EUROMOD
COUNTRY REPORT

ROMANIA (RO)
2016-2019

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EUROMOD version I2.0

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.

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

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The results presented in this report are derived using EUROMOD version I2.0. EUROMOD is continually being improved and the results presented here may not match those that would be obtained with later versions of EUROMOD.

For more information, see: https://www.euromod.ac.uk

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BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The tax-benefit system is largely a unified, national system.
- In Romania the fiscal year coincides with the calendar year (1st of January – 31st of December).
- In June 2015 the statutory retirement age was 60 years for women and 65 years for men, while starting from 2017 it increased by one year for both genders.
- The minimum school leaving age is 16 (compulsory education in Romania consists of 10 school years – lower secondary and two years of upper secondary education); the child is dependent until the age of 18 or until the age of 26 when in education and not married.
- According to the law, a lone parent is a person who is unmarried, widower, divorced or has a spouse declared missing by court order that lives together with dependent children (own, adopted, put into foster care or in tutorship or curatorship).
- The income tax system is an individual system, with spouses being assessed independently.
- Income is taxed by income source. Some income sources are exempted from personal income tax: income from social assistance and social insurance benefits except for pensions (above a threshold) and temporary work incapacity benefit. Romania had a flat income tax of 16% both for individuals and companies up to 2018, when it decreased to 10%. An exception from the tax rate of 16% was set for income from gambling activities which is taxed with a rate between 1% and 25% (depending on the income level). The other exception is the property transfer tax, which lies between 2% and 3%.
- Some income categories from independent activities are taxed at source - a share of 10% of the gross income minus the mandatory social contributions retained at sources is paid. This is considered anticipated tax payment. At the end of the financial year the anticipated payment is compared to the real duty (16% of net income) and compensations are made in favour of the taxpayer or the state budget.
- There are no statutory indexing regimes for taxes or benefits, except for pensions. The value of the pension point is annually indexed with a weighted average of annual inflation and real growth rate of the average gross wage. The rest of the benefits are indexed through Government Decisions.
- For most means-tested benefits the monthly income of the family is assessed. In this sense the term *family* designates the husband and wife or husband, wife and their unmarried children, who share the domicile or residence in the identity cards and manage their resources together in the household. In determining the net monthly income of the family all the incomes earned by all members are taken into account, including those from the state social insurance rights, unemployment insurance, legal liabilities for dependant persons, indemnities, allowances and benefits with permanent character and other claims. In the case of certain benefits the potential income obtained through the exploitation of certain goods that are not considered to be basic necessity goods is also considered.

1.2 Social Benefits

1.2.1 Pensions

Romania has a three pillar based pension system:

1st pillar: *public pay-as-you-go scheme:* contributions are compulsory for employers, employees, and self-employed; the total contribution rate differs depending on working conditions.

2nd pillar: *mandatory private contributions*; compulsory for employed individuals under 35 years and voluntary for individuals aged between 36 and 45 years (the age limits refer to 2008, when the 2nd pillar was introduced); contribution rate: 5% of gross wage in 2015 (carved down from the public social insurance contribution rate), but decreasing to 3.75% in 2018.

3rd pillar: *voluntary contributions*; the contribution rate should not exceed 15% of individual disposable income.

In the public pillar (*Law no.263/2010 on the public pension system and other social insurance rights*), the benefit is calculated based on the pension point; one pension point is equivalent to 830,2 RON (2015). The entire contribution record of the insured person is taken into account.

Old-age pension (*Pensia pentru limită de vârstă*) is provided to individuals who have reached retirement age: 65 years for men and 63 years for women (to be reached gradually in 2030, according to Law no. 263/2010). A minimum length of the contribution career is required. The statutory retirement age and the required length of the contribution career depend on working conditions.

Working conditions, as defined by *Law 19/2000* can include: normal, unusual and special. The unusual working conditions are those that can permanently affect in certain periods the working capacity of the insured person because of the high risk of exposure to harmful conditions; the special working conditions are considered: mining; exploring, exploitation and manufacturing of nuclear raw materials for the 1st and 2nd degree exposure to radiations, civil aviation, certain artistic activities.

According to Law no. 263/2010, if the full length of the contribution career is fulfilled totally or partly in unusual working condition or in special working conditions, the statutory retirement age can be reduced for up to between 8 and 20 years depending on the length of the contributory history in unusual/special conditions and what the unusual/special conditions are.

Early retirement pension/ early partial retirement pension (*Pensia anticipată/anticipată parţial*) is available to individuals up to 5 years before the legal pension age.

Contribution career: full contribution career or full contribution career exceeded with no more than 8 years for early partial retirement pension/ full contribution career exceeded with at least 8 years for early retirement pension.

The pension rights are calculated as in the case of old-age pensions; for early partial retirement pension, the pension is reduced according to the reduction of the length of the contribution period.

Survivors' pension (*Pensia de urmaş*). Those eligible for this pension include surviving children or spouse of a pensioner or a person who was entitled to a pension in the public pillar.
- Children are eligible if they are younger than 16 or 26 years assuming they are still attending school.
- The spouse is eligible for survivors' pension at standard statutory retirement age if he/she has been married for at least 15 years to the deceased. If the marriage lasted less than 15 years, but more than 10 years, the pension rights are reduced by 0.5% per month and 6% per year. If the spouse has 1st or 2nd degree invalidity, he/she has the right to survivors' pension if the marriage lasted for at least one year. The length of the marriage period is not an issue if the death is a result of work accidents or professional disease, if the spouse does not earn income from professional activities or their amount is less than 35% of the average gross wage.

The amount of the benefit is differentiated according to the number of survivors: 100% of the entitlement for three or more, 75% for two and 50% for one survivor.

Invalidity pension (*Pensia de invaliditate*). An employee is eligible for an invalidity pension in the case of total or at least 50% loss of his working capacity as a consequence of a work

accident, professional disease or any other kind of accident and disease not related to work. According to the degree of loss in work capacity and the work place requirements, the invalidity pension can be of 1st, 2nd and 3rd degree.

The amount of the invalidity pension is calculated by allotting a potential contribution period as the difference between the length of the statutory full contribution period and the length of effective contribution period until the moment the invalidity occurred.

The 1st degree invalidity pensioners are eligible for a monthly allowance to pay for an attendant, in the amount of 80% of the value of a pension point.

1.2.2 Unemployment benefit (*Indemnizaţia de şomaj*)

Basic legislation applicable to the unemployment benefit is *Law no. 76/2002 regarding the unemployment insurance system and employment stimulation*, amended and supplemented and Government Decision no. 174/2002 approving the Methodological Norms for the enforcement of this law.

A person is defined as unemployed if over 16 years of age, not retired, not working and available to start work.

The GEO no. 126/2008 published in the Official Monitor at the 14th of October 2008 made a first step in eliminating the connection between the unemployment benefits and the level of the minimum guaranteed wage. Thus the income obtained from legal activities for those that apply for unemployment benefits must be lower than the value of a reference social indicator in force. This reference social indicator in force is a quantum expressed in RON used in assessing the monetary social benefits. The quantum of the reference social indicator was established for 500 RON and can be changed through government decision according to consumer price index. Between 2008 and 2019 the value of this indicator remained unchanged.

1.2.3 Health insurance benefits

The Basic Legislation related to the Health Insurance benefits is included in GEO no. 158/2005 regarding medical leave and health insurance allowances and *Law no. 95/2006 on health reform, Title VIII. Health insurance*.

Leave and indemnity for temporary work incapacity caused by regular diseases or accidents not connected to work (*Concediul şi indemnizaţia pentru incapacitate temporară de muncă cauzată de boli obişnuite sau de accidente în afara muncii*) is offered for a maximum of 183 days in a period of one year. In case of special diseases, the indemnity is offered for a longer period, up to one year and six months in a period of two years.

The gross monthly quantum of this indemnity is 75% of the calculation base, determined as the average of monthly income for six months out of the 12 months that represent the contribution period. In case of special diseases such as AIDS, tuberculosis, cancer and so on the quantum is 100% of the calculation base. The insured persons are entitled to leave and indemnity for temporary work incapacity without a contribution period in case of medical-surgical emergencies, tuberculosis, certain contagious diseases, cancer or AIDS.

Indemnities for the prevention of diseases and recovery of work capacity (*Concedii medicale şi indemnizaţii pentru prevenirea îmbolnăvirilor şi recuperarea capacităţii de muncă, exclusiv pentru situaţiile rezultate ca urmare a unor accidente de muncă sau boli profesionale*) include the indemnity for reducing the working time by a quarter of the normal duration and the quarantine indemnity.

The indemnity for reducing the working time is offered for a maximum of 90 days in a period of 12 working months and its quantum is equal to the difference between the calculation base

previously mentioned and the gross income of the employee working with diminished working time, without exceeding 25% of the calculation base.

The quarantine indemnity is offered to insured people that cannot continue their activity because they suffer from contagious diseases. Its quantum is 75% of the above mentioned calculation base.

Medical leave and maternity allowance (*Concedii medicale şi indemnizaţii pentru maternitate*). Insured women are entitled to receive medical leave for pregnancy and confinement for a period of 126 days and during this period they receive maternity allowance.

Pregnancy leave is granted for a period of 63 days before giving birth, while confinement leave is granted for a period of 63 days after giving birth. The two types of leaves can compensate each other, according to the medical recommendation, but the minimum duration of confinement leave is of 42 days. Insured women that are entitled to disability benefits may receive, upon request, a medical leave for pregnancy, from the 6th month of pregnancy. The gross monthly amount of maternity allowance is 85% of the calculation base. This indemnity is financed entirely from the budget of the National Fund of Health Insurance.

Leave and indemnity for caring for an ill child (*Concedii medicale şi indemnizaţii pentru îngrijirea copilului bolnav*). Insured persons can benefit of leave and indemnity for caring for children up to the age of 7 or in case of children with disabilities up to the age of 18. The maximum duration for this indemnity is 45 days per year for one child with some exceptions, in case of certain diseases, when this duration can be extended. The quantum is 85% of the calculation base.

Leave and indemnity of maternal risk (*Concedii medicale şi indemnizaţii de risc maternal*) This indemnity is offered without requirement of a minimum contribution period and its amount represents 75% of the calculation base (average monthly income for the last 10 months prior to the solicitation, based on which the social insurance contribution was paid).

