

EUROMOD

COUNTRY REPORT



FRANCE (FR)

2015-2018

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December 2018

EUROMOD version I1.0



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

EUROMOD has been enlarged to cover 28 Member States and is updated to recent policy systems using data from the European Union Statistics on Income and Living Conditions (EU-SILC) as the input database, supported by DG-EMPL of the European Commission

The European Commission is in the process of taking over responsibility for carrying out the annual update and release of EUROMOD. The transfer of responsibility is expected to be complete by the end of 2020 and the transition is being facilitated by close cooperation between the University of Essex and the Joint Research Centre (JRC) of the European Commission as well as Eurostat.

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

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The results presented in this report are derived using EUROMOD version I1.0. 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>

This document is supported by the European Union Programme for Employment and Social Innovation “Easi” (2014-2020). For further information please consult <http://ec.europa.eu/social/easi>. The information contained within this document does not necessarily reflect the position or opinion of the European Commission.

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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 was 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 an income threshold since July 2015.

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.

Activity allowance (“*Prime d’activité*”): This allowance was created from 1 January 2016 and replaces the RSA activity allowance and the PPE tax credit. There is an income threshold.

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 (“*Régime d’assurance chômage*”, RAC) and the National Solidarity Plan (“*Régime de solidarité nationale*”, 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.

Parental leave (“*congé maternité*”, “*congé paternité*”, “*congé d’adoption*”): The Health Insurance (“*l’Assurance Maladie*”) also provides a replacement income in case of maternity, paternity or adoption in the same conditions of sickness benefit.

- *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.

Employee social contributions: Employee social contributions are aimed at financing the Social Security System which covers employees against the financial consequences of different risks (illness, accident, disability, unemployment) or situations (old age, widowhood). These contributions are taken on all employee wage and related incomes, on the whole gross income. There are several regimes for different types of workers.

Self-employed social contributions: Like employees, the self-employed have to pay social contributions on their gross profit into the Social Security System. There are three types of self-employed (farmers, artisans and industry/trader workers) whose contribution rate are quite different.

Employer social contributions: Employers are liable for social contributions for cover their employees against the financial consequences of old-age, illness, unemployment etc. In addition, there are social contributions used to finance the social system in different areas (family, housing) and to provide employees with the opportunity to be trained (professional training, apprenticeship).

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. This tax has been removed in 2018 and replaced by the tax on real estate wealth (IFI).

Tax on real estate Wealth ("*Impôt sur la fortune immobilière*", IFI): is an annual progressive tax payable by individuals because of their real estate ownership (except professional real estate) when the net value of these net real estate exceeds a certain amount (1,300,000 €Euros). The tax is assessed by household, which comprises spouses, cohabiting partners and minor children. There is a 30 % abatement on the principal residence value of the tax household.

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. In 2018, the government decide to reform the housing tax only for the principal residence in order to exclude about 80% of the taxable household of the housing tax.

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 between 2007 and 2011. 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?
		2014	2015	2016	2017	2018	
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	
Activity bonus	bsawk_s	n/a	n/a	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; not available informations on asset values

Housing benefit (AL)	bhotn_s	S	S	S	S	S	Benefit simulated for rent paying tenants only; benefits paid for owners are included in bhoot; not available informations on asset values
Housing benefit (AL)	bhoot	IA	IA	IA	IA	IA	Benefits for homeowners cannot be simulated; they are included alongside other housing benefits; not available informations on asset values
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	PS	PS	PS	PS	PS	Eligibility is based on observed receipt in the data; eligibility conditions can be simulated only approximately because of lack of information on previous contributions and previous receipt of the contributory unemployment benefit
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: “E”: *excluded* from the model as it is neither included in the micro-data nor simulated; “T”: *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?
		2014	2015	2016	2017	2018	
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	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	-	Detailed information about asset values is not available in the underlying input dataset
Real estate wealth tax (IFI)	twl	-	-	-	-	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; “I”: *included* in the micro-data but not simulated; “S” policy is *simulated* although some minor or very specific rules may not be simulated.

Some benefits use eligibility information from the data due to lack of information in the data to simulate all eligibility rules and are therefore only **partially simulated**. This is the case for the Solidarity allowance for the elderly (bsoa_s), Contributory unemployment benefit (bunct_s) and Means-tested unemployment benefit (bunmt_s) in France. These benefits are only simulated for those with receipt of the benefit in the data.

- *Structural changes between 2015 and 2016*

In 2016, concerning income tax, there was a increase in the “decote” amount.

Concerning social benefits, a new allowance was established, the activity allowance “Prime d’activité” who replaces the RSA activity allowance and the PPE tax credit.

An income threshold has been introduced for the previously universal general child benefit (“Allocation familiale”). There has been a modification since July 2015 in family allowance rules, they were modified for families who earn more than a defined threshold.

- *Structural changes between 2016 and 2017*

In 2017, the implementation of the 2011 pension reform leads to a change in the minimum retirement age (62 years old) and in the minimum age to receive the full state pension (depending of the date of birth and on the number of years of cotisation: 42 or 43 years of cotisation, but the full rate is automatic at 67 years old even if your cotisations are under the threshold).

Concerning the income tax, in 2017 there is a lump sum tax reduction up to 20% of the theoretical amount of 2017 income tax granted to households whose RFR is less than 18 500EUR for a single and 37000EUR for a couple.

Concerning social contributions, introduction of an arduouness contribution for all employers for all their employees.

In 2016, there is a reform of housing assistance (APL, AFL and ASL) in two stages:

Since July 2016, if the real rent paid is over a threshold, the benefit is suppressed. If the rent is over a determined ceiling but under a maximum threshold then the benefit is decreased.

Since October 2016, the value of the assets is taken into account in the allowance amount calculation when this is higher than 30000 EUR. This concern the real estate assets (excluding the main residence and properties for occupational use), financial assets and movable assets.

Furthermore, beneficiaries who are dependant on a household subject to wealth tax are no longer entitled to such assistance.

- *Structural changes between 2017 and 2018*

In 2018, there is a rise of 1.7 points of the general social contribution (CSG). In compensation, for workers, the contributions are decreased on sickness (-0.75%) and unemployment insurance (1.40 are removed in January 2018 and 1% in October) for employees in the private sector (that will make a reduction of 3.15 % on private employees social contribution at the end of 2018, the net reduction will be therefore 1.45% at the end of 2018). Concerning the public sector employees, the CSG increase is compensated by removing the exceptional solidarity contribution (which is 1% for those who are eligible) and by introducing a compensatory indemnity in order to erase the 1.7 points of increase of the CSG.

Concerning the retirement pensions, there is an increase of 0.8% in October 2017.

Concerning social benefits, the solidarity allowance for the elderly (ASPA) is increased by 30 euros in April 2018. The family support benefit is increased by 6 euros, the increased amount of family complement is raised by 16.80 euros, the PAJE baby bonus is unfrozen to follow the inflation rate. Finally, the income threshold for means-tested young children allowance (PAJE) is aligned with those below, of the family complement.

Concerning the tax on capital income, a single flat rate levy of 30 % is introduced that reduces the global capital income taxation rate.

The wealth tax (ISF) has been removed and replaced by the tax on real estate wealth (IFI).

2.2 Order of simulation and interdependencies

- *Order of simulation in 2015- 2018*

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, 2015- 2018

Policy	2015	2016	2017	2018	Description	Main output
Setdefault_fr	on	on	on	on	Definition of default values for variables not present in the input dataset	
Uaa_fr	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	Uprating of input data	
constdef_fr	on	on	on	on	Definition of constants used in the model	
ildef_fr	on	on	on	on	Definition of standardized income lists	
tundef_fr	on	on	on	on	Definition of assessment units used in the model	
random_fr	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	Minimum wage	yem
neg_fr	on	on	on	on	Recoding of negative values of self-employment income	yse
bta_fr	switch	switch	switch	switch	Master switch for controlling non take-up of RMI/RSA	
bunct_fr	on	on	on	on	Unemployment insurance benefit (Allocation de retour à l'emploi ARE)	bunct_s

bch00_fr	on	on	on	on	Universal child benefit (Allocation Familiale AF)	bch00_s
bchor_fr	on	on	on	on	Family Support Allowance (Allocation de soutien familial ASF)	bchor_s
tscee_fr	on	on	on	on	Employee social insurance contributions	tscee_s
tscer_fr	on	on	on	on	Employer social insurance contributions	tscer_s
tscse_fr	on	on	on	on	Self-employed social insurance contributions	tscse_s
tsckt_fr	on	on	on	on	Social insurance contributions paid on capital income	tsckt_s
bsuwd_fr	off	on	on	on	Minimum survivor pension (Allocation veuvage AV)	bsuwd_s
tinty_fr	on	on	on	on	Net taxable income	il_rniy
tscxc_fr	on	on	on	on	Generalized social insurance contributions (Contribution Sociale Généralisée CSG)	tscxc_s
tinkt_s	on	on	on	on	Personal income tax when using flat rate taxation of capital income (Prélèvement forfaitaire non libératoire PFL)	temp_tingt1
tin_fr	on	on	on	on	Personal income tax when using the progressive tax schedule only and optimization of gross tax	temp_tingt2
tincot_fr	on	on	on	on	Tax credits other than PPE	tingt_s
tintcees	on	on	on	on	Low earner refundable tax credit (Prime Pour L'Emploi PPE) & net tax	tintcees_s;
bdi_fr	on	on	on	on	Means-tested disability benefit (Allocation aux adultes handicapés AAH)	tintcmi_s;
bunmt_fr	off	off	off	off	Unemployment assistance benefit (Allocation de solidarité spécifique ASS)	tintced_s
bchyc_fr	on	on	on	on	Means-tested benefit for young children (Prestation d'Accueil du Jeune Enfant PAJE)	tintcees_s;
bchba_fr	on	on	on	on	Means-tested birth grant (Prime de naissance PN)	tin_s
bchcc_fr	on	on	on	on	Parental leave supplement (Complément de libre choix d'activité CLCA)	bdi_s
bched_fr	on	on	on	on	Means-tested education grant (Allocation de rentrée scolaire ARS)	bunmt_s
bchlg_fr	on	on	on	on	Means-tested benefit for large families (Complément familial CF)	bchyc_s
bchor_fr	on	on	on	on	Non means-tested benefit for orphans (Allocation de soutien familial ASF)	bchba_s
bhotn_fr	on	on	on	on	Means-tested housing benefits (Allocation Logement AL)	bchcc_s
bsaoa_fr	on	on	on	on	Means-tested benefit for the elderly (Allocation de solidarité aux personnes âgées ASPA)	bched_s
tscdf_fr	on	on	on	on	Contribution for the deficit repayment (Contribution pour le Remboursement de la Dette Sociale CRDS)	bchlg_s
bsa00_fr	on	on	on	on	Minimum guaranteed income (Revenu minimum d'insertion RMI/Revenu de solidarité active RSA)	bchor_s
bsawk_fr	n/a	n/a	on	on	Activity allowance (Prime d'activité)	bhotn_s
output_std_fr	on	on	on	on	Standard output file at the individual level	bsaoa_s
output_std_hh_fr	on	on	on	on	Standard output file at the household level	tscdf_s
						bsa00_s
						bsawk_s

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 charges 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(s) –Revenu de Solidarité Active (RSA) and Prime d'activité. By default, it is turned on. Turning it off causes the simulation of RSA/PA 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) is 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 (based on Smic for 169 hours/month).

- *Eligibility conditions*

The benefit is paid in arrears and 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. From 1st July 2015, family allowance and the increased amount for child over 14 years have become means-tested. The family net taxable income (RFR) will be taken in account to determine the benefit amount. The family can receive a full rate, 50 % of the benefit amount or 25 % of the benefit amount depending on their income (RFR). The next table shows the different thresholds depending on the number of children.

