car to the final household disposable income.

4.1.1 Components of disposable income

Table 4.1 lists the income components included in SRCV/EU-SILC and EUROMOD separately. Note that there are some slight differences in the two definitions.

Table 4.1 Definitions of disposable income in SRCV/EU-SILC and EUROMOD

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

Notes: a value of 0 is used to denote that the respective income concept does not enter the calculation of household disposable income;

4.1.2 Validation of incomes inputted into the simulation

A comparison of the number of employed and unemployed derived from the underlying EUROMOD micro data compared to an external benchmark is presented in Table 4.2 in Annex 2 below. The match is reasonably good during 2011, the year of the data, and remains so in the following years, with unemployment figures actually improving in 2014. No adjustments are made in EUROMOD to correct population characteristics other than income and so employment and unemployment changes taking place after 2009 are not reflected in EUROMOD data.

Table 4.3 in annex 2 below, displays the number of recipients of employment and self-employment income both in EUROMOD and in external administrative data. Note that the concepts used in EUROMOD and in external statistics are slightly different. In EUROMOD, the number of employees/self-employed is computed as the sum of all individuals who receive some employment/self-employment income over the year. Instead, the external data refer to the numbers recorded at a given point in time, i.e. on the 31st of December of the corresponding year. As such, one should expect slightly higher figures in EUROMOD compared to administrative statistics. Indeed, this is the case with employment income. In the base year, the number of recipients is recorded to be approximately 20% higher both for employment and self-employment income in EUROMOD compared to the external benchmark.

Table 4.4 in annex 2 below, repeats the same comparisons, but using amounts instead of number of recipients. EUROMOD values in this table refer to what we observe in SRCV/EU-SILC in 2011, and uprated values thereafter. Average gross employment income in EUROMOD is about a third lower compared to the external benchmark. One possible explanation is the fact that the external data refers to average wages computed on a full-time basis whereas EUROMOD uses all employees (both part-time and full-time as well as persons with partial spells of non-employment) to determine the average. Nonetheless, not only average employment income but also total employment income is underestimated in SILC compared to external statistics, suggesting, possibly, the inability of SILC to capture high income earners. Total self-employment income in SILC is underestimated compared to the external figure as is investment income.

Not all benefits and taxes are simulated in EUROMOD. Instead, when enough information to carry out a credible simulation is lacking, these income components are taken directly from the underlying micro-data.

Table 4.5 in annex 2 below, compares the number of recipients of non-simulated benefits in SILC to external administrative information. Unfortunately, only the total number of pension recipients could be retrieved from administrative statistics. It is clear from the figures presented in the table that SILC approximates the existing number of pensioners very well, until 2012 at least (after which point, external figures are unavailable).

Table 4.6 in annex 2 below, displays information on the amounts of non-simulated policy instruments, both in EUROMOD and in national administrative data. Whereas old-age pensions and disability are overestimated in EUROMOD, survivor pensions are clearly well underestimated. This pattern is probably explained by SILC aggregating all benefits received by people over 65, irrespective of their nature, into old-age pensions. Thus, disabled people and widows over 65 receiving disability and survivor benefits respectively appear to be receiving old-age pensions in EUROMOD.

Sickness benefits are also strongly underestimated in EUROMOD. It is not entirely clear what the reason is. The underestimation closely resembles that of employment income. Finally, non-simulated social assistance benefits appear to be widely underestimated in EUROMOD. However, note that the EUROMOD variable contains more benefits than the external benchmarks (related to child disability, adoption, parental care etc.). It has not been possible to reconstitute exactly the EUROMOD variable using external administrative data.

The total amount of property taxes paid is underestimated in EUROMOD compared to administrative statistics by around 50ppt. It is possible that the SILC variable does not capture both the land tax and the housing tax accurately or under-samples people who are liable for both.

4.1.3 Validation of outputted (simulated) incomes

Numbers of recipients / payers of simulated taxes and benefits are shown in Table 4.7. Figures in the table indicate that beneficiaries of the family allowance, the back to school allowance, the family complement, the young children allowance, the baby bonus, the housing allowance and the number of household eligible for income tax and the working tax credit are well simulated.

The number of people eligible for the allowance for handicapped adults is under simulated as is the number of people eligible for the elderly minimum income. In all likelihood, the disability status variable in Euromod fails to capture a large share of individuals entitled to disability benefits. For the minimum income for the elderly, eligibility is conditioned by observed receipt in the data, *in addition* to all applicable eligibility conditions. This substantially reduces the number of simulated eligible individuals. Note also that there is an interaction between ASPA and the RSA. More specifically, some individuals who in practice are entitled to ASPA but whose entitlement is not simulated will be simulated to be entitled to receive the RSA. Thus, the underestimation of benefit recipients in the case of ASPA will lead to an overestimation of beneficiaries of the RSA.

Even when simulating random non-take-up, the number of recipients of the RSA is overestimated and this is largely due to over simulation of the number of people entitled to the in-work benefit component of the RSA, the *RSA activité*. A potential explanation relates to the fact that net earnings in the input data are lower than external statistics suggest by about 10% (see Table 4.4). Additionally, as SILC only has information about annual incomes, it is not possible to split correctly between the *RSA socle* and *RSA activité*. Those who work for a part of the year and receive the *RSA socle* for the rest of the year cannot be distinguished from those who work at low pay for the entire year and are entitled to the *RSA activité*. Furthermore, households entitled to small amounts are less likely to claim and this is not taken into account in the take-up simulation.

Finally, the number of recipients of the contributory unemployment benefit in EUROMOD is under simulated. This is entirely due to observed receipt in SILC (eligibility in EUROMOD is so constructed as to reproduce observed receipt in the data). This can clearly be seen by the fact that simulated numbers and those derived from the original data are indeed very close. Since, in SILC, the contributory unemployment benefit is aggregated together with the means-tested one, it is possible that errors stemming from the disaggregation process are responsible for the overestimation.

Table 4.8 in annex 2 below, displays information on overall aggregate expenditure corresponding to the various tax and benefit instruments. Most simulated child and family benefits are slightly underestimated. A potential explanation relates to the use of current instead of previous income when simulating entitlement to all income-tested benefits.