1.2.4 Contributory parental benefits

Indemnity for child raising (*Indemnizaţia pentru creşterea copilului)* is created as a replacement income for persons on leave to care for young children. The benefit is awarded until the child reaches the age of 2 or 3 (in case of disabled children). The benefit is contributory and intended to provide an income source for parents unable to work due to child-care responsibilities.

Incentive for child raising (*Stimulentul lunar*) is an incentive to return to work offered to a person who normally is providing care for a young child and would have benefited from the indemnity for child raising. It can be received, optionally, by any of the child's natural parents, or by the person who was entrusted with the child in view of adoption, the person that adopted the child, the person that has the child in foster care or in emergency foster care or the person that was appointed guardian of the child. The incentive is received by the persons that were entitled to receive the indemnity for child raising and earn professional income subject to taxation. It cannot be received at the same time with the indemnity for child raising.

1.2.5 Non contributory benefits

State allowance for children (*Alocaţia de stat pentru copii*) is a universal right granted monthly to families with children (up to the age of 18 or above that age when attending secondary or vocational education).

From the 1st of January 2012 the quantum of the state allowance is established based on a reference social indicator (ISR).

State Support Allowance for families with children (*Alocaţia pentru susţinerea familiei*) is a means-tested benefit granted monthly to support poor families with children (up to the age of

18). The income threshold depends on the number of persons in the family. It was introduced in the Law no. 277/2010 that came into effect from the 1ˢᵗ of January 2011 and has substituted the Complementary family allowance (*Alocaţia familială complementară*) and the Support allowance for mono-parental family (*Alocaţia de susţinere pentru familia monoparentală*).

Allowance for family placement (*Alocaţia de plasament familial*) is given to children up to the age of 18 or in case of those included in the educational system, throughout their studies, but without exceeding the age of 26. It is targetted towards children in foster care, children put under guardianship, dependent children in the process of adoption, children given to maternal assistants. Children with disabilities benefit from this allowance increased by 50%.

Emergency benefits (*Ajutorul de urgenţă*) are means-tested benefits designed to support families that face justifiable emergency situations or emergency circumstances due to natural disasters, fires, accidents, and other special situations established by law. The benefit is given both to Romanian citizens and to stateless persons and foreign citizens, with Romanian residence. The amount is established based on the assessment of the situation through social inquiry carried out by specialized personnel from the Territorial Directorates of Labour and Social Protection.

Financial aid (*Ajutorul financiar*) is a means-tested benefit given to families and persons that face extreme difficulties due to health problems or other justifiable causes. The benefit is given both to Romanian citizens and to stateless persons and foreign citizens, with Romanian residence. The amount is established based on the assessment of the situation through social inquiry carried out by specialized personnel from the Territorial Directorates of Labour and Social Protection.

Home heating aid (Ajutorul pentru încălzirea locuinţei) is given as support to poor families who cannot afford the expenses of home heating during the cold season. The aid is given to spouses and other persons - Romanian citizens, stateless persons and foreign citizens with residence in Romania - that share the same residence, are registered in the building book and are taken into consideration in calculating the dwelling maintenance costs, whether or not family relations exist. The benefit is given monthly during the cold season, between November 1ˢᵗ and March 31ˢᵗ next year. It is means-tested.

The conditions and the amounts are differentiated according to the type of heating – energy provided in the centralized system, natural gas or wood, coal and oil fuel.

In case the heating is provided via a centralized system, the quantum of the aid consists of a percentage of the amount that must be paid by the household. The percentage that will be compensated is established according to the average monthly net income per family member.

Benefits for refugees (*Ajutorul rambursabil pentru refugiaţi*) are granted to stateless persons and foreign citizens with the status of refugee. The benefit is paid monthly for 6 months and in exceptional cases the aid can be obtained for another 3 months.

Aid for purchasing individual home heating or automated burning systems (*Ajutorul bănesc pentru achiziţionarea de centrale termice individuale sau arzătoare automatizate*) was created to support the modernisation of the heating systems used by poor families. The beneficiaries are families or single persons with low incomes that use natural gas for the heating of their homes. The beneficiaries must have the status of individual consumers, assessed by a contract with a supplier of natural gas. This benefit is means-tested as the income on family member must be less than the statutory gross minimum wage.

Monthly allowance for the adult with severe visual disability, designated for the payment of the attendant (*Indemnizaţia lunară pentru adultul cu handicap vizual grav, destinată plăţii însoţitorului*) is granted to Romanian citizens, stateless persons and foreign citizens with residence in Romania, monthly, in a quantum that is equivalent to the net salary of the junior social worker with secondary education from the budgetary sector.

The beneficiaries are the adults with severe visual disabilities who have been medically certified to have severe visual impairments, irrespective of their incomes. The benefit is not means-tested.

Monthly allowance for adults with severe and marked disabilities (*Indemnizaţia lunară pentru adulţii cu handicap grav sau accentuat*). Beneficiaries are adults who have been medically certified to have severe or marked disabilities, irrespective of their income. It is granted to Romanian citizens, stateless persons and foreign citizens with residence in Romania.

Complementary personal budget for people with disabilities (*Bugetul personal complementar pentru persoanele cu dizabilităţi*). Beneficiaries include adults or children with documented disabilities established by a medical certificate, regardless of their income. It is granted to Romanian citizens, stateless persons and foreign citizens with residence in Romania.

Guaranteed minimum income (Venitul minim garantat). Poor families are granted social assistance in an amount determined as the difference between the levels established by the law as guaranteed minimum income and the net monthly income of the family or single person.

The income of the family is taken into consideration in assessing the right to this benefit. The means are tested through social inquiry. Both income and assets may be included in the means test.

Aid for partial covering of funeral expenses (*Ajutorul de înmormântare*) is given to families and single persons that receive social aid according to the provisions of the law regarding the guaranteed minimum income (Law no. 416/2001). The funeral expenses of persons in this category are paid from the funds allocated for the payment of social aid.

Monthly food allowance for children and adults infected with HIV or AIDS (*Indemnizaţia lunară pentru copiii şi adulţii infectaţi cu HIV sau bolnavi de SIDA*). It is a benefit granted to children or adults of Romanian nationality or with Romanian residence, infected with HIV or AIDS, regardless of their income.

Contribution to health insurance for the beneficiaries of the indemnity for child raising (*Contribuţii pentru asigurările de sănătate aferente indemnizaţiei pentru creşterea copilului*). It is targetted towards persons that receive the indemnity for child raising. The territorial directions of labour and social protection are required to send monthly, to the Territorial Health Insurance Houses, the individual health contributions and the names of the beneficiaries. It is not a means-tested benefit.

The nursery voucher (*Tichet de creşă*) is designed to help families with children to cover child care expenses. It is given to employees from state and private companies who are not eligible for child raising leave and allowance. The nursery vouchers can only be used to pay for nursery services. Nursery vouchers are given upon request to a parent or to a tutor that is looking after the child entrusted.

Financial aid to purchase computers (*Euro 200 Program*) (*Ajutor financiar în vederea achiziţionării de calculatoare*) is a benefit targeted towards increasing the access to information and communication technologies for children from poor families. Beneficiaries are families with children (below the age of 26) studying in accredited public or private educational institutions, if the gross monthly income per family member is below a certain threshold established by law. The threshold is indexed annually, by Government decision, based on the consumer prices index.

The family receives financial assistance to purchase only one new personal computer, irrespective on the number of children in education.

The **financial support for students in the national social protection program "Money for highschool" (*Sprijin financiar acordat elevilor din cadrul programului naţional de protecţie socială "bani de liceu"*)** is designed to improve the access to education for children from poor

families. Beneficiaries are children who are enrolled in day education, in high schools or vocational schools and are dependent on families whose gross monthly income per family member in the last three months preceding the application is below a certain threshold. As the budget for this benefit is limited, additional criteria may be taken into account for families with the same levels of income.

The financial support is received monthly during the academic year and may be terminated in case of unjustifiable absenteeism or disciplinary issues.

The beneficiaries of the national programme of social protection "money for school" cannot simultaneously receive the 'social grants' for students.

Social grants (*Bursele de ajutor social*) are given to children attending classes in pre-university and university education, depending on the financial situation of the family or in other cases established by law.

Scholarships for tuition, scholarships for further education, adult literacy grants, according to Law 116/2002. These can include:

- **Scholarships for tuition** (*Bursa de şcolarizare*) can be received by people of school age who attend compulsory education and belong to families with two or more dependent children that are entitled to social aid under the Law no 416/2001 regarding the guaranteed minimum income.
- **Scholarships for further education** (*Bursa pentru continuarea studiilor*) are granted to compulsory education graduates who continue their studies in pre-university schools and in higher education institutions and who belong to families with two or more dependent children that are entitled to social aid under the Law no 416/2001 regarding the guaranteed minimum income.
- **Literacy grants** (*Bursa de alfabetizare*) are given to adults who participate in regional literacy programs. The beneficiaries must be older than 14 and in one of the following situations: they have never attended compulsory education courses; they haven't completed primary education or have attended primary education, but have not acquired basic knowledge.

The granting of these scholarships is conditional upon class attendance and academic results. The levels of the tuition scholarships and scholarship for further education are set annually by the Government and the amounts are paid from the budget of the Ministry of Education or local budgets.

The level of the literacy scholarship is decided by different local authorities.

Guaranteed minimum social pension/ Social allowance for pensioners (*Pensia socială minima garantată*). This social benefit has entered into force from April 1st, 2009. Beneficiaries: public pension system retirees with residence in Romania, if the pension amount, due or in payment is less than the guaranteed minimum social pension.

The quantum is calculated as the difference between the guaranteed minimum social pension level and the pension amount due or in payment, according to the Law no. 19/2000 on the public pension system and other social insurance rights, combined with any other duties paid under special laws. Starting with 2010, the guaranteed minimum social pension level is set annually by the state budget law and can only be increased by correcting the state budget in relation to the evolution of macroeconomic indicators and financial resources.

1.3 Social contributions

The Romanian social contribution system consisted in 2019 of six types of social contributions, levied on employers and/or employees, self-employed or on voluntary insurance contracts. These were the following:

- social insurance contributions;
- unemployment insurance contributions;
- health insurance contributions;
- medical leave and indemnities health insurance contributions;
- insurance contribution for work accidents and professional disease;
- contribution for the salary payment guarantee fund.

From 2018, the social contributions system has undergone major reforms, as most of the burden of contributions has been transferred to employees.