Thresholds July 2015 to December 2015:

Benefit rate	2 dependent children	3 dependent children	Income increase for each child after the 3rd
Maximum annual family RFR amount (for basic benefit)			
<i>Full rate</i>	≤ 67140	≤ 72735	+ 5595
<i>Rate at 50%</i>	67140 < RFR ≤ 89490	72735 < RFR ≤ 95085	+ 5595
<i>Rate at 25%</i>	> 89490	> 95085	+ 5595
Maximum annual family RFR amount (for over 14 years old increase)			
<i>Full rate</i>	≤ 55950	≤ 72735	+5595
<i>Rate at 50%</i>	< RFR ≤ 78300	72735 < RFR ≤ 95085	+5595
<i>Rate at 25%</i>	> 78300	> 95085	+5595

Thresholds 2016-2017:

Benefit rate	2 dependent children	3 dependent children	Income increase for each child after the 3rd
Maximum annual family RFR amount (for basic benefit and for over 14 years old increase)			
<i>Full rate</i>	≤ 67408	≤ 73025	+ 5617
<i>Rate at 50%</i>	67408 < RFR ≤ 89847	73025 < RFR ≤ 95464	+ 5617

Rate at 25%	> 89847	> 95464	+ 5617
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Thresholds 2018:

Benefit rate	2 dependent children	3 dependent children	Income increase for each child after the 3rd
Maximum annual family RFR amount (for basic benefit and for over 14 years old increase)			
Full rate	≤ 67542	≤ 73170	+ 5628
Rate at 50%	67542 <RFR ≤ 90026	73170 <RFR ≤ 95654	+ 5628
Rate at 25%	> 90026	> 95654	+ 5628

- *Benefit amount*

The benefit amount is the amount below multiplied by the percent above.

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

	2014*	2015	2016	2017	2018
<i>Monthly amount</i>					
2 dependent children	130	130	130.12	130.51	131.82
3 dependent children	296.53	296.53	296.83	297.72	300.70
Each child after the 3rd	166.55	166.55	166.71	167.22	168.88
Increase for child over 16 **	64.99	64.99	65.06	65.26	-----
Increase for child over 14***	64.99	64.99	65.06	65.26	65.91
Fixed amount paid to families of 3+ children with eldest of 20-21	82.19	82.19	82.28	82.52	83.35

*the amounts change each 1st of April except in 2015 (temporary freeze to reduce expenses).

**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 dependent 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 until the month before the child turns 21. As AF, this lump sum is is paid at full rate, 50% or 25% depending on net taxable income (RFR).

If there are only two children in the household, the increases for children over 14 is not paid for the first child.

- *Compatibilities*

This benefit is compatible with national or regional lump-sum child benefits. If one the children receives APL, it means that he has his own home, therefore the household is no longer eligible to AF.

- *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 14 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.

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 to be considered an earner:

2014	2015	2016	2017	2018
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Each member of the couple should earn more then 4947 5036 5107 5173 5252

- *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. The different ceilings depends on the child born date.

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

Ceilings granting access to the benefit:

Yearly amount	2014*	2015*	2016*	2017*
One earner couples				
One dependent child	35480	35729	35871	35871
Two dependent children	42576	42875	43045	43045
Three dependent children	51091	51450	51654	51654
Each child after the third	8515	8575	8609	8609
Two Earner couples or lone parent				
One dependent child	46888	47217	47405	47405
Two dependent children	53984	54363	54579	54579
Three dependent children	62499	62938	63188	63188
Each child after the third	8515	8575	8609	8609

*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 B1: Ceilings granting access to the benefit, child born between April 2014 & March 2018:

Yearly amount	2014	2015	2016	2017	2018
One earner couples					
One dependent child	35480	35729	35872	35872	35944
Two dependent children	41878	42172	42341	42341	42426
Three dependent children	48276	48615	48810	48810	48907
Each child after the third	6398	6443	6469	6469	6482
Two Earner couples or lone parent					
One dependent child	45077	45393	45575	45575	45666
Two dependent children	51475	51836	52044	52044	52148
Three dependent children	57873	58279	58513	58513	58630

Each child after the third	6398	6443	6469	6469	6482
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Ceilings C: For child born after 1st of April 2018

Ceilings C1: Ceilings granting access to the benefit, child born after April 2018:

Yearly amount	2018
One earner couples	
One dependent child	31345
Two dependent children	37614
Three dependent children	45137
Each child after the third	7523
Two Earner couples or lone parent	
One dependent child	41425
Two dependent children	47694
Three dependent children	55217
Each child after the third	7523

- *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 between April 2014 and March 2018, the income ceilings for a full rate benefit amount are:

Ceilings B2 for full rate between 1st of April 2014 and 31 March 2018:

Yearly amount for full benefit	2014	2015	2016	2017	2018
One earner couples					
One dependent child	29700	29907	30027	30027	30086
Two dependent children	35056	35300	35442	35442	35511
Three dependent children	40412	40693	40857	40857	40937
Each child after the third	5356	5393	5415	5415	5425
Two Earner couples or lone parent					
One dependent child	37733	37996	38148	38148	38223
Two dependent children	43089	43389	43563	43563	43648
Three dependent children	48445	48782	48978	48978	49074
Each child after the third	5356	5393	5415	5415	5425

The families whose incomes are above ceilings 2, but below ceilings 1 receive the partial amount of the benefit.

Ceilings C2 for full rate after 1st of April 2018:

Yearly amount for full benefit	2018
One earner couples	
One dependent child	26236
Two dependent children	31483
Three dependent children	37780
Each child after the third	6297
Two Earner couples or lone parent	
One dependent child	34673
Two dependent children	39920
Three dependent children	46217
Each child after the third	6297

The families whose incomes are above ceilings 2, but below ceilings 1 receive the partial amount of the benefit.

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

	2014	2015- 2016	2017	2018*	2018**
Monthly amount (full rate)	185.54	185.54	185.54	185.54	171.57
Monthly amount (partial rate)					
	92.77	92.77	92.77	92.77	85.79

*child born between 1st of April 2014 and 31 March 2018 whose parents earn income above the second ceilings (ceilings B2) and below the first ceilings (ceilings B1).

**child born after 1st of April 2018 whose parents earn income above the second ceilings (ceilings C2) and below the first ceilings (ceilings C1).

- *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 or 2018 irrespective of their month of birth. Variable *bchyc_s* 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 *bhcc_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 (based on 169h/month).

- *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:

	2014	2015	2016
Couple with one revenue			
One dependent child	35480	35729	35871
Two dependent children	42576	42875	43045
Three dependent children	51091	51450	51654
Each child after the third	8515	8575	8609
Couple with two revenues or lone parent			
One dependent child	46888	47217	47405
Two dependent children	53984	54363	54579
Three dependent children	62499	62938	63188
Each child after the third	8575	8609	8609

For child born between April 2014 - March 2018, the annual family net taxable income must be below:

Yearly amount	2014	January 2015	January 2016	January 2017	January 2018
One earner couples					
One dependent child	35480	35729	35872	35872	35944
Two dependent children	41878	42172	42341	42341	42426
Three dependent children	48276	48615	48810	48810	48907
Each child after the third	6398	6443	6469	6469	6482
Two Earner couples or lone parent					

One dependent child	45077	45393	45575	45575	45666
Two dependent children	51475	51836	52044	52044	52148
Three dependent children	57873	58279	58513	58513	58629
Each child after the third	6398	6443	6469	6469	6482

For child born before 1st of April 2018, the annual family net taxable income must be below:

	2018
<hr/>	
Couple with one revenue	
One dependent child	31345
Two dependent children	37614
Three dependent children	45137
Each child after the third	7523
Couple with two revenues or lone parent	
One dependent child	41425
Two dependent children	47694
Three dependent children	55217
Each child after the third	7523

- *Benefit amount*

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

	2014- 2017	2018	2018*
Childbirth	927.71	927.73	946.41
Adoption	1855.42	1855.46	1892.82

*For child born after 1st of April 2018

- *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 – bchcc_s – (*Complément de libre choix d'activité/PreParE*)

• *Definitions*

Children are considered as dependent persons if they are aged under 20 and earning less than 55% of the minimum wage (based on 169h/month).

• *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.

		2014*						
	2014	et 2015*	2015	2016	2016*	2017	2017*	2018
Gross amount from CRDS								
Non-receipt of PAJE base amount								
Full rate (stop working completely)	579.12	392.47	579.12	579.70	392.87	581.46	394.06	398
Reduce work to < 50%	440.36	253.72	440.36	440.80	253.97	442.15	254.74	257.30
Reduce work to 50-80%	333.01	146.36	333.01	333.35	146.51	334.35	146.94	148.42
Receipt of PAJE base amount								
Full rate (stop working completely)	392.47	392.47	392.47	392.87	392.87	394.06	394.06	398
Reduce work to < 50%	253.72	253.72	253.72	253.97	253.97	254.74	254.74	257.30
Reduce work to 50-80%	146.36	146.36	146.36	146.51	146.51	146.94	146.94	148.42

*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, PreParE majorée since January 2015) 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	2014	2014*	2015*	2016*	2017*	2018
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Non-receipt of PAJE base amount	828.20	641.53	641.54	642.17	644.12	650.56
Receipt of PAJE base amount	641.53	641.53	641.54	642.17	644.12	650.56

*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 (based on 169h/month).

- *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 (based on 169h/month).

- *Income test*

The income test depends on the number of dependent children:

Euros per year	2016-			
	2014	2015	2017	2018
One dependent child	24137	24306	24404	24453
Two dependent children	29707	29915	30036	30096
Three dependent children	35277	35524	35668	35739
Each child after the third	5570	5609	5632	5643

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	2014-			
	2015	2016	2017	2018
6-10 years	364.45	364.81	365.92	369.58
11-14 years	384.56	384.95	386.10	389.97
15-18 years	397.88	398.28	399.49	403.48

- *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 (based on 169h/month).

- *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	2014	2015	2016	2017	2018
Child living with lone parent	96.00	100.58	105.27	110.20	115.88
Child living with no parents	127.96	134.05	140.29	146.82	154.47

- *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 (based on 169h/month). 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 (based on 169h/month).

- *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 to be considered an earner:

	2014	2015	2016	2017	2018
Each member of the couple should earn more then	4947	5036	5107	5173	5252

Ceiling 1:

	2014	2015	2016- 2017	2018
Yearly income for family with 3 children				
One earner couples	37295	37555	37705	37780
Two earner couples or lone parent	45623	45941	46125	46217
Increase for each dependent child after 3 rd	6216	6259	6284	6297

The income used here is the net taxable income.

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

	2014	2015	2016- 2017	2018
Yearly income for family with 3 children				
One earner couples	18648	18779	18857	18893
Two earner couples or lone parent	22812	22972	23067	23111
Increase for each dependent child after 3 rd	3018	3130	3143	3149

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

	2014	2015	2016	2017	2018
Basic monthly amount	169.19	169.19	169.36	169.88	171.57
Increased monthly amount**	186.13	203.06	220.22	237.90	257.38

**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 PAJE (basic allowance and supplement for free choice of activity). If the household is eligible to PAJE, the CF is not paid. If one the children receives APL, it means that he has his own home, therefore the household is no longer eligible to CF.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits (except for activity allowance and RSA), 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 62.

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	2014	2015	2016	2017	2018
Single	9482.16	9605.40	9701.52	9730.68	9828
Couple	18964.32	19210.80	19403.04	19461.36	19656
for each child	4741.08	4802.70	4850.76	4865.34	4914

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:

Net from CRDS	2014	2015	2016	2017	2018
Maximum Monthly benefit	790.18	800.45	808.46	810.89	819
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:

	2014	2015	2016	2017	2018
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 except with AEEH.

- *Taxation and income testing*

Not taxable and not included in the income test of other benefits (except for activity allowance). 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 (pl031=8). 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 55. The deceased spouse must have contributed to the old-age insurance at least 3 months during the year preceding the death. This pension is paid for 2 years.

- *Income test*

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

	2014	2015	2016	2017	2018
Monthly income	752.65	752.65	753.42	753.42	759.43

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:

	2014	2015	2016	2017	2018
Monthly benefit	602.12	602.12	602.73	602.73	607.54

- *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.

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). Since 2016, this benefit is in principle given only to those out of work. For low-paid workers, a new benefit has been introduced: the activity allowance, “*La Prime d’activité*”.

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*

$$\text{RSA} = (\text{Maximum minimum income based on family characteristics} + 62\% \text{ family quarterly working income}/3) - (\text{family quarterly income}/3 + \text{housing package})$$

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.

However, this independent increase in September is not simulated in the year it occurs. It is included in the following year.

The end of year bonus was introduced in 2012 and it consists of a yearly lump-sum paid to RSA recipients who are entitled to the benefit in November or December.