Aggregate means-tested disability allowances are underestimated, again due to not capturing the recipient population properly. This shortcoming is due to the disability status variable in SILC which is more restrictive than disability requirements associated with this benefit. Means-tested total housing benefits are somewhat underestimated in SILC, to the same degree that the number of beneficiaries of this benefit is underestimated. Again, keep in mind that the EUROMOD and external figures are not entirely comparable due to the aggregations of external information. In the case of the main means-tested benefit RMI/RSA, total simulated amounts (including a random take-up simulation) are slightly overestimated. This is entirely due to the large oversimulation of the amount of *RSA activité* (the in-work benefit component). The number of households eligible for this component of the RSA is three times larger in the EUROMOD simulation than in external statistics (see Table 4.7). The RSA was introduced in place of the RMI in June 2009, in 2010, the first year that the RSA was in place for the

entire year, our simulation is too large for RSA activité although the split between *RSA socle* and *RSA activité* is still not accurate. Households entitled to small amounts are less likely to claim. To the extent that EUROMOD simulated non-take-up to be random, this introduces errors in the final results. Total ASPA outlays are somewhat underestimated in EUROMOD, total ARE outlays are underestimated. In the latter case, the overestimation is partly due to the fact that it is difficult to correctly identify recipients of ARE in SILC.

Simulated total receipts of the personal income tax is well estimated in 2011 but less well in subsequent years. This pattern may be due to employment changes not being well captured by the uprating process. However, keep in mind that there are a range of complex tax deductions and credits in France that we are unable to simulate. We simulate the most important ones relating to rental income, dividends, overtime pay and childcare but it is likely that we miss some deductions that are particularly important for those with high income. As such, we would expect income tax to be oversimulated. However, some important market income components (earnings, investment & property) are underreported in the data compared to external statistics. The total amount of the refundable tax credit (PPE) for low earners is well estimated. The two taxes specific to the French system, CSG and CRDS, are fairly accurately simulated in EUROMOD. Contributions on capital income are however overestimated although the external statistics are not fully comparable with EUROMOD figures.

4.2 Income distribution

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

4.2.1 Income inequality

Several inequality indicators as obtained in EUROMOD are compared with external benchmarks in table 4.9 in annex 2 below. The external figures come from EUROSTAT’s statistics database. They show that median and mean disposable incomes are well aligned. Overall inequality- as expressed by the Gini coefficient and the S80/S20 ratio are slightly underestimated in EUROMOD since 2013. Finally the comparison of decile shares indicates that income at the bottom is overestimated in EUROMOD while incomes in the middle of the distribution and at the top are relatively well aligned. There may be several possible explanations for the noted discrepancies. First, note that no data adjustments are made in EUROMOD in situations where the policy year does not correspond to the data year. In particular, no adjustment is made for changes in employment and unemployment that have taken place between 2011 and the policy year. Second, it is possible that the uprating factors used to account for changes in incomes are not capturing changes in the income distribution. More specifically, uprating factors are based on changes in average income components. If however incomes are rising faster at the top compared to the bottom, this would both increase inequality and not be captured in the change in averages.

4.2.2 Poverty rates

At-risk of poverty rates using various poverty thresholds are shown in Table 4.10, separately by gender. Poverty is substantially underestimated in EUROMOD, both for men and for women, when

using lower poverty thresholds. At higher poverty thresholds, poverty rates estimated by EUROMOD are closer to external benchmarks. This suggests that non take up of some means-tested benefits or administrative errors in the implementation of these benefits may play a role which EUROMOD cannot adequately capture. Only the non-take-up of general social assistance (RMI/ RSA) is simulated in EUROMOD. Moreover, non-take up is simulated to be random. If marginalized, peripheral groups are less likely to claim benefits to which they are theoretically entitled, incomes at the bottom will be inflated in EUROMOD. Finally, child poverty and to a lesser extent working-age are underestimated in EUROMOD. It is possible that non-take up of some means-tested family benefits accounts for this pattern, although child benefits are usually slightly underestimated in EUROMOD compared to administrative data (but overestimated compared to SILC on which the poverty external statistics rely).

4.2.3 Validation of minimum wage

EUROMOD also allows for the simulation of the minimum wage (SMIC), although this policy is tuned off in the baseline and thus its effects are not included in the previous tables. In Table 11, baseline results (in which minimum wage is not simulated) are compared to results obtained when the minimum wage is simulated. As expected, total employment income, disposable income, income tax and employee social insurance contributions are slightly higher when minimum wage is simulated. On the contrary, the amount of social assistance is lower. Overall however, changes are very small as the number of persons affected by the simulation of the minimum wage is not very large (the minimum wage is simulated on an hourly basis-to take account of part time work and spells of non-employment during the income reference period).

4.3 Summary of “health warnings”

Several things should be kept in mind when interpreting EUROMOD results:

- Total employment income appears to be underreported in SILC/SRCV compared to external benchmarks
- Similarly, some other types of incomes such as sickness benefits, investment and property incomes are lower in SILC compared to external information
- Accurate simulation of the parental leave benefit (CLCA) was not possible given available information in SILC; however, both the amount of benefits and number of recipients appear to be close to external statistics
- Non-take-up of the main social assistance benefit (RMI/RSA) is simulated to be random; non-take-up however is most likely to be non-random; comparisons between results obtained in EUROMOD and external benchmarks suggest that households entitled to lower amounts are less likely to claim
- Simulation of eligibility for the contributory unemployment benefit (ARE) is inaccurate due to the quality of data in SILC
- Eligibility for the means-tested social assistance for the elderly (ASPA) is simulated based on observed receipt in the data
- While incomes appear to be well simulated in the middle and top of the distribution, incomes at the bottom are overestimated in ERUOMOD
- Overall, EUROMOD simulated incomes are more equal; poverty rates-especially when calculated using low poverty thresholds are underestimated
- Child poverty is also underestimated