Social insurance contributions (*Contribuții în cadrul bugetului asigurărilor sociale de stat*) are paid on a mandatory basis by employers, employees and self-employed and also by the National Employment Agency on behalf of the unemployed. The categories of individuals who are mandatorily insured in the public social insurance system are: employees, self-employed and unemployed.

Unemployment insurance contributions (*Contribuția în cadrul bugetului asigurărilor pentru şomaj*). In the unemployment insurance system both employees and persons who hold elective positions or other persons who earn income on the basis of a labour agreement (no insurance is due for persons working under a civil agreement, although they may insure voluntarily) are mandatorily insured, according to the *Law no. 76/2002 on unemployment*.

On a voluntary basis, the self-employed can also become insured in the unemployment insurance system. From July 1st, 2010 the unemployment insurance contribution is compulsory for self-employed for income received as a result of intellectual property rights. The insured are entitled to unemployment benefit if the risk occurs.

The level of the unemployment contribution rate is set by the *Law on Social Insurance Budget* on an annual basis. The unemployment insurance contribution rate has different levels for employers, employees and the voluntarily insured. The base for the calculation of the unemployment insurance contribution is the total gross wages for employers, the gross wage for employees and the insured sum for voluntary insurance contracts (also self-employed), but not less than the statutory minimum wage. Income from intellectual property rights for self-employed who earn this type of income is not subject to minimum and maximum thresholds. The contribution is collected in the unemployment insurance budget.

Health insurance contributions (*Contribuția de asigurări sociale de sănătate*). All Romanian citizens who live in Romania and foreign citizens in certain conditions are insured in the sense of the *Law no. 95/2006 on the reform of the health system* if they pay the health insurance contribution. The health insurance contract is individually signed either directly or through an employer, for employees. Some categories are insured without paying contributions (see section 2.5.4). Similarly, some categories benefit from contributions being paid on their behalf (see section 2.5.4 for details). The contribution is collected to the health insurance budget.

Health insurance contributions for medical leave and indemnities (*Contribuția pentru concedii şi indemnizații de asigurări sociale de sănătate*) is paid by employers and self-employed. The contribution base is the total gross wages for employers and the insured income for self-employed (cannot be higher than the value of 12 minimum guaranteed wages). The contribution is collected in the health insurance budget and its purpose is to cover the payment of medical leave and indemnities.

Work accidents and professional disease insurance contributions (*Contribuția de asigurări pentru accidente de muncă şi boli profesionale*) is paid by all employers and self-employed. The rate is differentiated according to the classification of economic activities (NACE). The contribution base is the total gross wages at employer level (the sum of all employees' gross wages) and the insured income for self-employed (cannot be lower than the national minimum gross wage). The contribution is collected in the social insurance budget.

Contribution for the salary payment guarantee fund (*Contribuția la fondul de garantare pentru plata creanțelor salariale*) is paid by all employers, except for public institutions. Its purpose is to guarantee the right to salary to employees in the case the company is legally

declared to be insolvent. The contributory base is the total gross wages at employer level (the sum of all employees' gross wages). The contribution is collected in the salary payment guarantee fund.

1.4   Taxes

The Romanian tax system has undergone some major changes from 2000, when a tax reform made the Romanian fiscal regime simpler and more uniform. In 2004, the new Fiscal Code entered into force and brought important exemptions and facilities, but in the following years the changes that took place in the Fiscal Code, except for the introduction of the flat income tax of 16% for individuals and companies, were mainly in favour of higher taxation. The most important direct taxes that are levied through the Romanian tax system are *income tax* and *real estate taxes*, while the indirect taxes include *value added tax (VAT)* and *excise taxes*.

1.4.1   Direct taxes

Personal Income Tax (*Impozitul pe venit*). The personal income tax is paid by individuals at a flat rate of 16% (10% in 2018) levied on the income tax base. The personal income tax is paid by the Romanian residents, but also non-residents who are involved either in a dependent activity in Romania or in an independent activity through a permanent headquarters in Romanian territory.

Real Estate Taxes (*Impozite şi taxe pe proprietate*). Real estate taxes consist of a tax on buildings and a tax on land. These taxes are collected by municipalities.

- *Building tax* is levied on all buildings in Romania, except for state-owned buildings, buildings owned by municipalities and by public institutions, churches, historical monuments, schools, public hospitals. Other buildings that are exempted from building tax are buildings used as hothouses, hotbeds, silos or buildings owned by foundations or associations and which are used for social or humanitarian activities.

  For individuals, the building tax is calculated as 0.1% of the taxable value of the building, per year. The calculation of the taxable value takes into account three elements: the construction material used for the building, the *building facilities* (water installation, sewage, electrical and heating installation), and various *geographical elements* (the rank of the municipality and the location of the building within the municipality). The taxable value thus calculated is then reduced by a percent corresponding to the *age of the building*: 20% for building older than 50 years, 10% for a building which was built between 30 and 50 years ago.

  If the building is used for dwelling and has more than 150m^2, the taxable value is multiplied by 5% for every 50m^2 or fraction thereof which exceeds the above mentioned threshold.

  Individuals who own more than one building are additionally taxed. The increment is applied to the taxable value of the second (65%), third (150%) or fourth (300%) building.

  The building tax is paid yearly in two stages and if paid in advance, it is reduced by 10%.

- *Land tax* is levied on all land in Romania, except for land own by churches, cemeteries, schools, universities, hospitals or other public institutions, state bodies or municipalities if not used for commercial purpose. Land roads, lands which are not suited for agricultural or forestry activities, land used for fighting against floods, used for water sources or underground exploitation purposes, land connected to hydro technical systems, navigation roads, and harbour infrastructure are also exempted from the tax.

  The land tax is paid by the owner and calculated on the basis of area, municipality rank and location within the municipality and usage of the land.

The land tax is paid yearly in two stages and if paid in advance, the tax is reduced by 10%.

- *Vehicle tax* is paid for all vehicles registered in Romania, except for cars and motorcycles owned by disabled persons and adapted to their disability, cars owned by public institutions and conveyances used for public transportation. The vehicle tax is paid by the owner and differs by vehicle type and cylinder capacity. The tax is paid yearly into the local budgets in two stages and if paid in advance, the tax is reduced by 10%.

1.4.2 Indirect taxes

Value Added Tax (VAT) (*Taxa pe valoare adăugată*). The VAT is levied on the supply of goods and services provided on the Romanian territory by a VAT taxpayer as a result of an economic activity and the imported goods from non-EU countries. VAT is also levied on the import of new vehicles and goods which are subject to excise tax from EU countries. The taxpayer is a person who carries out, independently and irrespective of location, economic activities, no matter what the purpose and result of these activities. The tax base is the price for the supply of goods and services and the custom value for imported goods.

In 2016, the standard VAT rate was 20% and is was applied on the tax base. A reduced 9% VAT rate was applied on medicines, medical prostheses, orthopaedic products, books, newspapers, magazines, and accommodation in hotels or similar, access to cultural and historical events and institutions. A 5% VAT rate was supplementary introduced for the supply of houses as part of the government's social policy. In 2017, the standard VAT rate has decreased to 19% and the specific product categories for which a reduced rate applies have changed as follows. For cultural services and supply of books, newspapers, magazines, etc. the 5% rate is applied instead of the 9% rate which has been levied before. The application of the 9% rate is extended to the following product categories: food and non-alcoholic beverages; water supply; restaurant and catering service (except for alcoholic beverages).

Excise tax (*Accize*). In Romania the excise taxes are applied on the following products: alcohol and alcoholic beverages, processed tobacco, energy products and electricity.

2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Not all the taxes and benefits mentioned in the previous section are simulated in EUROMOD. Some are beyond its scope entirely and are neither included in the EUROMOD database nor in its output income variables. Others are not possible to simulate accurately with the available data. They are included in the database and may be chosen as components of output variables, but the rules governing them may not be changed by the model.

Table 2.1 presents the Romanian benefits system, underlining the manner in which various benefit instruments are treated in EUROMOD, while Table 2.2 presents the tax and contribution system in Romania explaining their simulation in EUROMOD. Note that we have used the following abbreviated notation, to mark how detailed the simulation of taxes and benefits is:

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

Table 2.1 Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in EUROMOD				Why not fully simulated?
		2016	2017	2018	2019	
Old age benefits (Old age pension, Early retirement pension)	poa	I	I	I	I	No data on contribution record
Survivors' pension	psu	I	I	I	I	No data on contribution record
Invalidity pension	pdi00	I	I	I	I	No data on contribution record
Unemployment benefit	bun_s	PS	PS	PS	PS	No data on the contribution history needed to estimate the bonus benefit, no simulation of the benefit for graduates (non-contributory)
Sickness benefit (Indemnity for temporary work incapacity caused, Indemnity for maternal risk)	bhl	I	I	I	I	No data on contribution history and sickness occurrence
Maternity benefit (Maternity allowance)	bmact_s	S	S	S	S	
Paternity leave allowance	bpact_s	S	S	S	S	
Universal child benefit	bchnm_s	S	S	S	S	
Means-tested family benefits	bchmt_s	S	S	S	S	
Child raising allowance	bccnw_s	S	S	S	S	No data on contribution record for the previous year to child birth, after 2009, the simulation of the amount is based on the imputed wage
Child raising incentive	bccrw_s	S	S	S	S	
Leave and indemnity for the caring of the ill child	-	E	E	E	E	No information in micro-data, no information on child disability or illness
Heating aid (Means-tested heating benefit)	bhoen_s	S	S	S	S	Asset test not fully implemented
Financial benefits	-	E	E	E	E	Discretionary benefit; No information in micro-data
Emergency benefits	-	E	E	E	E	Discretionary benefit; No information in micro-data
Benefits for refugees	-	E	E	E	E	No information in micro-data
Aid for purchasing automated burning	-	E	E	E	E	No information in micro-data on purchases
Disability benefit (Monthly allowance for adults with severe and marked disabilities, Complementary personal budget for adults with disabilities)	bdi	I	I	I	I	No information on the degree of disability
Monthly allowance for the adult with severe visual disability, designated for the payment of the attendant	-	E	E	E	E	No information on the type and degree of disability

	Variable	Treatment in EUROMOD				Why not fully simulated?
Social assistance (Guaranteed minimum income)	bsa_s	S	S	S	S	Asset test not fully implemented; work test not implemented
Aid for partial covering of funeral expenses	-	E	E	E	E	No information in micro-data, no information on event occurrence
Monthly allowance of food for children and adults infected with HIV or AIDS	-	E	E	E	E	No information in micro-data
The nursery voucher	-	E	E	E	E	No information in micro-data
Financial aid to purchase computers (Euro 200 Program)	-	E	E	E	E	No information in micro-data
Money for High -School (Means-tested educational allowance)	bched_s	S	S	S	S	Asset test not fully implemented, sanctions due to absenteeism from school not simulated
Scholarships	-	E	E	E	E	No information in micro-data
Minimum social pension	bsaoa_s	S	S	S	S	
Severance payments	yunsv	I	I	I	I	No detailed information in the dataset, no information on the occurrence of the firing event

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

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 unemployment benefit (bun_s) in Romania. The benefit is only simulated for those with receipt of the benefit in the data.