The minimum incomes are (gross of CRDS):

MI as Minimum Income, HP as Housing Package

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	2014		2015		2016		2017		2018	
	MI	HP								
Lone parent with children under 3										
Pregnant without child	644.39	60.22	663.19	61.97	677.13	63.27	692.74	64.73	711.02	66.11
One dependent child	859.18	120.44	884.26	123.94	902.85	126.55	923.67	129.48	948.03	132.22
Two dependent children	1073.97	149.04	1104.52	153.38	1127.73	156.61	1154.58	160.22	1185.03	163.63
Each child after the 3 rd	214.78		221.06		225.71		230.91		237	
End of year bonus *										
Pregnant without child	153.21		153.21		153.21		153.21		153.21	
One dependent child	229.81		229.81		229.81		229.81		229.81	
Two dependent children	275.78		275.78		275.78		275.78		275.78	
Each child after the third	61.28		61.28		61.28		61.28		61.28	

	2014		2015		2016		2017		2018	
	MI	HP	MI	HP	MI	HP	MI	HP	MI	HP
Everyone else										
Single										
Without dependent child	501.81	60.22	516.46	61.97	527.32	63.27	539.48	64.73	553.7	66.11
One dependent child	752.73	120.44	774.69	123.94	790.97	126.55	809.22	129.48	830.55	132.22
Two dependent children	903.27	149.04	929.63	153.38	949.17	156.61	971.06	160.22	996.66	163.63
Each child after 2 nd	200.72		206.58		210.92		215.79		221.48	
Couple										
Without dependent child	752.73	120.44	774.69	123.94	790.97	126.55	809.22	129.48	830.55	132.22
One dependent child	903.27	149.04	929.63	153.38	949.17	156.61	971.06	160.22	996.66	163.63
Two dependent children	1053.81	149.04	1084.57	153.38	1107.34	156.61	1132.9	160.22	1162.78	163.63
Each child after 2 nd	200.72		206.58		210.92		215.79		221.48	
End of year bonus *										
Single										
Without dependent child	153.21		153.21		153.21		153.21		153.21	
One dependent child	229.81		229.81		229.81		229.81		229.81	
Two dependent children	275.78		275.78		275.78		275.78		275.78	
Each child after 2 nd	321.75		61.28		61.28		61.28		61.28	
Each child after the third	61.28									
Couple										
Without dependent child			229.81		229.81		229.81		229.81	
One dependent child			275.78		275.78		275.78		275.78	
Two dependent children			321.74		321.74		321.74		321.74	
Each child after 2 nd			61.28		61.28		61.28		61.28	

MI as Minimum Income, HP as Housing Package

- *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. In 2016, the non-take up rate for RSA socle is around 36% according to the national assembly (evaluation_non_recours_assemblee_nationale_-_synthese_de_la_mission.pdf). In 2017, the non-take up is around 40% (<https://www.secours-catholique.org/prejuges-sur-les-pauvres> , rapport-statistique-pauvrete-2017.pdf).

Employment is established based on the presence of yearly earnings. Thus, individuals having no earnings throughout the year are considered to be not working. Otherwise, they are considered to be in work. Starting in 2016, only individuals not in work are simulated to receive this benefit. Individuals in work are assumed to receive PA (Prime d'activité). 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 Activity allowance – bsawk_s – from 2016

Since 1st January 2016, the rules changed concerning RSA activity (RSA activité) and PPE. The Activity allowance (“*prime d'activité*”) replaces those two elements. The aim is to encourage inactive people to take a job.

Before January 2016, the RSA activity was paid to people who worked for very low income. The amount was the monthly RSA amount they can earn if they didn't work minus the income they earn every month.

Since January 2016, the activity allowance is calculated each 3 months and is given monthly. The activity allowance is only given to families (or single person) with at least 1 person in work.

- *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*

This benefit concerns both employees and self-employed persons. For the self-employed, the turnover is used to know if they can access to the benefit. The turnover ceilings depend on the specificity of self-employment.

Ceilings are :

- 82 800 euros for the last 12 months, 20 700 euros for the last quarter for industry and traders
- 33 200 euros for the last 12 months, 8300 euros for the last quarter for artisans

To qualify, the monthly work income has to be below the threshold. The threshold depends on the family composition, as follows:

Threshold	2016	2017	2018
Single person without child	1500 (=1.3 SMIC)	1.3 SMIC	1.3 SMIC
Lone parent with 1 or more children	2200	2200	2200
Couple without children (1 earner)	2200	2200	2200
Couple with children where one parent works	2200	2200	2200
Couple with children where both parents work	2900	2900	2900

- *Benefit amount*

The allowance amount depends on the family composition and on the family quarterly income and is based on the following formula:

Step 1 = (Maximum minimum income based on family circumstances + 62% family quarterly working income + Bonus) – (family quarterly income + housing package)

Step 2 = Maximum minimum income – family quarterly income - housing package

Step 3= step 1 – step 2

Activity allowance amount is:

If step 2 > 0, the allowance amount is equal to step 3.

If step 2 ≤ 0, the allowance amount is equal to step 1.

The maximum minimum income is based on the lump sum:

	2016	2017	2018
Lump sum	527.3	528.89	534.2

This lump sum could be increased according to the household composition:

- 50 % for the first additional person
- 30 % for the additional person
- 40 % per additional person beyond the 3rd person if the household has more than 2 dependent children or persons under 25, except for the person who live in couple with the beneficiary.

Concerning lonely person with child or pregnant, the increased amount is 128.412 % of the maximum minimum income, added to it 42.804 % of the maximum minimum income for every child.

The family working income is the same as defined for RSA. The family total income is defined in the same way as for RSA (AAH, APL, ALS and CF are included). Paje PN, CMG and ARS are not taken into account in the calculation of the total income and since 2018, invalidity pensions, pensions for accident at work and pensions for occupational diseases too.

The housing package is :

	2016	2017	2018
1 person	62.90	63.15	63.78
2 persons	125.80	126.30	127.56
3 persons or more	155.68	156.3	157.86

Bonus amount for activity allowance:

Concerning the bonus, each family member who works can benefit from the bonus but the amount is capped for each worker in the family. The individual bonus amount depends on individual work income; the bonus is paid if individual work income is between 0.5 and 1.4 SMIC.

- For individuals with a monthly work income between 0.8 to 1.4 SMIC (based on net SMIC), the bonus is fixed and capped at 67 €(67.27 €in April 2018) per month.
- For individuals with a monthly work income between 0.5 and 0.8 SMIC (based on net SMIC), the amount is variable but less than 67.27 €for one worker. The bonus amount for this income bracket is a percentage of the lump sum for a single without dependent children, irrespective of the family situation. The rate is a linear function of work income (expressed as a fraction of SMIC). The rate increases as work income increases (from 0 to 12.782 %) and is equal to $Rate=41.481*(work\ income/SMIC) - 20.765$.

This activity allowance is paid from 18 years old.

The allowance is not taken into account in the income for calculation of the income tax and is given for amounts less than 15 €

- *Taxation and income testing*

The activity allowance is not taxable and not included in the income test of other benefits but subjected to CRDS.

- *EUROMOD notes*

This benefit is simulated for all individuals who fulfil the income test and are observed to have positive earnings. Earnings are calculated over the year. As a result, the model may overestimate PA receipt and an underestimate RSA receipt. The earnings limit to qualify for the benefit is likewise calculated using information about annual earnings. There is no information about the turnover of self-employed in the dataset. As a result, specific eligibility conditions for the self-employed are not simulated. Instead, the self-employed are assumed to be eligible if their net profit satisfies the same conditionality as that applicable to employees. The bonus amount is calculated using annual information about work income. The take-up is 73 % at the end of the year 2016 (57 % at the beginning of the benefit in 2016 in

“solidarites-sante.gouv.fr/IMG/pdf/rapport_d_evaluation_prime_d_activite.pdf”).
 The variable is not disaggregated in the UDB but simulated in Euromod.

2.4.10 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:

$$\text{ASPA} = \text{Monthly Maximum amount} - \text{Quarterly Family income} / 3$$

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:

	2014	2015	2016	2017	2018
Single	791.99	800	801	803.20	833
Couple	1229.61	1242	1243	1246.97	1293.54

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.

2.4.11 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 (based on 169h/month).

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.

Since July 2016, if the real rent paid is over a threshold, the benefit is suppressed. If the rent is over a determined ceiling but under a maximum threshold then the benefit is decreased.

Since October 2016, the value of the assets is taken into account in the allowance amount calculation when this is higher than 30000 EUR. This concern the real estate assets (excluding the main residence and properties for occupational use), financial assets and movable assets.

Furthermore, beneficiaries who are dependant on a household subject to wealth tax or tax on real estate wealth are no longer entitled to such assistance.

- *Benefit amount*

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

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

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

C: lump-sum charge

Pp: minimal personal participation

Mfo: lump sum voted each year

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 Geographical Zone	Octobre 2014 to September 2015			October 2015 to September 2016		
	I	II	III	I	II	III
Single	292.62	255.03	239.02	292.85	255.23	239.31
Couple without dependent person	352.92	312.15	289.76	353.20	312.40	289.99
Lone parent/couple with one dependent person	398.87	351.25	324.89	399.19	351.53	325.15
Lone parent/couple with two dependent people	456.73	402.37	371.45	457.10	402.69	371.75

Increase for each dependent person	57.86	51.12	46.56	57.91	51.16	46.60
Year	October 2015 to September 2016			October 2017 to September 2018		
Geographical Zone	I	II	III	I	II	III
Single	292.85	255.23	239.31	295.05	257.14	241.00
Couple without dependent person	353.20	312.40	289.99	355.85	314.74	292.16
Lone parent/couple with one dependent person	399.19	351.53	325.15	402.18	354.17	327.59
Lone parent/couple with two dependent people	457.10	402.69	371.75	460.52	405.71	374.54
Increase for each dependent person	57.91	51.16	46.60	58.34	51.54	46.95

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.

Since July 2016, real rent paid is used to determine if the benefit is abolished or not. It depends on the geographic zone and on the previous L amount who intergrate the family composition.

If the rent actually paid is above C1 but under C2 then the allowance is decreased, if rent paid is above C2 the benefit is abolished.

2018	C1	C2	Eg. For Single
Zone I	>3.4 L	≥ 4 L	(between 1003.17 EUR and 1180.2 EUR)
Zone II	>2.5 L	≥3.1 L	(between 642.85 EUR and 797.13 EUR)
Zone III	>2.5 L	≥3.1 L	(between 602.5 EUR and 747.1 EUR)

The increase for each dependent person are also multiplied by the corresponding coefficient.

If the rent actually paid is between C1 and C2, the decreasing rate applied to the allowance amount is defined as:

$$\alpha = \frac{\text{rent paid} - C1}{C2 - C1} \quad \text{with} \quad \alpha = 0 \text{ when the rent paid is } \geq C2 \text{ and then APL} = 0$$

$$\alpha = 1 \text{ when the rent paid is } = C1$$

$$0 < \alpha < 1 \text{ when the rent paid is between } C1 \text{ et } C2$$

So, if and only if rent actually paid is between C1 and C2, the allowance amount will be:

$$\text{new APL} = \text{APL} (1 - \alpha)$$

(2) Lump-sum charge (C):

The monthly amount depends on the number of dependent persons:

	2014-2015	2016-2017	2018
Single person/couple without dependent person	53.23	53.27	53.67
Single person/couple with one dependent person	65.29	65.34	65.83
Increase for each dependent person	12.06	12.07	12.16

(3) Minimal personal participation (Pp):

Pp is computed as follow:

$$Pp = P0 + Tp * Rp$$

P0 : minimal participation

Tp: Personal participation rate

Rp : Resources

- P0 minimal participation:

$$P0 = [8.5 \% * (L+C)]$$

	2014-2015	2016-2017	2018
P0 (€per month)	34.73	34.76	35.02

- Tp Personal participation rate:

Tp is computed as:

$$Tp = Tf + Tl$$

Tf is given by:

	2014-2018
Single	2.83%
Couple without dependents	3.15%
Lone parent/couple with one dependent person	2.70%
Lone parent/couple with two dependent persons	2.38%
Lone parent/couple with three dependent persons	2.01%
Lone parent/couple with four dependent persons	1.85%
Lone parent/couple with five dependent persons	1.79%
Increase for each dependent person	-0.06%

Tl:

Tl is computed as follow:

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

The rent Baseline is:

	2014-2015	2016-2017	2018
Single	255.03	255.23	257.14
Couple without dependent	312.15	312.40	314.74
Lone parent/couple with one dependent	351.25	351.53	354.17

Lone parent/couple with two dependents	402.37	402.69	405.71
Increase for each dependent	51.12	51.16	51.54

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

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

With :

RL	2014-2018	
	Rate	Rate Min
0-45%	0%	0%
45-75%	45%	20.25%
>75%	68%	37.50%

- *Rp Resources:*

Rp is defined as the difference between the family income (2 years before, incorporating assets values) and a lump-sum R0.