5. REFERENCES

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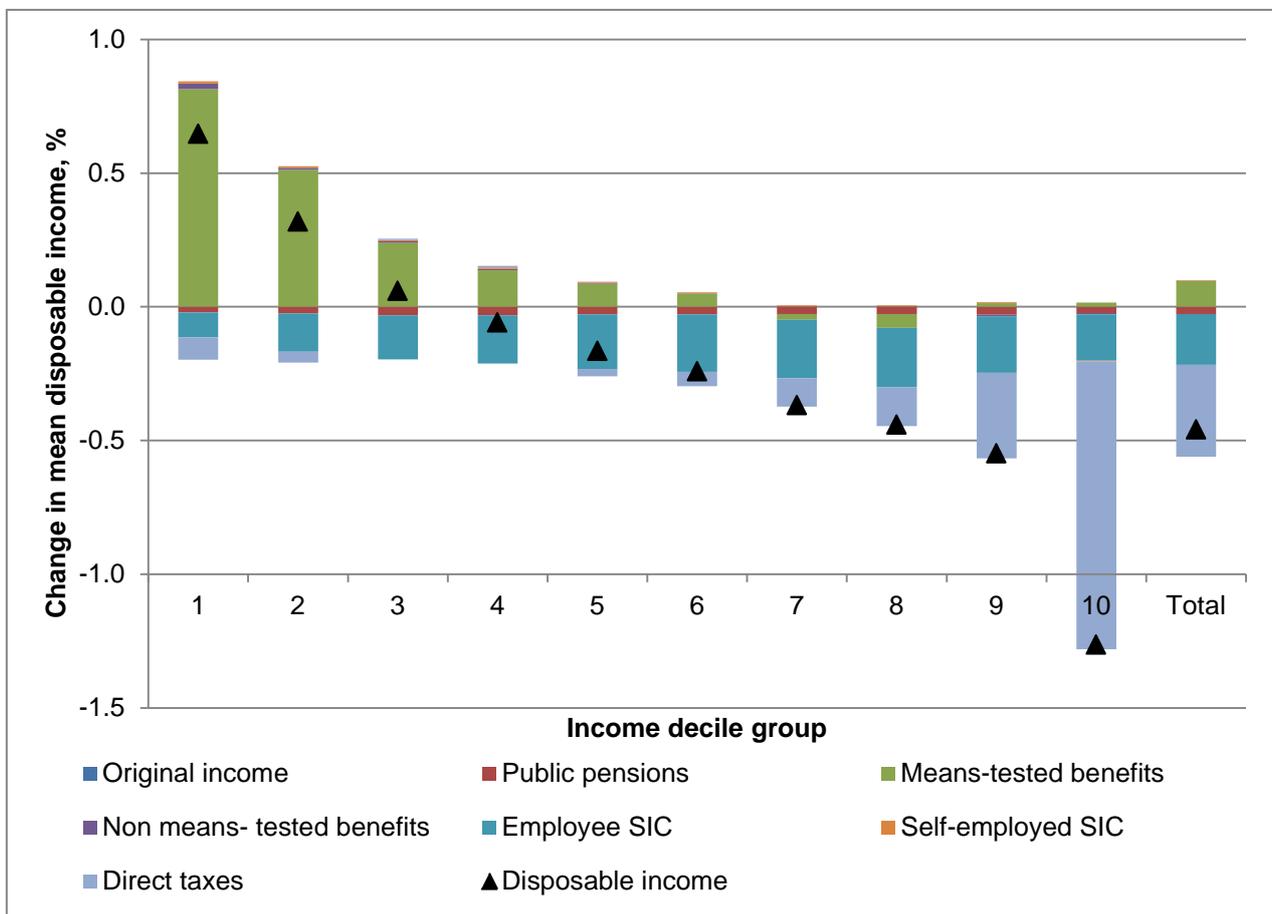
ANNEX 1: POLICY EFFECTS

Table A1: Policy effects for FR in 2013-2014, using the CPI indexation [1.00609331476323] on dataset FR_2012_b1, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0,00	-0,02	0,81	0,02	-0,09	0,01	-0,08	0,65
2	0,00	-0,02	0,51	0,01	-0,14	0,01	-0,04	0,32
3	0,00	-0,03	0,24	0,01	-0,16	0,01	0,00	0,06
4	0,00	-0,03	0,14	0,01	-0,18	0,01	0,01	-0,06
5	0,00	-0,03	0,09	0,00	-0,20	0,00	-0,03	-0,17
6	0,00	-0,03	0,05	0,00	-0,22	0,00	-0,05	-0,24
7	0,00	-0,03	-0,02	0,00	-0,22	0,00	-0,11	-0,37
8	0,00	-0,03	-0,05	0,00	-0,22	0,00	-0,15	-0,44
9	0,00	-0,03	0,01	-0,01	-0,21	0,00	-0,32	-0,55
10	0,00	-0,02	0,02	0,00	-0,17	0,00	-1,08	-1,26
Total	0,00	-0,03	0,10	0,00	-0,19	0,00	-0,34	-0,46

Notes : Shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2013, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2014 policies by Eurostat’s Harmonized Index of Consumer Prices (HICP).

Figure A1: Policy effects in 2013-2014, using the CPI-indexation, %



The profile of policy changes performed in 2014 clearly points at redistributing resources from deciles above the median to the two first deciles. We can claim that the tax-benefit system becomes more progressive. Three main changes can be observed.

First, the tax burden increased for most taxpayers, but especially so for those in the top two deciles. The large increase is due to the tax rate on dividends going up from 21% to 24%. At the same time, at the bottom two deciles were affected by lower caps on deductible income on account of the quotient familial and by the freezing of the refundable tax credit for low earners (PPE). The tax pressure increased and it was not fully compensated by a rise in the means-tested programs and other redistributive programs. In other words, the reform was not budget neutral. This is so because at that time, the French government has to comply with its commitment with Brussels regarding the stability and growth pact and the path of reducing the budget deficit. The last decile is losing 1% of disposable income through mainly changes of the tax code of the income tax.

Means-tested benefits have increased for the first three deciles. The increase is mainly due to above inflation increases of the main means-tested social assistance benefit (RSA). In addition, the large family benefit (CF) has been reformed to introduce a second, more generous, benefit level for families on very low incomes. On the contrary, the means-tested benefit for young children (PAJE) has been made less generous for families higher up in the income distribution which explains the small decrease in means-tested benefits for deciles seven and eight.