Table 2.2. Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in EUROMOD				Why not fully simulated?
		2016	**2017**	**2018**	**2019**	
Personal income tax	tin_s	S	S	S	S	
Real Estate Tax	-	E	E	E	E	No information in micro-data on real estate
Indirect taxes	-	E	E	E	E	No information on consumption in the micro-data
Employee Social Insurance Contributions	tscee_s	S	S	S	S	
Benefit Recipients Social Insurance Contributions	tscbr_s	S	S	S	S	
Self Employed Social Insurance Contributions	tscse_s	S	S	S	S	
Health insurance contribution (active population and pensioners)	tschl_s	S	S	S	S	
Credited Health insurance contribution	tscchl_s	S	S	S	S	

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

There are no significant structural changes regarding policy simulations during 2016- 2019.

2.2 Order of simulation and interdependencies

The following table shows the order in which the main elements of the Romanian tax and benefit system in 2016-2019 are simulated. As the Romanian system did not face significant structural changes within this period, we use one table to display policy simulations over the four years' span. The defined order shows that Romanian policy simulations start with the minimum wage. This choice is made in order to check minimum wage policy implementation for observed salaries first, as employment income is used in many following policies either explicitly or implicitly.

Then we simulate the contributions prior to simulating the personal income tax, as most of them are on the list of deductibles for purposes of personal income taxation. In order to maintain consistency we simulate the contributions together as a block, The Benefit Recipients Social Insurance Contributions (Credited social insurance contributions) are simulated after the Unemployment Benefit as they are also credited to unemployment benefit recipients.

After the personal income tax we simulate the non-taxable benefits. The means-tested social benefits that are granted considering a list of preceding incomes, are simulated as the last policies in the spine.

Table 2.3 EUROMOD Spine: order of simulation

Policy	2016	2017	2018	2019	Description of the instrument and main output
SetDefault_ro	**on**	**on**	**on**	**on**	**DEF: set default values for various variables**
uprate_ro	on	on	on	on	DEF: Uprating factors
constDef_ro	on	on	on	on	DEF: Constants
ilsDef_ro	on	on	on	on	INC: Standardized income concepts
ilsubdef_ro	on	on	on	on	DEF: Standard UDB Income Concepts
ildef_ro	on	on	on	on	DEF: Income concepts
tudef_ro	on	on	on	on	DEF: Assessment units
yem_ro	off	off	off	off	SWITCH:Minimum Wage /yem (Salariul minim brut)
neg_ro	on	on	on	on	INC:Correction of self-employment income
bmact_ro	on	on	on	on	BEN: Medical leave and maternity allowance (Concedii medicale și indemnizații pentru maternitate)
bpact_ro	on	on	on	on	BEN: Paternity leave allowance
tscee_ro	on	on	on	on	SIC: Employee Social Insurance Contributions (Contributii in cadrul bugetului asigurarilor sociale de stat, contributii in cadrul asigurarilor pentru somaj)/ tscee_s
tscer_ro	on	on	on	on	SIC: Employer Social Insurance Contributions (Contributii in cadrul bugetului asigurarilor sociale de stat, contributii in cadrul asigurarilor pentru somaj)/ tscer_s
bun_ro	on	on	on	on	BEN: Unemployment benefit (Ajutorul de somaj)/ bun_s
tscbr_ro	on	on	on	on	SIC: Benefit Recipients Social Insurance Contributions (Contributii in cadrul bugetului asigurarilor sociale de stat, contributii in cadrul asigurarilor pentru somaj)/ tscctpi_s
tscse_ro	on	on	on	on	SIC: Self-Employed Social Insurance Contributions (Contributii in cadrul bugetului asigurarilor sociale de stat, contributii in cadrul asigurarilor pentru somaj)/ tscse_s
tschl_ro	on	on	on	on	SIC: Health insurance contributions (active

					population & pensioners) (Contributia de asigurari sociale de sanatate)/ tschl_s
bchnm_ro	on	on	on	on	BEN: Universal Child Benefit (Alocatia de stat pentru copii)/ bchnm_s
bccnw_ro	on	on	on	on	BEN: Child raising allowance (Indemnizatia pentru cresterea copilului)/ bccnw_s
bccrw_ro	on	on	on	on	BEN: Child raising incentive (Stimulentul lunar)/ bccrw_s
tinta_ro	on	on	on	on	TAX: Optimization for the allocation of the tax allowance/ temp_tin_ro
tin_ro	on	on	on	on	TAX: Personal Income Tax (Impozitul pe venit)/tintb_s
bchba_ro	n/a	n/a	n/a	n/a	BEN: Allowance for new born children and the outfit for the new born children (Alocatia pentru copiii nou-nascuti si trusoul pentru nou-nascuti)/ bchba_s
bsaoa_ro	on	on	on	on	BEN: Minimum social pension/ social allowance for pensioners (Pensia minima garantata)/ bsaoa_s
bched_ro	on	on	on	on	BEN: Means-tested educational allowance (Money for High-School) (Sprijin financiar acordat elevilor din cadrul programului national de protectie sociala 'Bani de liceu')/ bched_s
bsa_ro	on	on	on	on	BEN:Guaranteed min income (Venitul minim garantat)/ bsa_s
tscchl_ro	on	on	on	on	SIC:Credited health insurance contributions + contributions of the inactive/tscchl_s
bchmt_ro	on	on	on	on	BEN: Means-tested family benefits (Alocatia familiala complementara si Alocatia de sustinere pentru familia monoparentala)/ bchmt_s
bhoen_ro	on	on	on	on	BEN: Means-tested heating benefit (Ajutorul pentru incalzirea locuintei)/ bhoen_s
tco_ro	switch	n/a	n/a	n/a	TAX: Commodities
output_std_ro	on	on	on	on	DEF: Standard output individual level
parben_output_std_ro	switch	switch	switch	switch	DEF: Parental Benefits Output individual Level
output_std_hh_ro	on	on	on	on	DEF: Standard output at household level

Source: EUROMOD G 4.0+

2.3   Policy switches

There are five switches used in the RO model.[1]

First, there is a switch controlling **benefit take-up modelling** (*BTA_ro*), which is set by default to *on* in the baseline for all years. If the switch is set to *on* then partial take-up is applied (the default), otherwise (*off*) full take-up is assumed. Its purpose is to adjust the calculation of the minimum guaranteed income by removing eligibility from heads of households that are under 26 years of age on the assumption that the majority of these are students.

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[1] Policy switches are denoted with 'switch' in the policy spine (for a given policy year), while their default values (*on* or *off*) are set in a separate dialogue box in the model, accessed via Country Tools > Set Switches in the EUROMOD User Interface (UI).

The **Tax Compliance Adjustments** *(TCA_ro)* switch isimplemented for the adjustment of tax compliance (social insurance, health insurance, income tax) in the case of self-employed in agriculture, living in rural areas with income level below the average gross wage. It is assumed that if the above conditions are satisfied, than the individual does not pay taxes. It is set to *on* by default in the baseline for all years.

Next is the **Uprating by Average Adjustment** *(UAA_ro)* switch, which is *off* by default in the baseline for all years. When switched on, non-simulated benefits (especially pensions) are uprated by changes in the average rather than by using statutory indexation rules (the default).

The **Parental Benefits** *(PBE_ro)* switch, is set to *off* by default in the baseline for years 2015 onwards. It controls the Medical Leave and Maternity Allowance (*bmant_ro*), and the Paternity Leave Allowance (*bpact_ro*) policies.

Finally, the **Minimum Wage Adjustments** (*MWA_ro*) switch, replaces employment income with the minimum hourly wage whenever employment income adjusted for hours and time in employment is less than the minimum. It is set to *off* by default in the baseline for all years.

2.4   Social benefits

2.4.1   Unemployment benefit (*Ajutorul de şomaj*) (bun_ro)

- *Brief description*

Unemployment benefit (*Ajutorul de şomaj*) is a benefit for unemployed individuals which depends on previous earnings and contributions to the insurance scheme.

- *Eligibility conditions*

The unit of analysis is the individual (tu_individual_ro).

Unemployed individuals are eligible for receiving the unemployment benefit if they have a minimum contribution period of 12 months in the last 24 months preceding the date of benefit claiming and they have no employment/self-employment income or the income they obtain is below a threshold. This threshold was established at the level of 500 lei per month for policy years 2016 - 2019.

- *Income test*

There is no income test. However, the unemployed person should have no employment/self-employment income or the income he/she obtains from such activities should be below the set threshold.

- *Benefit amount*

Between 2016 and 2019 the unemployment benefit is set related to a reference social indicator (called ISR) with a value of 500 RON, instead of the minimum guaranteed wage .The **amount** paid to the *unemployed* depends on the contributory record, as follows:

a)   75% of statutory ISR, for people with a contribution period of at least one year;

b)   The amount stipulated in point a) plus an amount calculated by applying a differentiated rate (according to the contribution period) on the gross average monthly salary during the last 12 months of contribution period. Differentiated rates according to the eligibility period have the following values:

      i.   3% for those with a contribution period of at least 3 years;
    ii.   5% for people with a contribution period of at least 5 years;
   iii.   7% for people with a contribution period of at least 10 years;
   iv.   10% for those with a contribution period of at least 20 years.

The unemployment benefit is granted to people *assimilated as unemployed* for a period of 6 months and it is a monthly fixed amount, which represents 50% of ISR, and it is awarded to those assimilated as unemployed (graduates older than 16, persons ending military service unable to find employment) once per every form of education graduated.

The payment of unemployment benefits is financed by the unemployment insurance budget.

- *Duration*

Unemployment benefits are awarded to the *unemployed*, for a period with a length depending on the contributory period, as follows:

- 6 months, for people with a contribution period of at least one year and for those assimilated as unemployed;
- 9 months, for people with a contribution period of at least 5 years;
- 12 months, for people with a contribution period of more than 10 years.