R0 is given by (yearly amounts):

	2014	2015	2016-2018
Single	4514	4544	4562
Couple without dependent person	6463	6508	6534
Lone parent/couple with one dependent person	7709	7762	7793
Lone parent/couple with two dependent persons	7883	7938	7969
Increase for each dependent child	303	304	305

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

(4) Lump sum (Mfo):

Since October 2017, the AL amount is reduced by a lump sum voted each year, since October this amount is 5 Euros.

Moreover, since October 2017, the minimum payment goes from €15 to €10.

- *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 (except for activity allowance and RSA) 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.

2.4.12 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 ("*Salaires 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 (11.84 per day in 2018). The benefit cannot be lower than the minimum benefit mentioned in the table below (28.86*RF euros for 2018) 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:

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

Parameters	2014	2015-2017	2018
------------	------	-----------	------

Fixed allocation	11.64*RF	11.76*RF	11.84*RF
Minimum Benefit	28.38*RF	28.67*RF	28.86*RF

Note: 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 years old and 36 months over 50 years old.

- *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.

2.4.13 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 :

	2014	2015-2016	2017	2018
Daily amount	16.11	16.25	16.27	16.48

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

$$30 * \text{daily amount} - (\text{Couple's income} - \text{Full rate threshold})$$

- *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.

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.

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 (*travailleur non salarié*, TNS) run by independent groups (RAM)
- 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

- *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 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:

	2014	2015	2016	2017	2018
Income group A	0 to 3129	0 to 3170	0 to 3218	0 to 3269	0 to 3311
Income group B	3129 to 12516	3170 to 12680	3218 to 12872	3269 to 13076	3311 to 13244
Income group C	12516 to 25032	12680 to 25360	12872 to 25744	13076 to 26152	13244 to 26488
Income group 1	0 to 3129	0 to 3170	0 to 3218	0 to 3269	0 to 3311
Income group 2	3129 to 9387	3170 to 9510	3218 to 9654	3269 to 9807	3311 to 9933

- *Contribution rates*

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

	Base	2014	2015	2016	2017	2018
Sickness	Whole income	0.75%	0.75%	0.75%	0.75%	0%
Old age	Income group A	6.80%	6.85%	6.90%	6.90%	6.90%
	Whole income	0.25%	0.30%	0.35%	0.40%	0.40%
Complementary pension for non-white collars	Income group 1	3.05%	3.10%	3.10%	3.10%	3.10%
	Income group 2	8.05%	8.10%	8.10%	8.10%	8.10%
Complementary pension for white collars	Income group A	3.05%	3.10%	3.10%	3.10%	3.10%
	Income group B	7.75%	7.80%	7.80%	7.80%	7.80%
	Income group C	7.75%	7.80%	7.80%	7.80%	7.80%
AGFF (Old age)	Income group 1/A	0.80%	0.80%	0.80%	0.80%	0.80%
	Income group 2/B	0.90%	0.90%	0.90%	0.90%	0.90%
Unemployment insurance	Income group A/B	2.40%	2.40%	2.40%	2.40%	0.95%
White collar (APEC)	Income group B					
	Income group A+B	0.02%	0.02%	0.02%	0.024%	0.024%
Outstanding contribution (CET)	Income group A/B/C	0.13%	0.13%	0.13%	0.13%	0.13%

- *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.

Since 1st January 2016, employer should provide a “mutuelle d’entreprise” to their employee. The employer pays half of the contributions and the employee the other half. The aim is to provide all employee a minimal social coverage in addition to social security.

- *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	2014	2015	2016	2017	2018
Sickness*	whole income	12.80%	12.80%	12.84%	12.89%	13.00%
Family benefits*	whole income	5.25%	5.25% (3.45% **)	5.25% (3.45% **)	5.25% (3.45% **)	5.25% (3.45% **)
Housing						
FNAL firms with less than 20 employees* ^o	Income group A	0.10%	0.10%	0.10%	0.10%	0.10%
FNAL firms with more than 20 employees* ^o	Whole income	0.50%	0.50%	0.50%	0.50%	0.50%
Old age*	Income group A	8.45%	8.50%	8.55%	8.55%	8.55%
	whole income*	1.75%	1.80%	1.80%	1.90%	1.90%
CSA (autonomy solidarity)* ^o	whole income	0.30%	0.30%	0.30%	0.30%	0.30%
Complementary pension for non white collars	Income group 1	4.58%	4.65%	4.65%	4.65%	4.65%
	Income group 2	12.08%	12.15%	12.15%	12.15%	12.15%
Complementary pension for white collars	Income group A	4.58%	4.65%	4.65%	4.65%	4.65%
	Income group B	12.68%	12.75%	12.75%	12.75%	12.75%

	Income group C	12.68%	12.75%	12.75%	12.75%	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%	4.05%
Wage guarantee fund	Income group A+B	0.30%	0.30%	0.25%	0.20%	0.15%
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%	1.00%	1.00%	1.00%
-more than 19 employees		1.60%	1.60%	1.00%	1.00%	1.00%
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%	0.016%	0.016%	0.016%
Arduousness contribution	One factor of arduousness		0.10%	0.10%	0.20%	0%
-for exposed employees only						
	Several factors		0.20%	0.20%	0.40%	0%
-for all employers					0.01%	0%

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

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

Since 2003, a general reduction on employers contributions paid for low-income employees exists (“Réduction 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 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 “Réduction Fillon” are sickness, family benefits, and old age. Since 1st of January 2015, housing (FNAL), solidarity autonomy (CSA), 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 are:

- Companies with fewer than 20 employees

2014	2015	2016	2017	2018
Income \leq 1.6 SMIC				
$=(0.281/0.6)*[(1.6$ * (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	$=(0.2802/0.6)*[(1.6*$ (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient to 0.2802	$=(0.2809/0.6)*[(1.6*$ (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient to 0.2809	$=(0.2814/0.6)*[(1.6*$ (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient to 0.2814

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 *pro rata 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

2014	2015	2016	2017	2018
Income \leq 1.6 SMIC				
$=(0.26/0.6)*[(1.6$ * (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient to 0.26	$=(0.2835/0.6)*[(1.6$ * (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient	$=(0.2842/0.6)*[(1.6$ * (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient	$=(0.2849/0.6)*[(1.6$ * (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient	$=(0.2854/0.6)*[(1.6$ * (SMIC gross annual amount/gross annual income subject to social security contributions))-1] with a cap of the coefficient

to 0.2835

to 0.2842

to 0.2849

to 0.2854

SMIC amounts since 2014

	Gross hourly Smic	Gross monthly Smic		Gross annual Smic		Date
		for 151.67 hours of work*	for 169 hours of work	for 151.67 hours of work*	for 169 hours of work	
2014	9.53	1445.38	1610.6	17344.6	19326.8	01/01/2014
2015	9.61	1457.52	1624.1	17490.2	19489.1	01/01/2015
2016	9.67	1466.62	1634.2	17599.4	19610.8	01/01/2016
2017	9.76	1480.27	1649.4	17763.2	19793.3	01/01/2017
2018	9.88	1498.47	1669.7	17981.6	20036.6	01/01/2018

Source : ministry of labour

* legal working time

- *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 (tscse_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.
- For self-employer when they start their activity.

- 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*”):

	2014	2015	2016	2017	2018
Annual PSS	37548	38040	38616	39228	39732

- Contribution rates

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

Artisan				
	2014	2015	2016	2017
Family benefits	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= $2.15 + [(3.1/0.3\text{PSS}) * (r - 1.1\text{PSS})]$	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= $2.15 + [(3.1/0.3\text{PSS}) * (r - 1.1\text{PSS})]$	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= $2.15 + [(3.1/0.3\text{PSS}) * (r - 1.1\text{PSS})]$
Sickness	6.5% * r (minimum calculated on 0.4PSS)	6.5% * r (minimum calculated on 0.4PSS)	6.5% * r	if $r > 0.7\text{PSS}$, rate = 6.5% if $r \leq 0.7\text{PSS}$, 3% ≤ rate < 6.5% (rate = 6.5% - [3.5% * (1 - (r/0.7PSS))])
Supplementary sickness	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on 0.4*PSS	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on 0.4*PSS (107€ in 2015)	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on 0.4*PSS (108€ in 2016)	0.7% of $r < 5 * \text{PSS}$. minimum payment calculated on 0.4*PSS (110€ in 2017)
Pension	16.95% of $r < \text{PSS}$ and 0.2% of $r > \text{PSS}$ (min contribution based on 5.25% * PSS = 338€)	17.05% of $r < \text{PSS}$ and 0.35% of $r > \text{PSS}$ (min contribution based on 7.7% * PSS = 510€ in 2015)	17.65% of $r < \text{PSS}$ and 0.50% of $r > \text{PSS}$ (min contribution 11.5% * PSS = 784 € in 2016)	17.75% of $r < \text{PSS}$ and 0.60% of $r > \text{PSS}$ (min contribution 11.5% * PSS = 801 € in 2017)
Complementary pension	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on 5.25% * PSS)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$ (min contribution based on 5.25% * PSS = 140€ in 2015)	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$
Professional training contribution	0.29% of PSS	0.25% of PSS	0.25% of PSS (contribution = 95€ in 2016)	0.25% of PSS (contribution = 97€ in 2017)
Invalidity + death insurance	1.6% of $r < \text{PSS}$ (min contribution on 0.2 PSS)	1.3% of $r < \text{PSS}$ (min contribution based on 0.2 PSS = 99 € in 2015)	1.3% of $r < \text{PSS}$ (min contribution based on 11.5% * PSS (58 € in 2016)	1.3% of $r < \text{PSS}$ (min contribution based on 11.5% * PSS (59 € in 2017)

Industry and trader				
	2014	2015	2016	2017
Family benefits	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= $[(5.25\% - 2.15\%)/(0.3 \cdot \text{PSS})] \cdot (r - 1.1 \cdot \text{PSS}) + 2.15\%$	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= $[(5.25\% - 2.15\%)/(0.3 \cdot \text{PSS})] \cdot (r - 1.1 \cdot \text{PSS}) + 2.15\%$	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	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	if $r > 0.7 \text{ PSS}$, rate = 6.5% if $r \leq 0.7 \text{ PSS}$, 3% $\leq \text{rate} < 6.5\%$ (rate = $6.5\% - [3.5\% \cdot (1 - (r/0.7 \text{ PSS}))]$)
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 $0.4 \cdot \text{PSS}$ (108€ in 2016)	0.7% of $r < 5 \cdot \text{PSS}$. minimum payment calculated on $0.4 \cdot \text{PSS}$ (110€ in 2017)
Pension	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)	17.65% of $r < \text{PSS}$ and 0.50% of $r > \text{PSS}$ (min contribution calculated on $11.5\% \cdot \text{PSS} = 784 \text{€}$ in 2016)	17.75% of $r < \text{PSS}$ and 0.60% of $r > \text{PSS}$ (min contribution calculated on $11.5\% \cdot \text{PSS} = 801 \text{€}$ in 2017)
Complementary pension	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 $\text{PSS} < r < 4 \cdot \text{PSS}$	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 \cdot \text{PSS}$
Professional training contribution	0.25% of PSS	0.25% of PSS	0.25% of PSS	0.25% of PSS
Invalidity + death insurance	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)	1.3% of $r < \text{PSS}$ (min contribution based on $11.5\% \cdot \text{PSS}$ (58 € in 2016))	1.3% of $r < \text{PSS}$ (min contribution based on $11.5\% \cdot \text{PSS}$ (59 € in 2017))