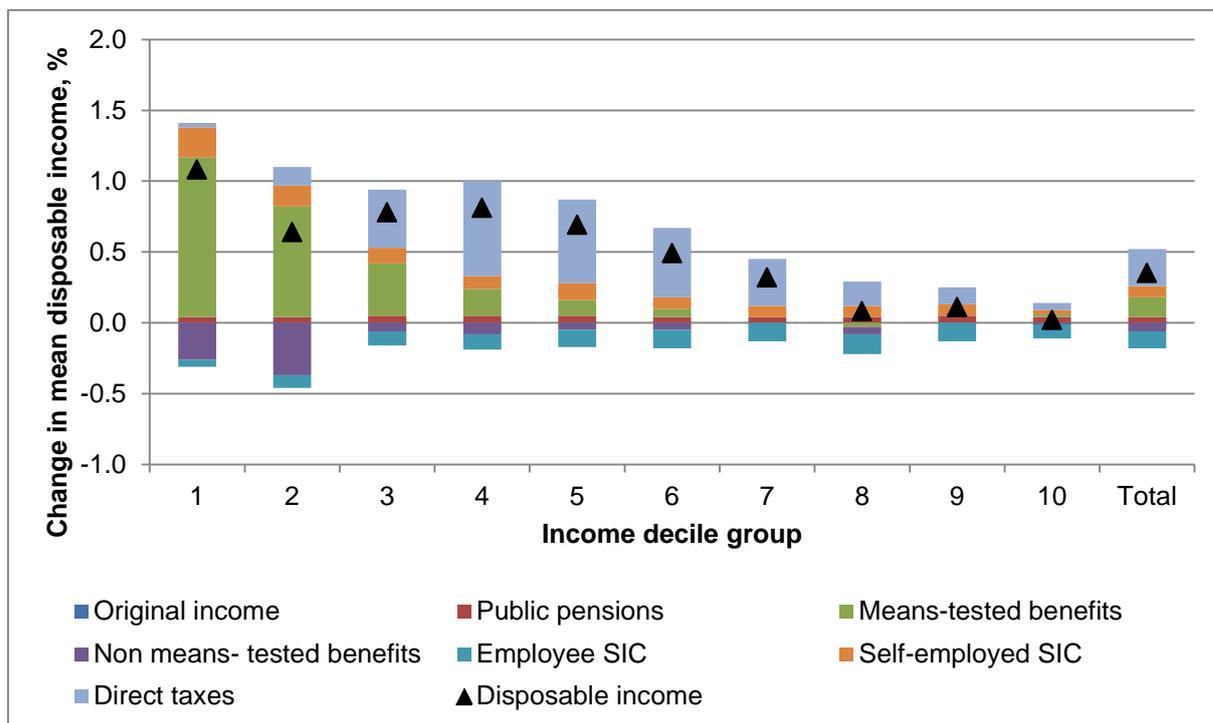
Finally, all income groups have been affected roughly to the same extent by an increase in the old-age employee insurance contribution rates. .

Table A2: Policy effects for FR in 2014-2015, using the CPI indexation [1.00034608063679] on dataset FR_2012_b1, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0,00	0,04	1,13	-0,26	-0,05	0,21	0,03	1,08
2	0,00	0,04	0,78	-0,37	-0,09	0,15	0,13	0,64
3	0,00	0,05	0,37	-0,06	-0,10	0,11	0,41	0,78
4	0,00	0,05	0,19	-0,08	-0,11	0,09	0,67	0,81
5	0,00	0,05	0,11	-0,05	-0,12	0,12	0,59	0,69
6	0,00	0,04	0,06	-0,05	-0,13	0,08	0,49	0,49
7	0,00	0,04	0,00	0,00	-0,13	0,08	0,33	0,32
8	0,00	0,04	-0,03	-0,05	-0,14	0,08	0,17	0,08
9	0,00	0,05	0,00	0,00	-0,13	0,08	0,12	0,11
10	0,00	0,04	0,02	-0,01	-0,10	0,03	0,05	0,02
Total	0,00	0,04	0,14	-0,06	-0,12	0,08	0,26	0,35

Notes : Shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2013, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2014 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure A2: Policy effects in 2014-2015, using the CPI-indexation, %



In 2015, disposable income increase for all deciles and especially for the bottom. Several change in policy can explain this fact. First, the tax burden decreased for all income deciles. The decrease was highest for the middle deciles. This change can largely be explained by the suppression of first tax bracket and the establishment of a larger tax-exempt income threshold. In addition, a tax rebate (decote) has been made more generous for couples. An increase in employee old-age insurance contribution rates affected all groups, but especially deciles three to ten. Conversely, some (family and invalidity & death) social insurance contribution rates for the self-employed have been lowered, especially for self-employed on lower incomes. This policy reform has resulted in higher disposable income especially in the first two deciles.

Means-tested benefits have increased substantially for the first two deciles. The increase is largely attributable to a substantial rise in the highertier of means-tested benefits for large families and to the above inflation increases in the main means-tested social assistance benefit (RSA).

Non-means tested benefits have decreased for the first two deciles because of a reduction in the length of paid parental benefit as well as a freezing of the main child benefit.

ANNEX 2: UPRATING FACTORS

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Harmonized Indices of Consumer Prices (HICP)	\$f_hicp	101,91	103,55	106,82	106,93	108,79	111,28	113,75	114,88	115,58	115,62	Eurostat / Harmonized Indices of Consumer Prices (HICP);- HICP (2005=100) - Monthly data (prc_hicp_midx) http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_midx&lang=en
Average annual net full-time equivalent salary - All salaried workers	\$f_yem	22302	23009	23718	24033	24518	25125	25507				INSEE IdBank 001665118 http://www.bdm.insee.fr/bdm2/affichageSeries?request_locale=en&anneeDebut=2007&codeGroupe=1475&recherche=criteres&idbank=001665118&anneeFin=2012
Average annual net full-time equivalent salary - First quartile	\$f_yem_q1	14257	14626	15118	15456	15710	16081	16343				INSEE IdBank 001665124 http://www.bdm.insee.fr/bdm2/affichageSeries?anneeDebut=2007&anneeFin=2012&recherche=criteres&codeGroupe=1476&idbank=001665118&idbank=001665121&idbank=001665124&idbank=001665127&idbank=001665130&idbank=001665133&idbank=001665136&idbank=001665139&idbank=001665143&idbank=001665146&idbank=001665148

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Average annual net full-time equivalent salary - Second quartile	\$f_yem_q2	17943	18420	19049	19447	19806	20278	20556				INSEE IdBank 001665127 http://www.bdm.insee.fr/bdm2/affichageSeries?anneeDebut=2007&anneeFin=2012&recherche=criteres&codeGroupe=1476&idbank=001665118&idbank=001665121&idbank=001665124&idbank=001665127&idbank=001665130&idbank=001665133&idbank=001665136&idbank=001665139&idbank=001665143&idbank=001665146&idbank=001665148
Average annual net full-time equivalent salary - Third quartile	\$f_yem_q3	24530	25189	25989	26541	27026	27707	28148				INSEE IdBank 001665130 http://www.bdm.insee.fr/bdm2/affichageSeries?anneeDebut=2007&anneeFin=2012&recherche=criteres&codeGroupe=1476&idbank=001665118&idbank=001665121&idbank=001665124&idbank=001665127&idbank=001665130&idbank=001665133&idbank=001665136&idbank=001665139&idbank=001665143&idbank=001665146&idbank=001665148
Gross wages and salaries (totals from AMECO)	\$f_yem_ameco	702,5	731,3	754,5	755,2	777,2	795,3	809,7	817,7	830,5	839,5	DG ECFIN/AMECO, household and NPISH/revenue/gross wages and salaries (Mrd euros) http://ec.europa.eu/economy_finance/ameco/user/serie/ResultSerie.cfm