The people assimilated as unemployed receive it for 6 months.

EUROMOD Notes: No account is included of part-time employment, all employment months are considered as full-time employment. Benefits for persons assimilated to the unemployed (i.e. graduates) are not simulated. Contribution history is imputed by assuming that the unemployed person worked the same amount of months during each year of the qualifying period, i.e. the number of months worked during the income reference period. Eligibility closely matches observed receipt in the micro data. To determine the amount of benefit and its duration, the contributory period taken into account is based on the individual's entire work history.

2.4.2 Universal child benefit *(Alocația de stat pentru copii)* (bchnm_ro)

- *Brief Description*

Universal child benefit is a monthly universal non-means-tested non-taxable benefit paid to families with children below an age limit.

- *Definitions*

The unit of analysis is the family (tu_family_ro). It is defined as consisting of the head, partner, own dependent children and loose dependent children. Are considered as dependent children individuals under the age of 18 or under the age of 26 if in education, not themselves parents and not married.

- *Eligibility conditions*

Entitled are households with children below the age of 18.
The benefit is also given to children older than 18, if the recipient is attending secondary education.

- *Income test*

The benefit is not income tested.

- *Benefit amount*

The benefit amount depends on the age and disability status of the child as follows:

Table 2.4.2 Universal child benefit (*Alocaţia de stat pentru copii*) (bchnm_ro)

	2016-2018	**2019**
Aged under 2 (or below 3 if disabled)	0.4 ISR	0.6 ISR
Aged 2 and above, not disabled	0.168 ISR	0.3 ISR
Aged 3 and above, disabled	0.4 ISR	0.6 ISR

From the 1st of January 2012 the quantum of the state allowance is established based on a reference social indicator (ISR). The ISR level established for 2016-2019 is of 500 RON.

EUROMOD Notes: No benefit is simulated for children who turn 18 during the income reference year. Increases in the amount of benefits awarded for disabled children are not simulated. The benefit is allocated to the mother, if she is present in the household.

2.4.3 Medical leave and maternity allowance (*Concedii medicale şi indemnizaţii pentru maternitate*) (bmact_s)

- *Definitions*

Insured women are entitled to receive medical leave for pregnancy and confinement for a period of 126 days and during this period they receive maternity allowance. Pregnancy leave is granted for a period of 63 days before giving birth, while confinement leave is granted for a period of 63 days after giving birth. The two types of leaves can compensate each other, according to the medical recommendation, but the minimum duration of confinement leave is of 42 days. Insured women that are entitled to disability benefits may receive, on request, a medical leave for pregnancy, starting with the 6th month of pregnancy. The gross monthly amount of maternity allowance is 85% of the calculation base. This indemnity is financed entirely from the budget of the National Fund of Health Insurance.

- *Eligibility conditions*

1 month of insurance (payment of contributions) in the last 12 months. Paternity leave: the father is insured under the social security system, without a minimum period of insurance.

- *Duration*

63 days prior to the birth and 63 days after birth. These periods may be compensated between one another according to medical advice and the option of the beneficiary, provided the period after confinement is longer than 42 days. Maternity leave cannot be taken on a part-time basis, but can be taken for intermittent periods, respecting the maximum duration of 126 days and the mandatory period of 42 days after birth.

- *Benefit amount*

85% of the average insured gross earnings over the last 6 months, paid during the period of maternity leave. The benefit is capped at 85% of 12 times the minimum gross wage.

- *Taxation*

Subject to social insurance contribution (invalidity, old-age, survivors)

2.4.4 Paternity leave allowance (*Indemnizaţia pentru concediul paternal*) (bpact_s)

- *Eligibility conditions*

The father is insured under the social security system, without a minimum period of insurance.

- *Duration*

Fathers are entitled to a paternity leave of 5 working days. Fathers who graduated a course in childcare obtain a longer paternity leave (10 days). Paternity leave cannot be taken on a part-time basis or intermittently over a period of time.

- *Benefit amount*

The amount of benefit for paternity leave is equal to the gross wage of the father corresponding to the 5 or 15 days.

- *Taxation*

Subject to social insurance contribution (invalidity, old-age, survivors).

2.4.5 Child raising allowance *(Indemnizația pentru creșterea copilului)* (bccnw_ro)

- *Brief description*

Child raising allowance is a monthly universal non-means-tested non-taxable benefit paid to families with young children.

- *Definitions*

The unit of analysis consists of the head, partner, own dependent children and loose dependent children – (tu_bcc_ro)**.** The dependent child is defined as a child aged under 2.

- *Eligibility conditions*

The benefit is awarded to a parent of a child under the age of 2 (or under the age of 3, if disabled) as a replacement income for the time when the parent is out of work in order to care for the child. This benefit is granted for the first three children, either natural or adopted, entrusted in the process of adoption, in foster care or emergency foster care (except when the child is entrusted to a professional maternal assistant) or in guardianship.

The recipient must have been working the 12 months preceding the birth of the child.
The parent must be not working while in receipt of the benefit.

- *Income test*

The benefit is not income tested.

- *Benefit amount*

Persons benefiting of a leave for child raising for a child born after the 1ˢᵗ of January 2011 may choose to receive the indemnity for one or two years. In case they choose to receive the indemnity until the child reaches the age of 1, the amount will be 85% (for 2016) of the average income for the last 12 months, but no less than 1.2 ISR and no more than 6.8 ISR. The parent can benefit of unpaid leave for raising the child between the ages of one and two.

If the parent chooses to receive the indemnity until the child reaches the age of 2, the amount will be 85% (for 2016) of the average income for the last 12 months, but no less than 1.2 ISR and no more than 2.4 ISR.

For parents of disabled children, the indemnity (and leave) may be granted until the child reaches the age of 3 and the amount is 85% (for 2016) of the average income for the last 12 months, but not less than 1.2 ISR and no more than 6.8 ISR.

In 2017, the child raising allowance was granted up to the age of two and its amount remained at 85% of the average income for the last 12 months, not less than 85% of the statutory minimum wage. No upper ceiling was set. However, in 2018 un upper ceiling was introduced at 8500 RON per month.

The quantum of the allowance is increasing with 1.2 ISR for children born of a pregnancy of twins, triplets or more.

EUROMOD Notes: The birth order of children is established taking into account only siblings present in the household. The benefit awarded for children aged between 2 and 3 and disabled is not simulated due to lack of information about the children's disability status. The benefit is simulated for all 12 months of the income reference period in the case of children aged 0 and it is not simulated for children turning 2 during the income reference period.

There is no information in the micro data relating to the activity status of the mother during the 12 months preceding birth. Instead, the condition relating to the contribution history of the parent is approximated by taking into account the duration of the entire work history, i.e. parents (mothers) who have worked for at least 12 months during their life are considered eligible. The increase in the amount of benefit for twins, triplets, etc. is not simulated. Parents of 1 year olds eligible for the benefit are considered entitled (i.e. they have not exhausted their entitlement during the child's first year). However, for benefits received on account of children aged below 1, we apply the higher level cap. The lower level cap is applied to benefits received on account of children aged between 1 and 2. The benefit is simulated to be 85% of the previous gross average monthly income. As this income is not observed in the data, it is imputed based on a wage equation. The benefit is allocated to the mother if she is present in the household (i.e. the mother is considered by default to be the claiming parent).

2.4.6   Child raising incentive (*Stimulentul lunar*) (bccrw_ro)

- *Definitions*

The unit of analysis consists in head, partner, own dependent children and loose dependent children – (tu_bcc_ro). The dependent child is defined as a child under the age of 2.

- *Eligibility conditions*

The benefit is awarded to a parent entitled to receive the Child raising allowance who chooses to return to work. This benefit is granted for the first three children, either natural or adopted, entrusted in the process of adoption, in foster care or emergency foster care (except when the child is entrusted to a professional maternal assistant) or in guardianship.
The incentive is granted to persons entitled to receive the Indemnity for child raising until the child reaches the age of 1 or 2 (their chosen option for 2016, respectively the age of two for 2017-2019) that return to work, thus earning professional income subject to taxation. If the child is disabled, the person entitled to receive the Indemnity for child rising that returns to work before the child reaches the age of 3, will receive the incentive, in the same amount.
The recipient must have been working the 12 months preceding the birth of the child.

The recipient must be obtaining employment income in order to receive this benefit.

- *Income test*

The benefit is not income tested.

- *Benefit amount*

    500 RON per month, for policy years 2016

    650 RON per month, for policy year 2017-2019

EUROMOD Notes: The birth order of children is established taking into account only siblings present in the household. The benefit awarded for children aged between 2 and 3 and disabled is not simulated due to lack of information about the children's disability status. The benefit is simulated for all 12 months of the income reference period in the case of children aged 0 and it is not simulated for children turning 2 during the income reference period.

There is no information in the micro data relating to the activity status of the mother during the 12 months preceding birth. Instead, the condition relating to the contribution history of the parent is approximated by taking into account the duration of the entire work history, i.e. parents (mothers) who have worked for at least 12 months during their life are considered eligible. The benefit is allocated to the mother if she is present in the household (i.e. the mother is considered by default to be the claiming parent).

2.4.7 Minimum social pension/ social allowance for pensioners (Pensia minima garantată) (bsaoa_ro)

- *Brief description*

Minimum social pension (or social allowance for pensioners) is a yearly allowance that is paid to a person who has attained pensionable age and who is living alone in Romania with an average monthly income below a certain threshold.

- *Definitions*

The unit of analysis is the individual (tu_individual_ro).

- *Eligibility conditions*

To receive a social allowance for pensioners, a person must be in receipt of a public pension, whatever its kind (old age, invalidity, survivor etc.).

- *Income test*

The pension amount due or in payment in the public pension system, combined with any other duties paid under special laws (any public pensions plus private pensions) must be below the guaranteed minimum social pension threshold of 400 RON for 2016, 520 RON for 2017-2018 and 640 RON for 2019.

- *Benefit amount*

The amount is assessed as the difference between the guaranteed minimum social pension level and the pension amount due or in payment in the public pension system, combined with any other duties paid under special laws.

EUROMOD notes: The minimum guaranteed pension is simulated for every month in receipt of a public pension. If two or more pensions have been received during the income reference period, the periods of receipt are assumed to be consecutive.