Farmers				
	2014	2015	2016	2017
Family benefits	5.25%	5.25% (3.45%)*	if $r \leq 1.1 \text{ PSS}$: 2.15% if $r > 1.4 \text{ PSS}$: 5.25% if r between 1.1 et 1.4 PSS: $2.15\% \leq \text{rate} \leq 5.25\%$ rate = $[(5.25\% - 2.15\%)/(0.3 \text{ PSS})] \cdot (r - 1.1 \text{ PSS}) + 2.15\%$	if $r \leq 1.1 \text{ PSS}$: 2.15% if $r > 1.4 \text{ PSS}$: 5.25% if r between 1.1 et 1.4 PSS: $2.15\% \leq \text{rate} \leq 5.25\%$ rate = $[(5.25\% - 2.15\%)/(0.3 \text{ PSS})] \cdot (r - 1.1 \text{ PSS}) + 2.15\%$
Invalidity	-	-	0.8% (min 11.5% PSS)	0.8% (min 11.5% PSS)
IJ Amexa and invalidity pension	-	-	225 euros	225 euros
Sickness	10.84%	10.84%	3.04%	3.04%
Pension	14.57% of $r < \text{PSS}$ 1.64% of $r > \text{PSS}$	14.67% of $r < \text{PSS}$ 1.94% of $r > \text{PSS}$	14.87% of $r < \text{PSS}$ 2.14% of $r > \text{PSS}$	14.77% of $r < \text{PSS}$ 2.04% of $r > \text{PSS}$
Complementary pension	3%	3%	3%	3%

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

Note: r = gross self-employment income

2018			
	Artisan	Industry and trader	Farmers
Family benefits	3.1% if $r > 1.4$ PSS 0% if $r \leq 1.1$ PSS if $1.1 \text{ PSS} < r \leq 1.4 \text{ PSS}$ Rate= $[(3.1/0.3\text{PSS})*(r-1.1\text{PSS})]$		if $r \leq 1.1\text{PSS}$: 0% if $r > 1.4\text{PSS}$: 3.1% if r between 1.1 et 1.4 PSS: $2.15\% \leq \text{rate} \leq 3.1\%$ Rate= $[(3.1\% - 2.15\%)/(0.3\text{PSS}) * (r-1.1\text{PSS})] + 2.15\%$
Sickness	if $r > 1.1\text{PSS}$, rate = 6.35% if $r \leq 0.4\text{PSS}$, $0\% \leq \text{rate} < 3.16\%$ if $0.4 \text{ PSS} < r \leq 1.1 \text{ PSS}$ $3.16\% \leq \text{rate} < 6.35\%$ rate= $[(7.2\% - 2.2\%) / 1.1\text{PSS}] * r + [(2.2\% - 0.85\%) / 0.4\text{PSS}] * r + 0.85\%$ rate= $[(7.2\% - 2.2\%) / 1.1\text{PSS}] * r + 2.2\%$		10.04% (based on 11.5 % of PSS)
Supplementary sickness	0.85% of $r < 5 * \text{PSS}$. minimum payment calculated on $0.4 * \text{PSS}$ (135€ in 2018)		
Pension	17.75% of $r < \text{PSS}$ and 0.60% of $r > \text{PSS}$ (min contribution calculated on $11.5\% * \text{PSS} = 811$ € in 2018)		14.87% of $r < \text{PSS}$ 2.24% of $r > \text{PSS}$
Complementary pension	7% of $r < \text{PSS}$ 8% of $\text{PSS} < r < 4 * \text{PSS}$		4%
Professional training contribution	0.29% of PSS	0.25% of PSS	
Invalidity + death insurance	1.3% of $r < \text{PSS}$ (min contribution based on $11.5\% * \text{PSS}$ (59 € in 2018)		IJ Amexa = 180 euros and invalidity pension = 25 euros

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 and Unemployment Benefit but not on Capital Income and Sickness benefits), (98.25% on gross income until four times the annual PSS, 100% above or for pension).

Benefits like ASPA or 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:

	2014-2017			2018		
	CSG	Reduced rate	Deductible CSG	CSG	Reduced rate	Deductible CSG
Employment income	7.50 %		5.10 %	9.20 %		6.80 %
Pension Income	6.60 %	3.80 %	4.20 %	8.30 %	3.80 %	5.90 %
Unemployment benefit	6.20 %	3.80 %	3.80 %	6.20 %	3.80 %	3.80 %
Sickness benefit	6.20 %	3.80 %	3.80 %	6.20 %	3.80 %	3.80 %
Capital Income	8.20 %		5.10 %	9.90 %		6.80 %

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	2014	2015	2016	2017	2018
1 share	10633	10633	10676	10996	11018
Each 0.5 share	2839	2839	2850	2936	2942

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 8.3%. 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		2016		2017		2018	
	lower threshold	ceiling threshold						
1 share	10633	13900	10676	13956	10996	14375	11018	14404
Each 0.5 share	2839	3711	2850	3726	2936	3838	2942	3846

• *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, pensions and sickness benefits), (98.25% on gross income until four times the annual PSS, 100% above). 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:

	2014	2015	2016	2017	2018

Social contribution	4.50%	4.50%	4.50%	4.50%	4.50%
Additional contribution	0.30%	0.30%	0.30%	0.30%	0.30%
Solidarity contribution	2.00%	2.00%	2.00%	2.00%	2.00%

The overall rate of the social contributions on capital income has not changed, it remained at 6.8% since 2012 without CSG and CRDS, 15.5 % with CSG and CRSD before 2018 and since the start of 2018, 17.2% (9.9 % 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 (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 2013	Income 2014	Income 2015	Income 2016	Income 2017
Min and Max	Taxation 2014	Taxation 2015	Taxation 2016	Taxation 2017	Taxation 2018
Earned income	424 12097	426 12157	426 12170	426 12183	430 12305
Unemployment benefit	931 12097	936 12157	937 12170	938 12183	947 12308
Pension*	377 3689	379 3707	379 3711	379 3715	383 3752

* 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 2016. 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 2013	Income 2014	Income 2015	Income 2016	Income 2017
	Taxation 2014	Taxation 2015	Taxation 2016	Taxation 2017	Taxation 2018
Maximum	29626	30038	30432	30893	31382
Minimum	3703	3755	3804	3862	3923

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	2013	2014	2015	2016	2017
Taxation	2014	2015	2016	2017	2018
Complementary reduction	5698	5726	5732	5738	5795

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

Income	2013	2014	2015	2016	2017
Taxation	2014	2015	2016	2017	2018
	3386	3403	3407	3411	3445

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:

2014		2015		2016		2017		2018	
Deduction	RGN								
2332	<14630	2344	<14710	2347	<14730	2352	<14750	2376	<14900
1166	14630 < r < 23580	1172	14710 < r < 23700	1174	14730 < r < 23730	1176	14751 < r < 23760	1188	14900 < r < 24000

- *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 capital income are taxed depending on their type.

2014-2017: The “*prélèvement forfaitaire non libératoire*” is applied, it’s a levy that a taxpayer pay in advance as a deposit (year n), the rate does not depend on the taxpayer’s total income at the first time, it is determined by type of investment. At the second time (year n+1), the taxpayer declare all his income and that determines the overall tax rate on the capital income, they are subject to the progressive tax on income. If the amount paid in advance is to high, il will be refunded by the tax authorities, if it is too low, the taxpayer’s have to pay the difference between its deposit and the actual amount of tax.

Since 2014, taxpayer with low-income may ask to be exempted from the levy if their RFF income in n-1 being less than a threshold (75000€for a couple and 50000€for a single person).

In this case, the capital income are subjected to a 40% deduction applies on the gross amount of dividend income (in 2018, this deduction is made only if the progressive taxation is chosen). Interest income from dividends is treated the same way but the income limits are 25000€for a single and 50000€for a couple.

2018: A unique flat tax is introduced at the level of 30 % (12.8 % for unique flat rate and 17.2 % for social contributions). No more progressive tax unless the taxpayer chose it if it’s more avantaous for him.

	2014-2017		2018	
	Flat rate	Social contributions	Flat rate	Social contributions
All capital income				
Fixed rate investment income	24%	15.5 %	12.8 %	17.2 %
Dividends	21 % and Normal taxation	15.5 %	12.8 %	17.2 %
Interest of dividends	21 % and Normal taxation	15.5%	12.8 %	17.2 %

Social contributions must be added to the flat rate paid at the source

2.6.5 Tax schedule

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

Taxation 2013 income 2012		Taxation 2014 income 2013		Taxation 2015 income 2014		Taxation 2016 income 2015	
Income bracket	Marginal Tax Rate						
0 to 5963	0%	0 to 6011	0%	0 to 9690	0%	0 to 9700	0%
5963 to 11896	5.50%	6011 to 11991	5.50%	9691 to 26764	14%	9701 to 26791	14%
11896 to 26420	14%	11991 to 26631	14%	26765 to 71754	30%	26792 to 71826	30%
26420 to 70830	30%	26631 to 71397	30%	71755 to 151956	41%	71287 to 152108	41%
70830 to 150.000	41%	71397-151.200	41%	>151956	45%	>152108	45%
>150.000	45 %	>151.200	45%				
Taxation 2017 income 2016		Taxation 2018 income 2017					
Income bracket	Marginal Tax Rate	Income bracket	Marginal Tax Rate				
0 to 9710	0%	0 to 9807	0%				
9711 to 26818	14%	9807 to 27086	14%				
26819 to 71898	30%	27086 to 72617	30%				
71899 to 152260	41%	72617 to 153783	41%				
>152260	45%	>153783	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:

	2014	2015	2016	2017	2018
The two first 0.5 for lone parent	3540	3558	3562	3566	3602
Each 0.5 after the second for lone parent	1500	1508	1510	1512	1527
Each 0.5	1500	1508	1510	1512	1527

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 2013	Income 2014	Income 2015	Income 2016	Income 2017
Yearly amounts	Taxation 2014	Taxation 2015	Taxation 2016	Taxation 2017	Taxation 2018
disabled	1497	1504	1506	1508	1523
Widower with dependent child	1672	1680	1682	1684	1701

Tax rebate (“Décote”):

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

	Income 2013 Taxation 2014	Income 2014 Taxation 2015	Income 2015 Taxation 2016	Income 2016 Taxation 2017	Income 2017 Taxation 2018
Tax rebate	1016	1135	1553	1553	1569
couple		1870	2560	2560	2585

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. Since 2015, a different rebate amount was introduced for couple.

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 2016:

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

Supplementary tax reduction since 2017: flat-rate reduction on income tax for low income

For RFR less than 18 500 EUR (single) or 37 000 EUR (couple):

There is a flat-rate reduction of 20% in the theoretical amount of the income tax granted to households whose RFR is less than 18 500 EUR for a single and 37 000 EUR for a couple, increased by 3700 EUR for each additional half-share.

For RFR above 18 500 EUR (single) or 37 000 EUR (couple):

For the household whose income are above those amounts, a smoothing device is applied to limit the threshold effects and give a degressive reduction. Starting from 18501 EUR of RFR (for a single person) or 37001 EUR (for a couple), plus a possible half-share (3700 per half-share), the percentage of reduction applied is calculated as follows:

- R1 is equal to 20 500 EUR for a single and 41 000 EUR for a couple, plus any eventual half-share
- R2 is the household RFR
- $N = R1 - R2$
- D is equal to 2000 EUR for a single and 4000 EUR for a couple

The reduction rate of the income tax is : $20\% * (N/D)$

The supplementary tax reduction is extended in 2018, the RFR are respectively **18685 EUR, 37370 EUR and 3737 EUR.**

Concerning R1, the amounts are **20705 EUR, 41410 EUR and 3737 EUR**

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 to December 2010, people who bought their principal residence can deduct approximately 40% of the interest on their mortgage for 5 years (suppressed for new loan since January 2011, no more tax credit in 2017).
- 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. In 2018, the rates are 15 % or 30 % depending on the restoration work and only available until 30 June. This tax credit will be replaced in 2019.
- 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 different devices.
- PPE until 2015

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:

- The earned income (employee and self-employment)
- The tax unit income
- 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	$M \leq R \leq P0$	$R * 7.7\%$	$ME * \text{number of dependent children}$
	$P0 < R \leq P1$	$(P1 - R) * 19.3\%$	$ME * \text{number of dependent children}$
Couple with one revenue	$M \leq R \leq P0$	$R * 7.7\% + MF$	$ME * \text{number of dependent children}$
	$P0 < R \leq P1$	$(P1 - R) * 19.3\% + MF$	$ME * \text{number of dependent children}$
	$P1 < R \leq P2$	MF	ME
	$P2 < R \leq P3$	$(P3 - R) * 5.1\%$	ME
Lone parent	$M \leq R \leq P0$	$R * 7.7\%$	$ML * \text{first dependent child} + ME * \text{number of children after first}$
	$P0 < R \leq P1$	$(P1 - R) * 19.3\%$	$ML * \text{first dependent child} + ME * \text{number of children after first}$
	$P1 < R \leq P3$	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:

*Individual PPE = the PPE in full-time equivalent / 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.