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Inflation rate (from INSEE)	\$f_cpi	114,24	115,94	119,2	119,31	121,13	123,7	126,12	127,21	127,85	128,11	INSEE IdBank 000639201 http://www.insee.fr/en/themes/series-longues.asp?indicateur=inflation
Rent reference index (RRI) - Base 100 on the 4th quarter of 1998	\$f_rri	112,16	113,61	116,44	117,7	118,49	120,66	123,21	124,55	125,17	125,22	INSEE IdBank 001515333 http://www.insee.fr/en/bases-de-donnees/bsweb/serie.asp?idbank=001515333
Monthly average amount per retired person	\$f_poa	1100	1135	1174	1194	1216	1256	1288	1306	1313	1315	INSEE http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF04571
Monthly base of family allowance	\$f_bfa	367,87	374,12	377,86	389,2	389,2	395,04	399	403,79	406,21	406,21	http://www.dalloz-actualite.fr/indice/base-mensuelle-de-calcul-des-prestations-familiales.VSfD45PK-AB
Basic AF amount	\$f_bch00	117,72	119,72	120,92	124,54	124,54	126,41	127,05	128,57	129,35	129,35	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Basic CF amount	\$f_bchlg	153,22	155,82	157,38	162,1	162,1	164,53	165,35	167,34	168,35	168,35	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic PAJE amount	\$f_bchyc	169,04	171,92	173,63	178,83	178,83	181,52	183,35	184,62	184,62	184,62	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic ARS amount	\$f_bched	269,35	273,92	273,92	282,16	282,16	284,97	356,2	360,47	362,63	362,63	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic BMAF amount	\$f_bchot	367,87	374,12	377,86	389,2	389,2	395,04	399	403,79	406,21	406,21	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Maximum amount of AAH	\$f_bdi	610,28	621,27	628,1	681,63	681,63	711,95	759,98	776,59	790,18	800,45	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic AV amount	\$f_bsugd	539,37	549,07	551,1	565,13	570,21	582,18	594,4	602,12	602,12	602,12	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic RSA amount	\$f_bsa00	433,06	440,86	447,91	454,63	460,09	466,99	474,93	483,24	499,31	513,88	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Basic ASPA amount	\$f_bsaoa	610,29	621,27	628,1	677,13	708,95	742,27	777,16	787,26	791,99	800	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
ent reference level for AL	\$f_bho	222,83	229,07	235,39	242,33	243,11	245,78	248,24	253,58	255,03	255,03	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Average net full-time salary in the PREVIOUS year	\$f_yemp v	21900	22302	23009	23718	24033	24518	25125	25507	25759	26162	INSEE IdBank 001665118 http://www.bdm.insee.fr/bdm2/affichageSeries?request_locale=en&anneeDebut=2007&codeGroupe=1475&recherche=criteres&idbank=001665118&anneeFin=2012
Average disposable income (per hh)	\$f_yds	35670	36010	36450	36500	36660	36650	36700	36190	36411	36423	INSEE http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATSOS04202
Gross disposable income (all hh, billions)				1254,1	1255,3	1285,4	1311,4	1318,3	1327,6	1342,3		http://www.insee.fr/fr/themes/comptes-nationaux/tableau.asp?sous_theme=2.1&xml=t_2101
Pension indexation rules	\$f_poa_i ndex	114,24	115,94	119,2	119,31	121,13	123,7	126,12	127,21	127,85	128,11	INSEE IdBank 000639197 http://www.bdm.insee.fr/bdm2/affichageSeries?anneeDebut=2005&anneeFin=2015&recherche=criteres&codeGroupe=143&idbank=000639197&idbank=000639198&idbank=000639201

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Change in average investment and property income (2006=base)	\$f_yiy	1,0000	1,0550	1,1014	1,0717	1,0620	1,0918	1,0437	1,0542	1,0621	1.07270	Revenu de la propriété reçus diminués des revenus versés. http://www.insee.fr/fr/ffc/docs_ffc/ref/revpmen11h.pdf
Basic daily rate for ASS	\$f_bunmt	14,250	14,250	14,250	14,960	15,140	15,370	15,630	15,900	16,11	16,25	Based on the ASS daily amount
Total amount of TF collected (billions)	\$f_tpr	20,600	21,600	22,500	24,700	26,000	27,300	28,600	29,800	30,6	30.5	Based on the total amount of TF (taxe foncière) collected http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF08328%22
Total amount of ISF collected (billions)	\$f_twl	3,7	4,4	4,2	3,6	4,5	4,3	5	4,4	5,2	5.2	Based on the total amount of ISF (Impôt de solidarité sur la fortune) collected: http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF08328%22
Total amount of TH collected (billions)	\$f_tmu	12,1	12,6	13,2	14,4	15,3	15,9	16,8	17,5	17,8	17.8	Based on the total amount of TH (taxe d'habitation) collected http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF08328%22
Total amount of IRPP collected (billions)	\$f_tin	52,4	48,6	50,9	46,1	47	50,8	59,5	68,7	70	70	Based on total amount of IRPP http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF08328%22

Income component	Uprating factor name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Source
Annual national accounts- GDP Current price	\$f_gdp	1853267	1945670	1995850	1939017	1998481	2059284	2086929	2116565	2132449	2153773	INSEE IdBank 001690355 http://www.bdm.insee.fr/bdm2/affichageSeries?request_locale=en&codeGroupe=1560&idbank=001690355&bouton=OK

Note: Cells in red are extrapolations of the series; to be revised when better data is available

ANNEX 3: VALIDATION TABLES

Table 4.2-Number of employed and unemployed

	EUROMOD		External				Ratio				
	2011	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Number of employed	25469.31	25751.3	25749	25749.4	25792.3	N/A	0.99	0.99	0.99	0.99	N/A
Number of unemployed	2806.551	2658	2858	3010	2992	N/A	1.06	0.98	0.93	0.94	N/A

Table 4.4-Market income in EUROMOD -Annual amounts (in mil.)

	EUROMOD					External					Ratio				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Average employment income	24129.71	24566.61	24809.33	25197.69	25470.75	34350	35049	35574	N/A	N/A	0.70	0.70	0.70	N/A	N/A
Employment income	693688.3	706248.5	713226.4	724391	732241.1	795300	809700	817700	N/A	N/A	0.87	0.87	0.87	N/A	N/A
Self-employment income	79795.47	81240.28	82042.96	83327.23	84230.24	120400	121400	121500	N/A	N/A	0.66	0.67	0.68	N/A	N/A
Private pensions	412.6876	421.8477	426.0381	428.6339	428.7821	290.06	N/A	N/A	N/A	N/A	1.42	N/A	N/A	N/A	N/A
Rent income	33853.57	34569.02	34944.98	35118.94	35132.98	166200	169200	170600	N/A	N/A	0.20	0.20	0.20	N/A	N/A
Income from capital	112939.7	107971.4	109050	109868.5	110967.2	127700	109000	110100	N/A	N/A	0.88	0.99	0.99	N/A	N/A

Table 4.6-Tax benefit instruments included but not simulated in EUROMOD -Annual amounts (in mil.)