2.4.8 Means-tested educational allowance (Money for High-School) (*Sprijin financiar acordat elevilor din cadrul programului național de protecție socială 'Bani de liceu'*) (bched_ro)

- *Definitions*

The unit of analysis is the family (tu_family_ro). It is defined as consisting of the head, partner, own dependent children and loose dependent children. Are considered dependent children individuals under the age of 18, or under the age of 26 if in education, not themselves parents and not married.

- *Eligibility conditions*

The benefit is given to families with children below the age of 18 who are attending upper secondary education – high school. The family income per member must be lower than a threshold.

There is also an asset test enforced through social worker inquiries. The law establishes a list of goods of basic necessity that are taken into account in assessing the right to receiving this benefit. In case the family or single person owns only goods considered of basic necessity they are entitled to receive this benefit. In case the family or single

person own goods that are not enlisted as basic necessity goods, they are not considered entitled to receiving the benefit.

If the family or single person owns basic necessity goods in an amount that exceeds the limit established by law, the potential income obtained through their exploitation is considered in assessing the net monthly income.

The list of basic necessity goods includes immobile goods (the family house and housing annexes) and mobile goods (gas cooker, refrigerator, washing machine, home heating system, computer, TV, furniture, and so on), land (differentiated according to the number of household members and to the type of crops that can be obtained), poultry and animals (in certain numbers) and other goods (clothing, personal hygiene and so on).

The benefit may be terminated in cases of unjustifiable absenteeism from school.

- *Income test*

The family income per member must be less than 150 RON per month, between 2016 and 2018, and respectively 500 RON per month in 2019. All income received by each family member during the three months prior to application is taken into account, except for: state allowance for children, family support allowance, scholarships and social grants, and other social aids provided for students.

- *Benefit amount*

The amount of the benefit is 180 RON per month between 2016 and 2019, and respectively 250 RON per month in 2019.

EUROMOD notes: Sanctions due to absenteeism from school are not simulated. The asset test is only partially simulated (i.e. only financial capital and possession of a car are taken into account).

2.4.9 Guaranteed min income (*Venitul minim garantat*) (bsa_ro)

- *Definitions*

The unit of assessment is constructed for social assistance purposes; it consists of the head of the tax unit, the partner, their own dependent children and loose dependent children (tu_bsa_ro). To be considered a dependent child, an individual must be younger than 18 or younger than 26 and in education, not married and not a parent.

- *Eligibility conditions*

The benefit is given to the assessment unit if the monthly net income in the assessment unit is below a threshold, differentiated according to the number of persons in the assessment unit. The thresholds are listed below:

Table 2.4.9. Guaranteed min income thresholds (Venitul minim garantat) (bsa_ro)

(per month)	2016 - 2019
single person	0.283 ISR
families with 2 persons	0.510 ISR
families with 3 persons	0.714 ISR
families with 4 persons	0.884 ISR
families with 5 persons	1.054 ISR
for each person over the number of	0.073 ISR

five persons belonging to the family

There is also an asset test and a condition concerning community work for able bodied individuals of working age.

The law establishes a list of goods of basic necessity that are taken into account in assessing the right to receive this benefit. When the family or single person own(s) only goods considered of basic necessity they are entitled to receive the benefit. When the family or single person own(s) goods which are not listed as basic necessity goods, they are not considered entitled to receive the benefit. .

If the family or single person own(s) basic necessity goods in an amount that exceeds the limit established by the law, the potential income obtained through their exploitation is considered in assessing the net monthly income.
The list of basic necessity goods includes immobile goods (the family house and housing annexes) and mobile goods (gas cooker, refrigerator, washing machine, home heating system, computer, TV, furniture, and so on), land (differentiated according to the number of household members and to the type of crops that can be obtained), poultry and animals (in certain numbers) and other goods (clothing, personal hygiene and so on).

Unemployed able bodied working age adults must register as unemployed at the local Employment Office and not refuse to take up any job offers. The local authorities may require working age able bodied adults who are unemployed to do community work in return for receiving the benefit.

- *Income test*

The benefit is means-tested. There is an income test and an asset test.

Income subject to the means-test is: all gross market income (ils_origy) less employee SIC (tscee_s), less self-employed SIC (tscse_s), less personal Income Tax (tin_s), plus old age pension (poa), plus disability pension (pdi), plus survivor's pension (psu), plus child raising allowance (bccnw_s), plus child raising incentive (bccrw_s), plus half of the amount of non means-tested child benefits (bchnm_s), plus unemployment benefit (bun), plus alimony/ maintenance payments (yptmp), plus temporary sickness benefit (bhl), plus maternity benefit (bma), and plus guaranteed minimum pension/social allowance for pensioners (bsaoa_s).

- *Benefit amount*

The amount is the difference between the minimum guaranteed income level and the family's income. If the difference is less than 10 RON per month, than 10 RON is received as benefit. If there is at least one working adult in the unit, the benefit is increased by 15%.

EUROMOD notes: The income test is simulated using annual incomes and assuming that the monthly income has been constant throughout the income reference period. Thus, fluctuations in the family's monthly income throughout the reference year are not captured. The asset test is only partially simulated. Only financial capital and possession of a car are taken into account. The work test is not simulated.

EUROMOD offers the possibility to calibrate the receipt of social assistance by excluding units where the head is aged under 26 (these are likely to be students or young people still financially dependent on their parents).

2.4.10 Support allowance for families with children (*Alocația pentru susținerea familiei*) (bchmt_ro)

- *Definitions*

The assessment unit is constructed for purposes of means-tested child benefits. It consists of the head of the tax unit, the partner, their own dependent children and loose dependent children (tu_bchmt_ro). For the single parent allowance the head is the lone parent of the dependent children.

Dependent child condition: children under 16 or children under 18, who are not themselves parents and have an income below a threshold.

A person is considered to be a lone parent if she is a parent of dependent children, is not married and is not cohabiting.

- *Eligibility conditions*

Net monthly income per family member must be below a set threshold. There is also an asset test. The law establishes a list of goods of basic necessity that are taken into account in assessing the right to receive this benefit. When the family or single person own(s) only goods considered of basic necessity they are entitled to receive the benefit. When the family or single person own(s) goods that which are not listed as basic necessity goods, they are not considered entitled to receiving the benefit.

If the family or single person own(s) basic necessity goods in an amount that exceeds the limit established by law, the potential income obtained through their exploitation is considered in assessing the net monthly income.

The Law no. 277/2010 establishes that children of school age must attend school in order for their family to be receiving this benefit and absences without leave may lead to reductions of the benefit.

- *Income test*

Eligibility is subject to passing an income test. The income threshold depends on the number of persons assessed together as a family. Income subject to the means-test consists of the income used for the means-test of the guaranteed minimum income, plus guaranteed minimum income, plus means-tested "Money for high-school".

- *Benefit amount*

The amount is differentiated according to the number of dependent children in the tax unit. The amounts are presented below:

a) For the family consisting of husband, wife and dependent children the thresholds and amounts were:

The thresholds and amounts are calculated as % of the ISR:

Benefit amount per month	2016-2019
Per capita income threshold	*up to 0.40 ISR*
1 child	0.164 ISR
2 children	0.320 ISR
3 children	0.492 ISR
4+ children	0.656 ISR
Per capita income threshold	*0.40 ISR to 1.06 ISR*
1 child	0.15 ISR
2 children	0.30 ISR
3 children	0.45 ISR
4+ children	0.60 ISR

* ISR equal 500 RON.

b) For the family consisting of lone parent living together with dependent children, the thresholds and amounts are the following:

Benefit amount per month	2016-2019
Per capita income threshold	*up to 0.40 ISR*
1 child	0.214 ISR
2 children	0.428 ISR
3 children	0.642 ISR

Benefit amount per month	2016-2019
4+ children	0.856 ISR
Per capita income threshold	*0.40 ISR to 1.06 ISR*
1 child	0.204 ISR
2 children	0.408 ISR
3 children	0.612 ISR
4+ children	0.816 ISR

EUROMOD notes: The income test is conducted using the annual income and not the monthly income-i.e. it is assumed that monthly income is constant throughout the year. The asset test is only partially simulated- only possession of a car and possession of financial capital are used in the simulation. Sanctions due for unauthorized absences from school are not simulated.

2.4.11 Means-tested heating benefit (*Ajutorul pentru încălzirea locuinței*) (bhoen_ro)

- *Definitions*

The assessment unit is the household (tu_household_ro).

- *Eligibility conditions*

Net monthly income per family member should be less than a threshold. The monthly income per family member threshold is differentiated according to the type of heating used by the household (see below for exact figures).
There is also an asset test. The law establishes a list of goods of basic necessity that are taken into account in assessing the right to receive this benefit. When the family or single person own(s) only goods considered of basic necessity they are entitled to receive this benefit. When the family or single person own(s) goods that are not enlisted as basic necessity goods, they are not considered entitled to receiving the heating benefit.
If the family or single person own(s) basic necessity goods in an amount that exceeds the limit established by the law, the potential income obtained through their exploitation is considered in assessing the net monthly income.

- *Income test*

The means-test consists of an income test and an asset test.

Income subject to the means test is: all gross market income (*ils_origy*), less Employee SIC (*tscee_s*), less Self-employed SIC (*tscse_s*), less Personal Income Tax (*tin_s*), plus Old age pension (*poa*), plus Disability pension (*pdi*), plus Survivor's pension (*psu*), plus Child raising allowance (*bccnw_s*), plus Child raising incentive (*bccrw_s*), plus Non means-tested child benefit (*bchnm_s*), plus unemployment benefit (*bun*), plus alimony/maintenance payments (*yptmp*), plus temporary sickness benefit (*bhl*), plus maternity benefit (*bma*) plus the guaranteed minimum pension/social allowance for pensioners (*bsaoa_s*), plus the guaranteed minimum income (*bsa_s*), plus "Money for high-school" benefit (*bched_s*).

The income thresholds depend on the type of heating used:

I.   Thermal energy provided by the centralized system, 2016-2019

Average monthly net income per family member, and per a single person (RON)	Percentage compensation of the actual amount of heat energy bill (%)	
	Family	**Single person**
Up to155	90%	100
155.1 - 210	80	90
210.1 - 260	70	80
260.1 - 310	60	70
310.1 - 355	50	60
355.1 - 425	40	50
425.1 - 480	30	40
480.1 - 540	20	30
540.1 - 615	10	20
615.1 - 786	5	15
786.1 - 1082	0	10

Families that benefit from social aid under the Law regarding the Minimum Guaranteed Income receive a compensation of 100%.