The PPE was stopped since 31 December 2015 and was intergrated to the RSA activity and then into the Activity allowance since 1st January 2016.

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 (pl031=8). 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 PNFL 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 until 2015). Since 2015, the activity allowance replace the 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) was simulated based on current rather than previous year's income. If an individual has both employment and self-employment income, the conversion factor was calculated by summing the partial income source specific factors. In calculating the conversion coefficient, account was taken only on the number of months worked and not on the number of hours. Persons who were married but whose partner was missing from the data were 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) provided by Eurostat. 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 used to build the French EU-SILC is conducted by INSEE and is named “*Statistiques sur les ressources et les conditions de vie*” (SRCV).

Before 2010, the reference population is estimated from the 1999 population census and the dwellings built since then. Since 2010, the reference population is estimated from Octopusse (“Organisation coordonnée de tirages optimisés pour une utilisation statistique des échantillons”) which is updated each year on the basis of the dwellings enumerated the previous year (only principal residence in metropolitan France). Around 11.500 households are surveyed each year, of which approximately 10.000 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.

French EU-SILC 2016 sample statistics project to a reference population of 62.837.902 individuals.

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:

<https://www.insee.fr/en/metadonnees/source/serie/s1220>

EUROMOD database description

EUROMOD database	FR_2016_a3
Original name	EU-SILC 2016
Provider	Eurostat
Year of collection	2016
Period of collection	May to June 2016
Income reference period	Year 2015
Sample size	26.560 IND 11.459 HH
Response rate	82%

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 (87 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.

3.3 Imputations and assumptions

3.3.1 Time period

The EU_SILC information on demographic variables refers to the time of data collection (May-June, 2016).

However, some information also indicates the status quo at the end of the income reference period (2015). 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 2015. 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 2015). If possible, the corresponding demographic, labour and socio-economic information in the EUROMOD dataset was based on the EU-SILC variables referring to the income reference period.

The EU-SILC UDB information on incomes refers to the calendar year of 2015, 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 EU-SILC 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://www.insee.fr/fr/metadonnees/source/s1220#documentation>

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 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 UDB 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 and average daily benefit amounts.
- 2) The aggregate family benefits variable existing in the UDB has been split into several components. The universal child benefit (AF) has been separated from the aggregate variable based on benefit rules. Similarly, means-tested child benefits (CF, ARS, PAJE) have been disaggregated based on benefit rules and based on the relationship between gross incomes and net taxable incomes derived from EU-SILC. Residual amounts have been included in a separate variable-other child benefits.
 - 3) Means-tested disability benefits (AAH) have been separated from contributory disability pensions based on the observed amounts of the aggregate variable and policy rules.
 - 4) Means-tested survivor minimum pension (AV) has been separated from contributory survivor benefits by applying benefit rules.
 - 5) Social exclusion benefits have been split into the main social assistance benefit (RSA) and the rest by simulating benefit rules. Any residual amounts are saved in a separate variable-other social assistance benefits.
 - 6) Old-age pensions have been split into contributory pensions and a means-tested benefit for the elderly (ASPA). The splitting has been done based on benefit eligibility rules relating to age and income as well as on the observed amount in the dataset.
 - 7) Employment income during the previous year -for individuals receiving unemployment insurance benefits- has been imputed by inverting benefit rules.
 - 8) 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).
 - 9) 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.
 - 10) 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 possible statutory rules on overtime pay (i.e. extra 25% pay for the first 8 hours per week and 50% for extra 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 13 policy years, i.e. 2006-2018. Currently, all the simulations are done using five datasets, namely FR-SILC 2007, FR-SILC 2010, FR-SRCV2012, FR-SILC2015 and FR-SILC2016 which contain 2006, 2009, 2011, 2014 and 2015 incomes. Thus the data year and policy years are aligned only in 2006, 2009, 2011, 2014 and 2015. 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 2016 dataset as well as the sources used to derive them can be found in annex 2. 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 EU-SILC and EUROMOD separately. Note that there are some slight differences in the two definitions.

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

	EUROMOD ils_dispy	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 3 below. The match is reasonably good during 2015, the year of the data, and remains so in the following years. No adjustments are made in EUROMOD to correct population characteristics other than income and so employment and unemployment changes taking place after 2015 are not reflected in EUROMOD data.

Table 4.3 in annex 3 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 18% higher for employment and 8% for self-employment income in EUROMOD compared to the external benchmark.

Table 4.4 in annex 3 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 2015, 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 3 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 2016 at least (after which point, external figures are unavailable).

Table 4.6 in annex 3 below, displays information on the amounts of non-simulated policy instruments, both in EUROMOD and in national administrative data. Whereas survivor pensions and disability are clearly underestimated in EUROMOD, old-age pensions are overestimated. 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. 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 strongly underestimated in EUROMOD compared to administrative statistics. 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 family complement, the young children allowance, the baby bonus 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 and family support allowance. 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. The high undersimulation of the ASF results from the lack of information on the payment of alimonies.

When simulating random non-take-up, the number of recipients of the RSA is underestimated. However, the results concerning the two different components of RSA are different. The number of people entitled to the in-work benefit component of the RSA, the *RSA activité* is underestimated by approx 25% in 2015. The number of people who are not in work and receiving RSA (*RSA socle*) is underestimated. A potential explanation relates to the fact that net earnings in the input data are lower than external statistics suggest (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. Eligibility is based on yearly incomes so shorter periods of low income/ being outside of work and eligible to claim may be missed.

Finally, the number of recipients of the contributory unemployment benefit in EUROMOD is strongly over 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 3 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 underestimated around 50%. Both *RSA activité* and *RSA socle* are undersimulated. 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 and total ARE outlays are well estimated.

Simulated total receipts of the personal income tax is well estimated in 2016 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 two taxes specific to the French system, CSG and CRDS, are fairly accurately simulated in EUROMOD.

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 3 below. The external figures come from EUROSTAT’s statistics database. They show that median and mean disposable incomes are rather well aligned. Overall inequality- as expressed by the Gini coefficient and the S80/S20 ratio are slightly underestimated in EUROMOD when information is available. Finally the comparison of decile shares indicates that income at the bottom is slightly overestimated in EUROMOD while incomes in the middle of the distribution are relatively well aligned and slightly underestimate at the top of the distribution. 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 2015 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 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, poverty is underestimated for most age groups, it is not entirely clear what is causing this pattern.

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 4.11, 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) and means-tested unemployment benefits (ASS) is simulated based on observed receipt in the data
- Overall, EUROMOD simulated incomes are more equal; poverty rates-especially when calculated using low poverty thresholds are underestimated
- Youth poverty is significantly underestimated

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ANNEX 1: POLICY EFFECTS

Table 2 and Figure 2 show the effect of 2018 policies on mean equivalised household disposable income by income component and income decile group. The effect is estimated as a difference between simulated household net income under the 2018 tax-benefit policies (deflating monetary parameters by projected Eurostat’s Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2017 policies, as a percentage of mean equivalised household disposable income in 2017.

In 2018, policy changes delivered a decrease in disposable income for all deciles. This decrease is increasing across the deciles. The highest decrease in disposable income took place in the top decile, essentially due to a sharp rise of the direct taxes. The decrease is also caused by, but in a lesser extent, due to the decrease in public pensions. Finally, the non means-tested benefits contribute slightly to the disposable income decrease.

Several changes in policies can explain this overall decrease in the disposable income. For the direct taxes, the 1.7 point rise in CSG decreases the disposable income even if that rise in CSG is compensated for workers. The compensation does not concern the pensioners who are affected strongly by this rise in taxes, moreover, the public pensions are revalued only by 0.8% which is too low to absorb the 1 % of inflation in 2017.

The exceptional increase in social benefits like ASPA, family support and family complement and the unfreeze of the PAJE baby bonus lead to an increase of the disposable income with regard to the mean-tested benefits.

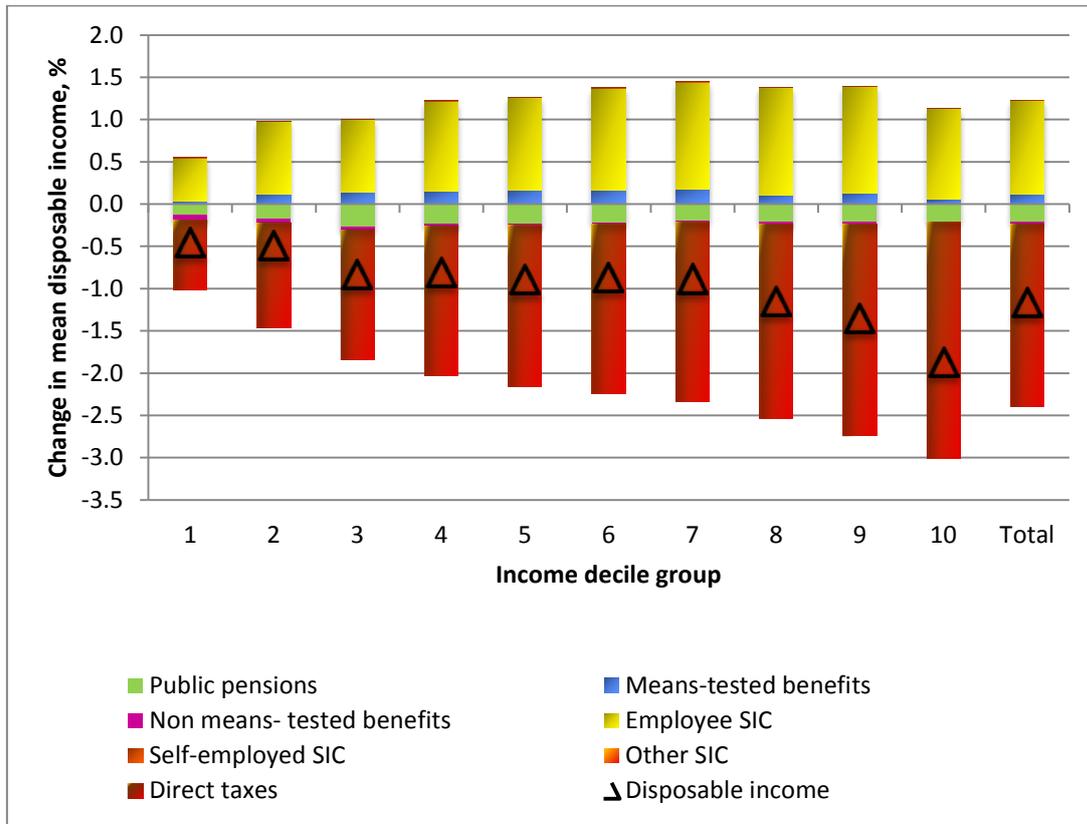
Finally, if we look at disposable income through employee SIC, the 0.75% drop in sickness contributions and the 1.4% drop in unemployment benefit for employees in the private sector leads to gains in disposable income.