	EUROMOD					External					Ratio				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Benefits															
Contributory old age pensions	281172.40	286684.50	289164.10	290619.30	291213.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Disability pensions/benefits	3705.71	3778.20	3810.85	3830.02	3837.81	5974.1	6091.4	6258	N/A	N/A	0.62	0.62	0.61	N/A	N/A
Survivor pensions/benefits	1292.52	1317.81	1329.20	1335.89	1338.60	8918	9235.4	9529	N/A	N/A	0.14	0.14	0.14	N/A	N/A
Sickness benefits	1473.69	1510.18	1533.14	1548.28	1572.51	8863	8774	8779	N/A	N/A	0.17	0.17	0.17	N/A	N/A
Other child benefits	3313.63	3346.91	3387.02	3407.34	3407.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social assistance benefits other than RSA	2757.07	2803.94	2853.01	2947.88	3033.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance contributions															
Property tax	13362.32	13998.61	14585.97	14977.57	14977.57	27300	28600	29800	30600	N/A	0.49	0.49	0.49	0.49	N/A

Table 4.7-Tax benefit instruments simulated in EUROMOD -Number of recipients/ payers (in thousands)

	EUROMOD					SILC	Ratio External			Ratio							
	2011	2012	2013	2014	2015		2011	2011	2011	2012	2013	2014	2015	2011	2012	2013	2014
Benefits																	
Universal child benefit	4446.05	4448.35	4446.05	4446.05	4446.05	4273.12	1.04	4461.20	4486.58	4534.80	N/A	N/A	1.00	0.99	0.98	N/A	N/A
Means-tested educational allowance (ARS)	2392.74	2367.09	2474.49	2495.35	2487.47	2071.41	1.16	2661.16	2719.77	2758.94	N/A	N/A	0.90	0.87	0.90	N/A	N/A
Means-tested large family allowance (CF)	740.25	734.97	744.64	745.63	735.30	575.28	1.29	786.47	783.84	791.48	N/A	N/A	0.94	0.94	0.94	N/A	N/A
Family support allowance (ASF)	271.74	281.89	281.89	271.74	271.74	N/A	N/A	631.26	630.46	639.15	N/A	N/A	0.43	0.45	0.44	N/A	N/A
Means-tested benefit for young children (PAJE base)	1764.67	1740.82	1785.23	1767.21	1744.62	1849.91	0.95	1800.16	1786.70	1772.12	N/A	N/A	0.98	0.97	1.01	N/A	N/A
Means-tested birth grant (PN)	589.53	577.48	599.65	575.77	575.77	0.00	N/A	604.07	567.34	601.51	N/A	N/A	0.98	1.02	1.00	N/A	N/A
Supplementary free choice of activity (CLCA)	471.84	471.84	471.84	471.84	363.74	3036.28	0.16	517.20	504.48	491.18	N/A	N/A	0.91	0.94	0.96	N/A	N/A
Means-tested disability benefit	335.37	343.18	343.18	343.18	347.15	407.57	0.82	892.70	931.12	955.85	N/A	N/A	0.38	0.37	0.36	N/A	N/A
Means-tested housing allowance (AL):APL+ALS+ALF only tenants caf metrop	4592.88	4459.99	4372.57	4360.81	4364.50	7877.79	0.58	4970.31	5005.37	N/A	N/A	N/A	0.92	0.89	N/A	N/A	N/A
Guaranteed min income (RSA)	1563.58	1599.13	1679.71	1764.98	1829.63	1780.88	0.88	1834.77	1930.37	2066.72	N/A	N/A	0.85	0.83	0.81	N/A	N/A
Guaranteed min income-in work (RSA activite)	567.36	601.12	680.05	750.22	792.60	0.00	N/A	444.56	453.51	476.48	N/A	N/A	1.28	1.33	1.43	N/A	N/A
Guaranteed min income-inactive (Rsa socle)	996.22	998.01	999.67	1014.76	1037.04	0.00	N/A	1390.21	1476.86	1590.24	N/A	N/A	0.72	0.68	0.63	N/A	N/A

Means-tested old-age benefit (ASPA) metrop, régime général	29.49	29.49	29.49	29.49	29.49	60.31	0.49	125.97	142.80	162.00	N/A	N/A	0.23	0.21	0.18	N/A	N/A
Contributory unemployment benefit	2740.01	2740.01	2740.01	2740.01	2740.01	2786.87	0.98	2138.83	N/A	N/A	N/A	N/A	1.28	N/A	N/A	N/A	N/A
Means-tested unemployment assistance	870.52	856.61	827.30	828.01	828.01	2053.02	0.42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Taxes and Social Insurance contributions

Personal income tax (IRPP)	17797.84	18795.29	20452.68	20615.38	17907.66	19217.42	0.93	19707.20	20463.60	19119.78	N/A	N/A	0.90	0.92	1.07	N/A	N/A
Net taxable income (RNI)	33756.44	33756.44	33756.44	33756.44	33756.44	N/A	N/A	36962.50	36389.26	36720.04	N/A	N/A	0.91	0.93	0.92	N/A	N/A
Refundable tax credit for low earners (PPE)	7154.84	6846.44	6276.26	6043.61	5881.43	0.00	N/A	6563.57	6153.67	N/A	N/A	N/A	1.09	1.11	N/A	N/A	N/A
Generalized social insurance contributions	45721.10	45728.93	45731.56	45700.18	45700.18	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Contributions for the repayment of the social security's system debt	46565.62	46565.62	46565.62	46565.62	46563.28	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employee social insurance contributions	28748.31	28748.31	28748.31	28748.31	28748.31	0.00	N/A	23850.60	23781.40	23821.10	N/A	N/A	1.21	1.21	1.21	N/A	N/A
Self-employed social insurance contributions	3152.20	3152.20	3152.20	3152.20	3152.20	0.00	N/A	2579.00	2675.80	2685.90	N/A	N/A	1.22	1.18	1.17	N/A	N/A
Employer social insurance contributions	28748.31	28748.31	28748.31	28748.31	28748.31	22468.41	1.28	23850.60	23781.40	23821.10	N/A	N/A	1.21	1.21	1.21	N/A	N/A
Contributions on capital income	38179.00	38179.00	38179.00	38179.00	38179.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Exceptional tax on high income earners					19.94		N/A	N/A	N/A	29.68	29.75	N/A	N/A	N/A	0.00	0.00	N/A

Table 4.8-Tax benefit instruments simulated in EUROMOD -Annual amounts (Mil.)