II.   Natural gas

Average monthly net income per family member, and single person (RON)	Monthly amount (RON) 2016-2019
Up to 155 Lei	262
155.1 – 210	190
210.1 – 260	150
260.1 – 310	120
310.1 – 355	90
355.1 – 425	70
425.1 – 480	45
480.1 – 540	35
540.1 – 615	20

III.   Wood, coal and oil fuel, 2016-2019

Average monthly net income per family member, and single person (RON)	Monthly amount (RON)
Up to 155	54
155.1 - 210	48
210.1 - 260	44
260.1 - 310	39
310.1 - 355	34
355.1 - 425	30
425.1 - 480	26
480.1 - 540	20
540.1 - 615	16

- *Benefit amount*

The benefit amount is differentiated according to the type of heating used by the household, the heating costs incurred by the household, and also according to the monthly net income per household member (see above for further information). For the households using heating in centralised system, the benefit compensates a certain percentage of the heating bill. For households using natural gas, wood, coal or oil fuels, the benefit is flat-rate. The benefit is given monthly during the cold season, between November 1st and March 31st next year.

EUROMOD notes: The benefit is calculated as the sum payable during the year: i.e. Jan-Mar + Nov-Dec of the income reference year. The type of heating used by the family is imputed based on urbanization. Households living in urban areas are assumed to be using the centralized system whereas households living in rural areas are assumed to use fossil fuels. For households using the centralized heating system, the average monthly heating bill is imputed based on the 2007 Household Budget Survey. The heating cost for the winter months (Nov-March) is imputed to be approximately 23% of total yearly utilities cost.
The income test is carried out using annual rather than monthly income. The asset test is only partially simulated- only possession of a car and of financial capital is used in the asset test.

2.5 Social contributions

2.5.1 Employee Social and Unemployment Insurance Contributions (*Contribuții în cadrul bugetului asigurărilor sociale de stat, contribuții în cadrul asigurărilor pentru șomaj*) (tscee_ro)

The unit of analysis is the individual (tu_individual_ro).

The base for the calculation of social insurance contribution is the gross employment income - *yem*. The social insurance contribution is not levied on employees' participation to company profit - *yemcs*.

The social contribution base was limited to five national average gross wages in 2016.

The unemployment contribution base is the gross wage for employees.

Employee Social insurance contribution

Employee Social insurance contribution rate is 10.5% for 2016-2017 and 25% (normal working conditions) for 2018-2019.

Employee Unemployment contribution

Employee Unemployment contribution rate is 0.5% for 2016 – 2017 and has been eliminated in 2018.

EUROMOD notes: Employee social insurance contributions (including contribution ceilings) are simulated based on the number of months in employment during the income reference period. The exemption of employee's participation in company profit from the contribution base is not simulated.

2.5.2 Employer Social and Unemployment Insurance Contributions (Contribuții in cadrul bugetului asigurărilor sociale de stat, contribuții în cadrul asigurărilor pentru șomaj) (tscer_ro)

The unit of analysis is the individual (tu_individual_ro).

The base for the calculation of social insurance contribution (il_tscer_base) is the gross employment income – *yem.*

The social insurance contribution base for employers was limited to five national average gross wages multiplied with the number of employees (2016), while for the unemployment contribution there is no upper threshold for the contribution base.

The Salary Guarantee Contribution was due only by private employers.

In 2018, the social insurance contribution of employers has been transferred to employees, while the unemployment insurance contribution has been eliminated. On the other hand, a new contribution on employers has been introduced – Work Insurance Contribution (Contributia asiguratorie pentru munca).

The contribution rates are listed below:

Table 2.5.2 Contribution rates for Social insurance Contributions, 2016-2019

Type of contribution	% of contribution base	
	2016-2017	**2018-2019**
social insurance	15.8%, 20.8%, 25.8% (differentiated by working conditions)	n/a
unemployment insurance	0.5%	n/a
work insurance	n/a	2.25%

EUROMOD notes: Employer social insurance contributions (including contribution ceilings) are simulated based on the number of months in employment during the income reference period. Only the lowest SIC rate is simulated for all individuals (i.e. increased contribution rates for employees working in special and unusual conditions are not simulated due to absence of information about work conditions). Only the entire contribution is simulated, not its division into the first and second pillars. For purposes of the salary guarantee contribution, private sector employment is imputed based on occupation.

2.5.3 Self-employed Social Insurance Contributions (*Contribuții în cadrul bugetului asigurărilor sociale de stat, contribuții în cadrul asigurărilor pentru șomaj*) (tscse_ro)

The unit of analysis is the individual (tu_individual_ro).

SIC for the self-employed

All self-employed individuals are liable to pay social insurance contribution if their annual income is above a threshold. The contribution base is the insured income declared by the self-employed, which is subject to a minimum threshold and an upper ceiling, except for income from intellectual property rights; in this case the gross income is the tax base.

If the gross annual income obtained from independent activities is below the threshold of 4.2 (0.35% X 12) national average wages the social insurance contribution is not due (2016-2017). The threshold has changed in 2018, being set to the level of the minimum wage (12 X monthly minimum wage).

In 2016, the self-employed can choose between paying 10.5% or 26.3%, the former being equivalent to only one third of the full rights in the pensions system. For intellectual property rights, the contribution rate is 10.5% and has not been changed during 2015-2017. From 2018, the contribution rate has changed to 25% and is applied also on intellectual property income.

The base for the calculation of the unemployment insurance contribution (2016-2017) is the insured sum for the voluntary insurance contracts (self-employed), but not less than the statutory minimum wage and the income from intellectual property rights for self-employed who earn this type of income (no minimum or maximum thresholds apply for income from intellectual property rights). In 2018, the unemployment insurance contribution has been dropped.

Self-employed sickness insurance contributions

The base for the calculation of Self-employed sickness insurance contributions is the difference between the self-employment income (without taking into consideration the income from intellectual property rights - *yse –yseil*) and the Social Insurance Contribution for the Self Employed – taxable income *ysetx_s*.

During 2016– 2017 the contribution rate was 0.85%, while in 2018 it was eliminated.

Self-employed work accidents insurance contribution

The base for the calculation of self-employed work accidents insurance contribution is the self-employed taxable income. During 2016 – 2017 the contribution rate was of 1%. In 2018, the contribution for work accidents has been dropped.

EUROMOD notes: If a person has both employment and self-employment income but the period spent in employment is less than 12 months, it is assumed that employment and self-employment income were generated in different periods. The contributory base for social insurance contributions is assumed to be the minimum insurable income-i.e. a third of the average gross wage for all self-employed paying this contribution. The same applies for sickness and accident insurance contributions. The exemption of income from intellectual property rights from sickness and work accident insurance is not simulated. There is a switch *tca_ro* implemented for the adjustment of tax compliance (social insurance, health insurance, income tax) in the case of self-employed working in agriculture, living in rural areas with an income level below the average gross wage. It is assumed that if the above conditions are satisfied, than the individual does not pay taxes.

2.5.4 Health Insurance Contribution (active population and pensioners) (*Contribuția de asigurări sociale de sănătate*) (tschl_ro)

The health insurance contribution is simulated separately from the other social contributions (social insurance and unemployment) and it is paid by employees, self-employed, employers and pensioners.

Employee Health insurance contributions

The unit of analysis is the individual (tu_individual_ro).

The health insurance contribution rate is 5.5% for 2016-2017 and 10% in 2018-2019, and is due on the gross wage, minus the employees' participation at company profits.

Self-employed Health insurance contributions

The unit of analysis is the individual (tu_individual_ro).

For 2016-2017, the base for the calculation of self-employed health insurance contributions was the taxable income *ysetx_s (i.e. self-employment income minus social insurance contributions)*. In 2018-2019, the tax base was set equal to the minimum wage, and if the monthly self-employment income is less than the minimum wage, the contribution is not mandatory.

During 2016 – 2017 the contribution rate was 5.5%, while in 2018-2019 it was raised to 10%.

The health insurance contribution is due on self-employment income even when the individual has employee income as well, except when the self-employment income comes from intellectual property rights. Health insurance contribution is not due on intellectual property income unless it is the sole source of income.

Employer Health insurance contributions

The unit of analysis is the individual (tu_individual_ro).

The base for the calculation of employer health insurance contribution is the gross wage bill.

The health insurance rate paid by employers was 5.2% in 2016 – 2017, while in 2018 and 2019 it is no longer applied.

Pensioners' Health insurance contribution

The unit of analysis is the individual (tu_individual_ro).

The base for the calculation of health insurance contribution for pensioners is ils_pen, which includes all income from public pensions.

Only pensioners with pensions above 740RON in 2015 and above 872RON in 2016 were due to pay this contribution as 5.5% on the difference between the pension amount and the threshold (OUG no. 17/ 2012). Starting from 2017, pensioners are exempted from paying the health insurance contribution.

EUROMOD notes: Health insurance contributions are simulated based on annual incomes. In the case of employee contributions, the exemption of employees' participation in company profits is not simulated. In the case of self-employed, the exemption of intellectual property income is not simulated. There is a switch *tca_ro* implemented for the adjustment for tax compliance (social insurance, health insurance, income tax) in the case of self-employed in agriculture, living in rural areas with income level below the average gross wage. It is assumed that if the above conditions are satisfied, than the individual does not pay taxes.

2.5.5   Credited Health Insurance Contributions (*Contributia de asigurari sociale de sanatate plătită din alte surse decât venitul persoanei asigurate*) (tscchl_ro)

The unit of analysis is the individual (tu_individual_ro).

A number of categories are entitled to credited health insurance contributions. The categories that are insured but their contribution is paid from other sources than personal income are those in the following situations: (a) military service; (b) temporary work incapacity leave as a result of work accident or professional disease; (c) childcare leave; (d) arrested persons; (e) unemployment benefit recipients; (f) victims of human trafficking (g) expelled; (h) family members of guaranteed minimum income recipients.

For 2016-2019, the contribution rates and the contribution base for the above categories are as follows: 5.5% from two minimum statutory gross wages for (a), (d), (f), (g); 5.5% from the unemployment benefit for (e); 5.5% of the indemnity for work incapacity (b); 5.5% from the social benefit received for (c), (h). These contributions are paid from the state budget ((a), (c), (d), (f), (g)), the unemployment insurance budget ((e)), the local budgets ((h)) or the employer and the Insurance Fund for work accidents and professional disease ((b)). In 2018, the contribution rate has changed from 5.5% to 10%.