Table 2: Policy effects in 2017-2018, using the CPI indexation [1.01704937419927] on dataset FR_2016_a3, %

Decile	Original income	Public pensions	Non means-		Self-			Direct taxes	Disposable income
			tested benefits	tested benefits	Employee SIC	employed SIC	Other SIC		
1	0.0	-0.13	0.04	-0.06	0.51	0.0	0.0	-0.82	-0.46
2	0.0	-0.18	0.12	-0.04	0.85	0.0	0.0	-1.24	-0.48
3	0.0	-0.27	0.14	-0.03	0.86	0.0	0.0	-1.53	-0.83
4	0.0	-0.23	0.15	-0.02	1.07	0.0	0.0	-1.77	-0.80
5	0.0	-0.24	0.16	-0.02	1.10	0.0	0.0	-1.91	-0.90
6	0.0	-0.22	0.16	-0.01	1.21	0.0	0.0	-2.01	-0.87
7	0.0	-0.20	0.18	-0.01	1.27	0.0	0.0	-2.12	-0.89
8	0.0	-0.21	0.10	-0.02	1.28	0.0	0.0	-2.30	-1.15
9	0.0	-0.21	0.13	-0.03	1.26	0.0	0.0	-2.50	-1.35
10	0.0	-0.20	0.05	-0.01	1.08	0.0	0.0	-2.80	-1.87
Total	0.0	-0.21	0.12	-0.02	1.11	0.0	0.0	-2.16	-1.16

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 2017, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2018 policies by Eurostat’s Harmonized Index of Consumer Prices (HICP).

Figure 2: Policy effects in 2017-2018, using the CPI indexation, %



ANNEX 2: UPRATING FACTORS

Income component	Uprating factor name	2015	2016	2017	2018	Source
Harmonized Indices of Consumer Prices (HICP)	\$f_hicp	100	100.31	101.47	103.2	Eurostat / Harmonized Indices of Consumer Prices (HICP);- HICP (2015=100) - Monthly data (prc_hicp_midx) http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_midx&lang=en
Harmonized Indices of Consumer Prices (HICP)	\$f_hicp	115.65	116.01	117.35	118.48	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	26634	27170	27970	28831	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	16814	17152	17658	18201	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
Average annual net full-time equivalent salary - Second quartile	\$f_yem_q2	21309	21738	22378	23066	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	29482	30075	30961	31914	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	845.1	862.1	887.5	914.8	DG ECFIN/AMECO, household and NPISH/revenue/gross wages and salaries (Mrd euros) http://ec.europa.eu/economy_finance/ameco/user/serie/ResultSerie.cfm
Inflation rate (from INSEE)	\$f_cpi	100	100.19	101.23	102.09	INSEE IdBank 0001765178 http://www.bdm.insee.fr/bdm2/affichageSeries?idbank=001765178&bouton=OK&codeGroupe=1743

Income component	Uprating factor name	2015	2016	2017	2018	Source
Rent reference index (RRI) - Base 100 on the 4th quarter of 1998	\$f_ri	125.25	125.34	126.34	127.22	INSEE IdBank 001515333 http://www.insee.fr/en/bases-de-donnees/bsweb/serie.asp?idbank=001515333
Monthly average amount per retired person	\$f_poa	1376	1376	1376	1387	INSEE http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF04571 http://drees.social-sante.gouv.fr/etudes-et-statistiques/publications/panoramas-de-la-drees/article/les-retraites-et-les-retraites-edition-2017
Monthly base of family allowance	\$f_bfa	406.21	406.62	407.84	411.92	http://www.dalloz-actualite.fr/indice/base-mensuelle-de-calcul-des-prestations-familiales.VSfD45PK-AB
Basic AF amount	\$f_bch00	129.35	129.47	129.86	131.16	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic CF amount	\$f_bchlg	168.35	168.52	169.02	170.71	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic PAJE amount	\$f_bchyc	184.62	184.62	184.62	184.62	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Basic BMAF amount	\$f_bchot	362.63	363	364.08	367.73	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
Basic ARS amount	\$f_bched	406.21	406.62	407.84	411.92	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides/enfance-et-jeunesse
Maximum amount of AAH	\$f_bdi	800.45	808.46	810.89	819	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
Basic AV amount	\$f_bsuwd	602.12	602.73	602.73	607.54	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
Basic RSA amount	\$f_bsa00	513.88	524.68	536.78	550.93	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
Basic ASPA amount	\$f_bsaoa	800	801	803.2	833.2	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
rent reference level for AL	\$f_bho	255.03	255.23	255.23	257.14	https://www.caf.fr/aides-et-services/s-informer-sur-les-aides
Average net full-time salary in the PREVIOUS year	\$f_yempv	26327	26634	27170	27970	INSEE IdBank 001665118 http://www.bdm.insee.fr/bdm2/affichageSeries?request_locale=en&anneeDebut=2007&codeGroupe

Income component	Uprating factor name	2015	2016	2017	2018	Source
						=1475&recherche=criteres&idbank=001665118&anneeFin=2012
Average disposable income (per hh)	\$f_yds	36300	37030	37370	37138	INSEE https://www.insee.fr/fr/statistiques/2412465#tableau-Donnes
Pension indexation rules	\$f_poa_index	100	100.19	101.23	102.09	INSEE IdBank 0001765178 http://www.bdm.insee.fr/bdm2/affichageSeries?idbank=001765178&bouton=OK&codeGroupe=1743
Change in average investment and property income (2006=base)	\$f_yiy	1.0785	1.0955	1.115	1.138	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	16.25	16.27	16.27	16.48	Based on the ASS daily amount
Total amount of TF collected (billions)	\$f_tpr	31.6	33.2	33.6	33.9	Based on the total amount of TF (taxe foncière) collected https://www.insee.fr/fr/statistiques/2381408#tableau-Donnes https://www.insee.fr/fr/statistiques/1906710?sommaire=1906743
Total amount of ISF collected (billions)	\$f_twl	5.2	4.8	4.9	4.9	Based on the total amount of ISF (Impôt de solidarité sur la fortune) collected: https://www.insee.fr/fr/statistiques/2381408#tableau-Donnes
Total amount of TH collected (billions)	\$f_tmu	18.4	18.8	19	19.2	Based on the total amount of TH (taxe d'habitation) collected https://www.insee.fr/fr/statistiques/2381408#tableau-Donnes
Total amount of IRPP collected (billions)	\$f_tin	70.4	72.7	73.5	74.2	Based on total amount of IRPP https://www.insee.fr/fr/statistiques/2381408#tableau-Donnes INSEE IdBank 001690355 http://www.bdm.insee.fr/bdm2/affichageSeries?request_locale=en&codeGroupe=1560&idbank=001690355&bouton=OK
Annual national accounts- GDP Current price	\$f_gdp	21942 43	22288 57	22689 76	231435 6	2016 & 2017:GDP :Based on forecasted GDP growth (https://ec.europa.eu/info/sites/info/files/wf2017_statistical_annex_0.pdf)

ANNEX 3: VALIDATION TABLES

Table 4.2-Number of employed and unemployed (in thousands)

	EUROMOD	External				Ratio			
	2015	2015	2016	2017	2018	2015	2016	2017	2018
Number of employed	25320.25	25771	25874	26110	N/A	0.98	0.98	0.97	N/A
Number of unemployed	3217.127	3054	2970	2788	N/A	1.05	1.08	1.15	N/A

Table 4.3-Market income in EUROMOD -Number of recipients (in thousands)

	EUROMOD	External				Ratio			
	2015	2015	2016	2017	2018	2015	2016	2017	2018
Employment income	28955.25	24488.5	24745.2	24977.25	N/A	1.18	1.17	1.16	N/A
Self-employment income	3068.525	2847.7	2838.4	3129	N/A	1.08	1.08	0.98	N/A
Private pensions	35.07065	17.071	17.209	N/A	N/A	2.05	2.04	N/A	N/A
Rent income	6827.617	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Income from capital	36521.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

	EUROMOD				External				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Average employment income	26478.67	27011.31	27807.14	28662.51	36315	36809	N/A	N/A	0.73	0.73	N/A	N/A
Employment income	766696.5	782119.4	805162.9	829930.2	845100	862100	890300	N/A	0.91	0.91	0.90	N/A
Self-employment income	75284.57	76799	79061.72	81493.7	117900	121900	124120	N/A	0.64	0.63	0.64	N/A
Private pensions	406.339	407.6035	412.3113	416.2817	319.686	325.3	N/A	N/A	1.27	1.25	N/A	N/A
Rent income	37979.67	38006.94	38310.18	38577.03	173900	185500	183080	N/A	0.22	0.20	0.21	N/A
Income from capital	99439.98	101007.4	102805.3	104926.1	108900	104000	N/A	N/A	0.91	0.97	N/A	N/A

Table 4.5-Tax benefit instruments included but not simulated in EUROMOD -Number of recipients/ payers (in thousands)

	EUROMOD	External				Ratio			
	2015	2015	2016	2017	2018	2015	2016	2017	2018
Benefits									
Contributory old age pensions	15733.54	15980	16129	N/A	N/A	0.98	0.98	N/A	N/A
Disability pensions/benefits	376.09	632	653	N/A	N/A	0.60	0.58	N/A	N/A
Survivor pensions/ benefits	301.1419	603	596	N/A	N/A	0.50	0.51	N/A	N/A
Sickness benefits	531.9839	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other child benefits(AEEH)	4705.499	226.079	237.395	252.45	N/A	20.81	19.82	18.64	N/A
Social assistance benefits other than RSA	705.7282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance contributions									
Wealth tax	310.4482	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

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

	EUROMOD				External				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Benefits												
Contributory old age pensions	313128.90	313722.10	316957.60	319730.10	267100	272100	N/A	N/A	1.17	1.15	N/A	N/A
Disability pensions/benefits	3069.33	3075.16	3107.09	3133.48	6406	6513	6555	6792	0.48	0.47	0.47	0.46
Survivor pensions/ benefits	3202.28	3208.36	3241.67	3269.21	9896	10091.9	10213	N/A	0.32	0.32	0.32	N/A
Sickness benefits	1680.85	1700.45	1734.66	1785.74	6758	7070	7353	N/A	0.25	0.24	0.24	N/A
Other child benefits(AEEH)	8604.61	8613.29	8639.12	8725.53	785.889	823.80015	N/A	N/A	10.95	10.46	N/A	N/A
Social assistance benefits other than RSA	2249.38	2296.65	2349.61	2411.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance contributions												
Wealth tax	2599.88	2399.89	2449.89	2449.89	31600	33200	34000	N/A	0.08	0.07	0.07	N/A

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

	EUROMOD				SILC	Ratio	External	Ratio						
	2015	2016	2017	2018	2015	2015	2015	2016	2017	2018	2015	2016	2017	2018
Benefits														
Universal child benefit (AF)	4700.16	4700.16	4699.08	4699.08	4504.97	1.04	4587.98	4593.61	4606.70	N/A	1.02	1.02	1.02	N/A
Means-tested educational allowance (ARS)	2444.35	2427.17	2357.51	3956.18	2461.19	0.99	2811.05	2821.07	2826.30	N/A	0.87	0.86	0.83	N/A
Means-tested large family allowance (CF)	869.60	866.94	756.89	744.60	773.71	1.12	819.07	826.56	836.41	N/A	1.06	1.05	0.90	N/A
Family support allowance (ASF)	174.97	174.97	174.97	174.97	0.00	N/A	654.77	649.65	667.35	N/A	0.27	0.27	0.26	N/A
Means-tested benefit for young children (PAJE base)	1643.23	1633.08	2047.99	2006.63	1647.79	1.00	1689.76	1645.22	1596.46	N/A	0.97	0.99	1.28	N/A
Means-tested birth grant (PN)	549.26	542.35	523.98	512.40	0.00	N/A	553.26	534.07	544.25	N/A	0.99	1.02	0.96	N/A
Supplementary free choice of activity (CLCA)	317.29	317.29	317.29	317.29	75.60	4.20	438.22	395.70	269.30	N/A	0.72	0.80	1.18	N/A
Means-tested disability benefit (AAH)	238.19	239.36	238.19	236.40	735.15	0.32	993.68	1018.80	1054.63	N/A	0.24	0.23	0.23	N/A
Means-tested housing allowance (AL):APL+ALS+ALF only tenants caf metrop	4286.18	4247.96	4114.17	3941.83	7979.78	0.54	5678.01	5666.68	5729.85	N/A	0.75	0.75	0.72	N/A