	EUROMOD				SILC				Ratio				External				Ratio						
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2011	2012	2013	2014	2015	2011	2012	2013	2014	2011	2012	2013	2014	2015
Benefits																							
Universal child benefit	11420.79	10866.41	10991.48	11049.20	11049.20	9720.37	9769.58	9886.49	9946.45	1.17	1.11	1.11	1.11	1.11	11384.75	11604.05	11943.68	N/A	1.00	0.94	0.92	N/A	N/A
Means-tested educational allowance (ARS)	1136.18	1397.61	1469.05	1485.65	1480.48	975.80	1219.66	1234.28	1241.68	1.16	1.15	1.19	1.20	1.19	1345.42	1692.64	1739.60	N/A	0.84	0.83	0.84	N/A	N/A
Means-tested large family allowance (CF)	1461.51	1465.66	1502.80	1609.39	1679.56	951.47	956.21	967.72	973.56	1.54	1.53	1.55	1.65	1.73	1536.27	1541.71	1570.36	N/A	0.95	0.95	0.96	N/A	N/A
Family support allowance (ASF)	461.76	481.01	486.77	498.63	522.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	991.56	1089.57	1106.84	N/A	0.47	0.44	0.44	N/A	N/A
Means-tested benefit for young children (PAJE)	3843.88	3849.38	3974.78	3862.95	3721.29	4064.00	4105.00	4133.40	4133.40	0.95	0.94	0.96	0.93	0.90	3998.47	4010.80	4031.26	N/A	0.96	0.96	0.99	N/A	N/A
Means-tested birth grant (PN)	535.03	531.99	556.30	534.15	534.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	610.66	604.51	612.29	N/A	0.88	0.88	0.91	N/A	N/A
Supplementary free choice of activity (CLCA)	1590.04	1597.97	1612.25	1611.26	1156.72	6866.01	6934.85	7018.09	7060.17	0.23	0.23	0.23	0.23	0.16	2012.00	1963.76	1930.49	N/A	0.79	0.81	0.84	N/A	N/A
Means-tested disability benefit	2736.98	2912.88	2973.88	3028.57	3074.38	2950.27	3149.31	3218.14	3274.47	0.93	0.92	0.92	0.92	0.93	6761.87	7008.04	7378.46	N/A	0.40	0.42	0.40	N/A	N/A
Means-tested housing allowance (AL):APL+ALS+ALF only	9940.17	9787.03	9818.18	9796.40	9880.68	12200.52	12322.63	12587.74	12659.72	0.81	0.79	0.78	0.77	0.78	13676.20	14045.35	N/A	N/A	0.73	0.70	N/A	N/A	N/A
Guaranteed min income (RSA)	4615.75	4812.10	5054.38	5406.30	5766.76	5755.39	5853.23	5955.68	6153.72	0.80	0.82	0.85	0.88	0.91	8420.80	8843.70	9639.70	N/A	0.55	0.54	0.52	N/A	N/A
Guaranteed min income-in work (RSA active)	906.72	969.40	1121.50	1267.71	1429.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1369.12	1446.57	1525.53	N/A	0.66	0.67	0.74	N/A	N/A
Guaranteed min income-inactive (Rsa socle)	3709.03	3842.70	3932.88	4138.60	4337.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7051.68	7321.21	8114.17	N/A	0.53	0.52	0.48	N/A	N/A
benefit (ASPA) metrop, régime général	254.86	259.11	262.14	264.04	267.11	414.61	434.10	439.74	442.38	0.61	0.60	0.60	0.60	0.60	1333.80	1406.20	1457.40	N/A	0.19	0.18	0.18	N/A	N/A
Contributory unemployment benefit	24974.15	25547.52	25959.59	26197.35	26564.89	23602.76	24187.10	24554.84	24797.43	1.06	1.06	1.06	1.06	1.05	25583.00	27047.00	N/A	N/A	0.98	0.94	N/A	N/A	N/A
Means-tested unemployment assistance	3250.39	3272.30	3296.10	3350.99	3383.55	4841.26	4923.16	5008.20	5074.34	0.67	0.66	0.66	0.66	0.66	2345.00	2454.00	N/A	N/A	1.39	1.33	N/A	N/A	N/A
Taxes and Social Insurance contributions																							
Personal income tax (IRPP)	54263.70	55371.45	73464.01	77378.54	75695.24	47015.07	55066.88	63581.43	64784.57	1.15	1.01	1.16	1.19	1.17	57205.00	64085.00	62242.00	N/A	0.95	0.86	1.18	N/A	N/A
Net taxable income (RNI)	789075.30	792362.40	895368.60	904534.00	911735.70	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	N/A	681706.00	684233.00	707300.00	N/A	1.16	1.16	1.27	N/A	N/A
Refundable tax credit for low earners (PPE)	2966.64	2845.31	2624.85	2526.22	2463.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2901.50	2674.00	N/A	N/A	1.02	1.06	N/A	N/A	N/A
Generalized social insurance contributions (CSG)	86821.56	89010.30	89904.65	90811.67	91624.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	88100.00	91800.00	92500.00	N/A	0.99	0.97	0.97	N/A	N/A
Contributions for the repayment of the social security's system debt (CRDS)	6174.23	6249.20	6310.98	6385.22	6436.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6400.00	6600.00	6600.00	N/A	0.96	0.95	0.96	N/A	N/A
Employee social insurance contributions	80026.82	81508.65	96785.27	100051.80	102187.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	81250.00	83838.00	N/A	N/A	0.98	0.97	N/A	N/A	N/A

Self-employed social insurance contributions	24854.30	24915.58	26350.37	26678.47	26096.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	27700.00	29100.00	30800.00	N/A	0.90	0.86	0.86	N/A	N/A
Employer social insurance contributions	229989.70	234087.90	282621.50	288101.70	292078.40	250651.00	255189.40	257710.70	261744.80	0.92	0.92	1.10	1.10	1.10	229790.00	234949.00	302100.00	N/A	1.00	1.00	0.94	N/A	N/A
Contributions on capital income	7046.08	9692.77	9791.62	9859.31	9934.87	N/A	N/A	N/A	0.00	N/A	N/A	N/A	N/A	N/A	4321.00	5043.00	4400.00	N/A	1.63	1.92	2.23	N/A	N/A
Exceptional tax on high income earners					267.14					N/A	N/A	N/A	N/A	N/A	N/A	N/A	630.00	522.00	N/A	N/A	0.00	0.00	N/A

Table 4.9-Distribution of equivalised disposable income

	EUROMOD					External					Ratio				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
D1	3.69	3.72	3.84	3.87	3.86	3.60	3.60	N/A	N/A	N/A	1.03	1.03	N/A	N/A	N/A
D2	5.27	5.28	5.44	5.45	5.46	5.20	5.20	N/A	N/A	N/A	1.01	1.02	N/A	N/A	N/A
D3	6.22	6.25	6.40	6.43	6.44	6.20	6.20	N/A	N/A	N/A	1.00	1.01	N/A	N/A	N/A
D4	7.06	7.08	7.26	7.27	7.30	7.10	7.20	N/A	N/A	N/A	0.99	0.98	N/A	N/A	N/A
D5	7.89	7.90	8.04	8.09	8.11	8.00	8.00	N/A	N/A	N/A	0.99	0.99	N/A	N/A	N/A
D6	8.85	8.86	8.99	9.01	9.04	8.90	8.90	N/A	N/A	N/A	0.99	1.00	N/A	N/A	N/A
D7	10.04	10.05	10.15	10.18	10.19	10.10	10.10	N/A	N/A	N/A	0.99	0.99	N/A	N/A	N/A
D8	11.57	11.58	11.67	11.68	11.65	11.60	11.50	N/A	N/A	N/A	1.00	1.01	N/A	N/A	N/A
D9	13.94	13.94	13.88	13.86	13.84	13.90	13.90	N/A	N/A	N/A	1.00	1.00	N/A	N/A	N/A
D10	25.49	25.34	24.34	24.15	24.10	25.60	25.40	N/A	N/A	N/A	1.00	1.00	N/A	N/A	N/A
Median	19488.80	19699.36	19475.77	19685.16	19931.04	20603.00	20954.00	N/A	N/A	N/A	0.95	0.94	N/A	N/A	N/A
Mean	23412.62	23585.01	22985.98	23133.48	23363.35	24499.00	24773.00	N/A	N/A	N/A	0.96	0.95	N/A	N/A	N/A
Gini	30.19	29.99	28.74	28.50	28.41	30.50	30.10	N/A	N/A	N/A	0.99	1.00	N/A	N/A	N/A
S80/S20	4.40	4.36	4.12	4.08	4.07	4.50	4.50	N/A	N/A	N/A	0.98	0.97	N/A	N/A	N/A

Table 4.10-Poverty rates by gender and age

	EUROMOD					External					Ratio				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
40% median HDI															
Total	2.66	2.60	2.41	2.32	2.34	3.20	3.00	N/A	N/A	N/A	0.83	0.87	N/A	N/A	N/A
Males	2.65	2.60	2.39	2.28	2.27	3.20	3.00	N/A	N/A	N/A	0.83	0.87	N/A	N/A	N/A
Females	2.66	2.61	2.43	2.35	2.41	3.20	3.00	N/A	N/A	N/A	0.83	0.87	N/A	N/A	N/A
50% median HDI															
Total	6.15	6.12	5.93	5.89	5.83	6.90	6.80	N/A	N/A	N/A	0.89	0.90	N/A	N/A	N/A
Males	5.98	5.91	5.79	5.76	5.65	6.70	6.60	N/A	N/A	N/A	0.89	0.89	N/A	N/A	N/A
Females	6.30	6.32	6.06	6.01	6.01	7.10	7.00	N/A	N/A	N/A	0.89	0.90	N/A	N/A	N/A
60% median HDI															
Total	12.52	12.43	11.69	11.70	11.89	14.10	13.70	N/A	N/A	N/A	0.89	0.91	N/A	N/A	N/A
Males	12.13	11.96	11.28	11.35	11.54	13.60	13.00	N/A	N/A	N/A	0.89	0.92	N/A	N/A	N/A
Females	12.89	12.87	12.07	12.03	12.22	14.60	14.30	N/A	N/A	N/A	0.88	0.90	N/A	N/A	N/A
70% median HDI															
Total	20.50	20.41	19.82	19.69	19.85	21.60	21.70	N/A	N/A	N/A	0.95	0.94	N/A	N/A	N/A
Males	19.69	19.57	19.18	18.99	19.01	20.80	20.70	N/A	N/A	N/A	0.95	0.95	N/A	N/A	N/A
Females	21.26	21.19	20.41	20.35	20.64	22.40	22.70	N/A	N/A	N/A	0.95	0.93	N/A	N/A	N/A
60% median HDI															
0-15 years	16.51	16.44	15.63	15.58	16.04	18.80	17.80	N/A	N/A	N/A	0.88	0.92	N/A	N/A	N/A
16-24 year:	19.81	19.92	18.83	18.53	18.73	22.40	21.80	N/A	N/A	N/A	0.88	0.91	N/A	N/A	N/A
25-49 year:	11.96	11.73	11.13	11.08	11.15	13.10	12.90	N/A	N/A	N/A	0.91	0.91	N/A	N/A	N/A
50-64 year:	10.09	10.12	9.43	9.52	9.63	10.70	11.00	N/A	N/A	N/A	0.94	0.92	N/A	N/A	N/A
65+ years	7.49	7.35	6.57	6.89	7.06	9.40	8.70	N/A	N/A	N/A	0.80	0.84	N/A	N/A	N/A

Table 4.10-Minimum wage validation

	Baseline					Min Wage Incl.					Ratio				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Equivalised disposable income	997826.90	1004451.00	980257.50	986440.30	996597.60	1009757.00	1017487.00	992834.70	998912.30	1009128.00	0.99	0.99	0.99	0.99	0.99
Employment income	693688.30	706248.50	713226.40	724391.00	732241.10	693688.30	706248.50	713226.40	724391.00	732241.10	1.00	1.00	1.00	1.00	1.00
Total income tax Total employee social insurance contributions	54263.70	55371.45	73464.01	77378.54	75695.24	54907.22	56220.57	74733.60	78680.69	76890.49	0.99	0.98	0.98	0.98	0.98
Guaranteed min income (RSA)	4615.75	4812.10	5054.38	5406.30	5766.76	4278.32	4451.62	4654.28	4992.63	5337.40	1.08	1.08	1.09	1.08	1.08
Gini coefficient	30.19	29.99	28.74	28.50	28.41	29.72	29.50	28.22	27.99	27.91	1.02	1.02	1.02	1.02	1.02
Poverty rate (60% median HDI)	12.52	12.43	11.69	11.70	11.89	12.31	12.10	11.40	11.39	11.63	1.02	1.03	1.02	1.03	1.02