Guaranteed min income (RSA)	1854.57	719.07	724.66	729.81	2353.69	0.79	2285.20	1636.19	1626.20	N/A	0.81	0.44	0.45	N/A
Guaranteed min income-in work (RSA activite)	656.80	0.00	0.00	0.00	0.00	N/A	859.30	N/A	N/A	N/A	0.76	N/A	N/A	N/A
Guaranteed min income-inactive (Rsa socle)	1197.77	719.07	724.66	729.81	0.00	N/A	1708.95	1636.19	1626.20	N/A	0.70	0.44	0.45	N/A
Means-tested old-age benefit (ASPA) metrop, régime général	194.81	194.81	194.81	197.01	235.34	0.83	205.95	225.27	N/A	N/A	0.95	0.86	N/A	N/A
Contributory unemployment benefit (ARE)	4006.36	4006.36	4006.36	4006.36	4124.06	0.97	2460.90	2460.80	2488.10	N/A	1.63	1.63	1.61	N/A
Means-tested unemployment assistance (ASS)	550.58	539.00	533.37	521.50	1098.45	0.50	480.00	460.20	426.90	N/A	1.15	1.17	1.25	N/A
Taxes and Social Insurance contributions														
Personal income tax (IRPP)	18152.19	17005.19	18059.75	18605.86	0.00	N/A	17024.88	16548.54	N/A	N/A	1.07	1.03	N/A	N/A
Net taxable income (RNI)	34452.50	34452.50	34452.50	34452.50	N/A	N/A	37429.43	37683.60	37889.18	N/A	0.92	0.91	0.91	N/A
Refundable tax credit for low earners (PPE)	5625.82	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generalized social insurance contributions (CSG)	45700.33	45700.33	45693.48	45697.83	0.00	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 (CRDS)	46778.06	46778.06	46777.03	46777.03	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employee social insurance contributions	28955.25	28955.25	28955.25	28955.25	0.00	N/A	24488.50	24745.20	24977.25	N/A	1.18	1.17	1.16	N/A
Self-employed social insurance contributions	3068.53	3068.53	3068.53	3068.53	0.00	N/A	2847.70	2838.40	N/A	N/A	1.08	1.08	N/A	N/A
Employer social insurance contributions	28955.25	28955.25	28955.25	28955.25	22316.87	1.30	24590.00	24878.00	N/A	N/A	1.18	1.16	N/A	N/A
Contributions on capital income	36780.00	36780.00	36780.00	36780.00	0.00	N/A	340.50	348.58	N/A	N/A	108.02	105.51	N/A	N/A
Exceptional tax on high income earners	23.63	23.63	23.63	23.63	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

	EUROMOD				SILC				Ratio				External				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Benefits																				
Universal child benefit (AF)	11781	11009	10994	11019	10741	10751	10783	10891	1.10	1.02	1.02	1.01	11923	11591	11655.47	N/A	0.99	0.95	0.94	N/A
Means-tested educational allowance (ARS)	1508	1494	1460	2438	1575	1577	1582	1598	0.96	0.95	0.92	1.53	1813	1824	1838.49	N/A	0.83	0.82	0.79	N/A
Means-tested large family allowance (CF)	1981	2082	1900	1964	1498	1499	1503	1518	1.32	1.39	1.26	1.29	1792	1892	2011.57	N/A	1.11	1.10	0.94	N/A

Family support allowance (ASF)	343	358	375	395	0	0	0	0	N/A	N/A	N/A	N/A	1262	1311	1407.22	N/A	0.27	0.27	0.27	N/A
Means-tested benefit for young children (PAJE base)	3521	3418	2280	2234	3434	3434	3434	3434	1.03	1.00	0.66	0.65	3828	3672	3518.75	N/A	0.92	0.93	0.65	N/A
Means-tested birth grant (PN)	510	503	486	475	0	0	0	0	N/A	N/A	N/A	N/A	370	568	551.55	N/A	1.38	0.89	0.88	N/A
Supplementary free choice of activity (CLCA)	1011	1012	1015	1026	107	107	108	109	9.43	9.43	9.43	9.43	1716	1520	1182.08	N/A	0.59	0.67	0.86	N/A
Means-tested disability benefit (AAH)	2199	2222	2221	2238	4453	4498	4511	4556	0.49	0.49	0.49	0.49	7961	8174	8456.24	N/A	0.28	0.27	0.26	N/A
Means-tested housing allowance (AL):APL+ALS+ALF only tenants caf metrop	9881	9793	9444	9069	14486	14497	14497	14606	0.68	0.68	0.65	0.62	15253	15342	N/A	N/A	0.65	0.64	N/A	N/A
Guaranteed min income (RSA)	6708	3987	4097	4224	7903	8069	8255	8473	0.85	0.49	0.50	0.50	11491	9824	9659.30	N/A	0.58	0.41	0.42	N/A
Guaranteed min income-in work (RSA activite)	1318	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	1917	57	N/A	N/A	0.69	0.00	N/A	N/A
Guaranteed min income-inactive (Rsa socle)	5389	3987	4097	4224	0	0	0	0	N/A	N/A	N/A	N/A	9184	9393	10630.00	N/A	0.59	0.42	0.39	N/A
Means-tested old-age benefit (ASPA) metrop, régime général	1852	1852	1858	1939	2757	2760	2768	2871	0.67	0.67	0.67	0.68	1595	1619	N/A	N/A	1.16	1.14	N/A	N/A
Contributory unemployment benefit (ARE)	32075	32396	32919	33740	30309	30663	31280	32201	1.06	1.06	1.05	1.05	29332	29984	N/A	N/A	1.09	1.08	N/A	N/A
Means-tested unemployment assistance (ASS)	1724	1715	1704	1702	1988	1990	1990	2016	0.87	0.86	0.86	0.84	2921	2812	N/A	N/A	0.59	0.61	N/A	N/A
Taxes and Social Insurance contributions																				
Personal income tax (IRPP)	78851	78214	82030	87137	0	0	0	0	N/A	N/A	N/A	N/A	70400	72900	74000.00	N/A	1.12	1.07	1.11	N/A
Net taxable income (RNI)	939195	949129	965897	1000123	0	0	0	0	0.00	N/A	N/A	N/A	681706	684233	707300.00	N/A	1.38	1.39	1.37	N/A
Refundable tax credit for low earners (PPE)	2238	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generalized social insurance contributions (CSG)	93642	95052	97175	122067	0	0	0	0	N/A	N/A	N/A	N/A	95800	97100	99400.00	100904.00	0.98	0.98	0.98	1.21
Contributions for the repayment of the	6638	6728	6872	7037	0	0	0	0	N/A	N/A	N/A	N/A	6900	7000	7200.00	N/A	0.96	0.96	0.95	N/A

social security's system debt (CRDS)																				
Employee social insurance contributions	106853	109695	112912	104397	0	0	0	0	N/A	N/A	N/A	N/A	87600	90400	N/A	N/A	1.22	1.21	N/A	N/A
Self-employed social insurance contributions	24459	24928	25653	26338	0	0	0	0	N/A	N/A	N/A	N/A	24600	23700	N/A	N/A	0.99	1.05	N/A	N/A
Employer social insurance contributions	306980	311492	321405	332856	274743	280270	288528	297403	1.12	1.11	1.11	1.12	245900	248800	N/A	N/A	1.25	1.25	N/A	N/A
Contributions on capital income	9345	9453	9596	9758	0	0	0	0	N/A	N/A	N/A	N/A	5224	5018	5031.00	N/A	1.79	1.88	1.91	N/A
Exceptional tax on high income earners	261	269	279	295	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 4.9-Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
D1	3.91	3.89	3.85	3.88	3.60	N/A	N/A	N/A	1.09	N/A	N/A	N/A
D2	5.46	5.47	5.42	5.44	5.30	N/A	N/A	N/A	1.03	N/A	N/A	N/A
D3	6.51	6.49	6.47	6.47	6.40	N/A	N/A	N/A	1.02	N/A	N/A	N/A
D4	7.41	7.39	7.40	7.43	7.30	N/A	N/A	N/A	1.01	N/A	N/A	N/A
D5	8.30	8.32	8.33	8.36	8.20	N/A	N/A	N/A	1.01	N/A	N/A	N/A
D6	9.18	9.21	9.24	9.27	9.10	N/A	N/A	N/A	1.01	N/A	N/A	N/A
D7	10.28	10.30	10.34	10.38	10.10	N/A	N/A	N/A	1.02	N/A	N/A	N/A
D8	11.68	11.70	11.72	11.73	11.50	N/A	N/A	N/A	1.02	N/A	N/A	N/A
D9	13.88	13.89	13.87	13.86	13.80	N/A	N/A	N/A	1.01	N/A	N/A	N/A
D10	23.39	23.34	23.35	23.18	24.70	N/A	N/A	N/A	0.95	N/A	N/A	N/A
Median	21321.52	21608.26	22065.20	22414.56	21713.00	N/A	N/A	N/A	0.98	N/A	N/A	N/A
Mean	24383.21	24699.53	25145.20	25462.73	25278.00	N/A	N/A	N/A	0.96	N/A	N/A	N/A
Gini	27.68	27.69	27.79	27.59	29.30	N/A	N/A	N/A	0.94	N/A	N/A	N/A
S80/S20	3.98	3.98	4.01	3.98	4.30	N/A	N/A	N/A	0.93	N/A	N/A	N/A

Table 4.10-Poverty rates by gender and age

	EUROMOD				External				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
40% median HDI												
Total	2.58	2.69	2.90	2.91	3.10	N/A	N/A	N/A	0.83	N/A	N/A	N/A
Males	2.62	2.68	2.96	2.98	3.20	N/A	N/A	N/A	0.82	N/A	N/A	N/A
Females	2.54	2.69	2.84	2.85	3.10	N/A	N/A	N/A	0.82	N/A	N/A	N/A
50% median HDI												
Total	6.28	5.98	6.14	6.16	6.80	N/A	N/A	N/A	0.92	N/A	N/A	N/A
Males	5.99	5.65	5.80	5.81	6.50	N/A	N/A	N/A	0.92	N/A	N/A	N/A
Females	6.56	6.28	6.46	6.49	7.10	N/A	N/A	N/A	0.92	N/A	N/A	N/A
60% median HDI												
Total	13.09	12.97	13.70	13.69	13.60	N/A	N/A	N/A	0.96	N/A	N/A	N/A
Males	12.58	12.53	13.15	13.10	12.80	N/A	N/A	N/A	0.98	N/A	N/A	N/A
Females	13.58	13.38	14.21	14.24	14.40	N/A	N/A	N/A	0.94	N/A	N/A	N/A
70% median HDI												
Total	21.18	21.26	21.94	21.94	21.40	N/A	N/A	N/A	0.99	N/A	N/A	N/A
Males	20.29	20.35	20.92	20.91	20.00	N/A	N/A	N/A	1.01	N/A	N/A	N/A
Females	22.02	22.13	22.90	22.91	22.70	N/A	N/A	N/A	0.97	N/A	N/A	N/A
60% median HDI												
0-15 years	18.52	17.87	19.67	19.49	18.80	N/A	N/A	N/A	0.99	N/A	N/A	N/A
16-24 years	19.82	19.67	20.16	19.96	21.80	N/A	N/A	N/A	0.91	N/A	N/A	N/A
25-49 years	12.31	11.88	12.60	12.49	13.20	N/A	N/A	N/A	0.93	N/A	N/A	N/A
50-64 years	10.74	11.04	11.10	11.29	10.10	N/A	N/A	N/A	1.06	N/A	N/A	N/A
65+ years	7.78	8.28	8.78	9.03	8.20	N/A	N/A	N/A	0.95	N/A	N/A	N/A

Table 4.11-Minimum wage validation

	Baseline				Min Wage Incl.				Ratio			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Equivalised disposable income	1066561	1080635	1100210	1112463	1080165	1094592	1113839	1125661	0.99	0.99	0.99	0.99
Employment income	766697	782119	805163	829930	766697	782119	805163	829930	1.00	1.00	1.00	1.00
Total income tax	78851	78214	82030	87137	80279	79455	83245	88420	0.98	0.98	0.99	0.99
Total employee social insurance contributions	106853	109695	112912	104397	109937	112738	115871	107003	0.97	0.97	0.97	0.98
Guaranteed min income (RSA)	6708	3987	4097	4224	6291	3982	4092	4219	1.07	1.00	1.00	1.00
Gini coefficient	27.68	27.69	27.79	27.59	27.20	27.18	27.30	27.12	1.02	1.02	1.02	1.02
Poverty rate (60% median HDI)	13.09	12.97	13.70	13.69	12.58	12.45	12.88	12.81	1.04	1.04	1.06	1.07