The categories that benefit from credited health insurance contribution and are simulated in EUROMOD are the recipients of a sickness benefit; those on childcare leave (caring for a dependent child aged under two), unemployment benefit recipients and beneficiaries of social assistance minimum guaranteed income. These contributions are paid from the state budget, unemployment budget or local budgets.

The following categories are insured without paying contribution: children up to the age of 18, people aged between 18 and 26 years if they are pupils, students or apprentices and do not earn any income; young people up to the age of 26 if they come from the child protection system and do not earn any income and are not beneficiaries of the minimum guaranteed income; a non-earning spouse or parent of an insured person; people with disabilities who do not earn income from working arrangements, pensions or other sources, except for the disability benefit; people with illness who are included in national health programs, pregnant and child bedding women if they do not earn any income; and politically persecuted persons.

Only the following categories are simulated to be entitled to health insurance contributions without payment- a) children under 18 or under 26 if in education and without earnings b) persons in receipt of a disability pension without any additional income sources, c) married partners of an insured person who have no income of their own, d) members of families receiving the minimum guaranteed income, e) parents of an insured person with no income of their own.

EUROMOD notes: Not all categories of beneficiaries can be simulated (see above for which categories are simulated). For parents on childcare leave, no credited contribution is simulated for children turning 2 during the income reference period; for children born in the income reference period-12 months of contribution are simulated. For social assistance recipients, the contribution is credited only for the head; the children and the spouse are normally insured without paying. It is assumed that the contribution is made from a local budget only if no other contribution is made from other sources.

2.5.6   Other social contributions

Benefit Recipients Social Insurance Contributions (*Contribuții în cadrul bugetului asigurărilor sociale de stat, contribuții în cadrul asigurărilor pentru șomaj*) (tscbr_ro)

This is a credited social insurance contribution for recipients of unemployment, sickness and/or maternity benefits.

The unit of analysis is the individual (tu_individual_ro).

For recipients of unemployment benefits (thus *bun*>0), the contribution rate is 10.5% in 2016-2017 and 25% in 2018 and 2019.

For recipients of sickness benefits or maternity benefits - (*bhl+bma*)>0, the contribution rate is 10.5% of minimum wage in 2016-2017 and 25% in 2018-2019.

EUROMOD notes: The contribution is simulated only for months in receipt of sickness and maternity benefits.

2.6   Personal income tax

2.6.1   Tax unit

The tax unit is the individual - tu_individual_ro.

During the process of identifying and allocating the dependent persons in the household to an individual tax unit, another tax unit is used, tu_household_ro, which includes all household members.

2.6.2   Exemptions

In Romania, the following income categories are exempted from personal income tax:

- Social benefits (allowances, indemnities, social insurance benefits, scholarships), other than pensions and temporary work incapacity benefit. Are exempted from personal income tax: invalidity pensions for the 1st degree of invalidity, benefits for war invalids.

- Income paid for damages suffered, either received from insurance of any type or from other sources, including punitive damages.
- The income equivalent of coupons/vouchers which are awarded to individuals, according to the legislation in force.
- Income or goods from inheritance or donation
- Income gains from real estate property transfers in the following three situations: the property is regained under special laws; donation between relatives of the 3rd degree at most and between spouses; inheritance, if the succession is finalized in maximum 2 years from the moment of death.
- Income earned by the members of diplomatic missions in Romania, under the condition of reciprocity and income earned by members of Romanian diplomatic missions, councillor offices and cultural institutes placed abroad.
- Income earned by officials of international organizations for their activity in Romania.
- Income earned by foreign citizens for consultancy activities, under non-reimbursable financing agreements.
- The difference of subsidized interest for credits, under the legislation in force.
- Income from prizes gained by sportsmen winning prizes at European, World and Olympic championships.

In EUROMOD simulations, the following sources of income are exemptions from personal income tax:

- Allowance for new born children and the outfit for the new born children
- Universal child benefit
- Child raising allowance
- Child raising incentive
- Minimum social pension/ social allowance for pensioners
- Means-tested educational allowance (Money for High-School)
- Social assistance Guaranteed minimum income
- Means-tested heating benefit

2.6.3   Tax allowances

There is a **Tax allowance for pensioners** of maximum 1000 RON per month (for 2015), 1050 RON per month for policy year 2016, and respectively 2000 RON per month for 2017-2018. The tax base is the difference between the gross income less any mandatory social contributions and the tax allowance amount.

For employees there is the **Tax allowance for oneself and allocated dependents –** It is a personal deduction which is given to employees who have a monthly gross wage under or equal to 3000 RON (2015-2017) or 3600 RON (2018). The amount of the deduction is a function of the number of taxpayer's dependent persons, as seen in the table below (for a monthly gross wage not higher than 1500 RON in 2016-2017, respectively 1950 RON in 2018-2019).

Number of dependents	Personal deduction (Lei) 2016-2017	Personal deduction (Lei) 2018-2019
0	300	510
1	400	670
2	500	830
3	600	990
4 or more	800	1310

This tax deduction is applied only on wages and only at the main job or activity.

For 2016-2017, if the gross wage is between 1501and 3000 RON, the personal deduction is decreasing with income and its amount is established by applying the following formula:

Personal deduction = Personal deduction (gross wage <=1500 RON) * [1-(Gross wage – 1500) / 1500]

The *dependent person* can be the spouse, child or other family relative up to the 2nd degree (children, parents, brothers and sisters, grandparents and grandchildren) of the taxpayer or his/her spouse's with a gross taxable and non-taxable income (all income, whatever its source is included) which does not exceed 300 RON in 2016-2017, 510 RON in 2018-2019.
Children under 18 years are considered dependent persons, except for children aged between 16 and 18 who are legally employed, in which case the child is treated as a taxpayer and he could be a dependent person only if his income is below the 300 RON threshold in 2016-2017or 510 RON in 2018-2019.

Deductions for private voluntary pension contributions- contributions made to private pension plans are deductible from the tax base up to the limit of the equivalent of 400 Euros in RON. The deduction is applicable only for employees.

Other tax allowances in the Romanian system are the tax allowance for trade union fees (which are fully deductible from the tax base in the case of employees) and the tax allowance for savings in collective systems for dwelling expenses. These are not simulated in EUROMOD due to lack of information in the input dataset.

2.6.4 Tax base

The calculation of the tax base for the personal income tax is differentiated by income type.

For *employment income*, the tax base is the taxable income which is calculated as gross income minus social insurance and health contributions and minus tax allowances.

For *self-employment income*, the tax base is the difference between the net gain (income minus expenses) and social insurance and health contributions (also, losses for the last five fiscal years, if any, can be deducted as well). If the self-employed has no employees, the rule is to be taxed based on net income established by income norms, issued by the Ministry of Finance on a yearly basis depending on region (county), type of economic activity and seasonality, but self-employed without employees may choose to be taxed based on their real income.

For *investment income,* the tax base is the net gain from investments.

For *pensions,* the tax base is the difference between the gross income and social contributions and the tax allowance for pensioners.

2.6.5 Tax schedule

The personal income tax is paid by individuals as a flat rate of 16% (2015-2017) or 10% (2018-2019) levied on the income tax base.

2.6.6 Tax credits

An amount up to 2% of the personal income tax paid on employee and self-employed income can be donated to non-profit organizations or for private scholarships.

There are no tax credits simulated in EUROMOD due to the lack of necessary information.

EUROMOD notes: For purposes of calculating the employee allowance for oneself and dependents, family relationships are not checked. Any person residing in the same household with an employee may be considered a dependent if he/she satisfies the income threshold criterion or is aged below 16. Annual incomes are used in determining whether an adult may be considered dependent or not. Income used in the test of dependency include earnings, pension income, unemployment benefits, sickness benefit, child care allowance /incentive, investment

income, property income, private pensions, severance payments, educational allowances, the universal child benefit and income received by children under 16.

If there is more than 1 employee eligible to claim the tax allowance for dependents, the allocation of dependents in the household is optimized so that the maximum tax allowance may be claimed. The optimization is done by first allocating dependents to the employee with the lower income until income available to claim the tax allowance is exhausted, moving on to the employee with the next lowest income and so on.

None of the tax credits have been simulated.

Switch *TCA_ro* is implemented for the adjustment of tax compliance (social insurance, health insurance, income tax) in the case of self-employed in agriculture, living in rural areas with income level below the average gross wage. It is assumed that if the above conditions are satisfied, than the individual does not pay taxes.

3. DATA

3.1 General description

The Romanian database used in EUROMOD is the Romanian Survey on Income and Living Conditions, (also called Quality of Life Survey), which represents the implementation of the European Union Statistics on Income and Living Conditions (EU-SILC) survey in Romania. In 2019, the survey was carried out by the National Institute of Statistics. An integrated design with a rotational sample was applied, in which the sample is divided in four sub-samples, each of them similar in size and design and representative for the whole population. From one year to the next, three sub-samples are retained, one is dropped and one new sub-sample is included in the survey. In this way, the cross-sectional and longitudinal statistics are produced from the same set of sample observations.

The data is collected during the 5th month of the year following the income reference year (the calendar year: January – December 2017).

The unit of assessment is the household, defined as a person living alone or a group of persons who live together in the same dwelling and share expenditures including the joint provision of the essentials of living (the household membership definition used is according to Eurostat recommendations EU-SILC 065). The response rate of households calculated as the share of complete household interviews accepted for the database out of the number of eligible households found at contact addresses is equal to 95.41%, while the overall individual response rate is 99.89%.

In 2017, the survey was based on the use of Multifunctional Sample of Territorial Areas - the master sample "new EMZOT", a database with approximately 1.500.000 dwellings, selected according to probabilistic criteria, serving as sampling frame for all household surveys. For the first wave (new subsample selected in 2017) of the survey, the sampling plan is a two-stage probability sampling of housing units (dwellings). In the first stage, a stratified random sample of 792 areas, called Primary Sampling Units (PSUs), was designed using the 2011 Population Census. The PSUs were sampled with a probability proportional to size (number of permanent dwellings). In the second stage, dwellings are systematically selected from sampled PSUs. For the others three waves (samples), a master sample database named "old EMZOT" was used. In the first stage, a stratified random sample of 780 PSUs was designed after the 2002 Census, with probability proportional to the size and, in the second stage, a fix number of dwellings were selected from each PSU of "old EMZOT".

The EUROMOD database is built on the UDB (User Data Base) version provided by Eurostat. We use the SILC 2017 cross-sectional release.

Table 3.1. EUROMOD database description

EUROMOD database	RO_2017_a2
Original name	UDB_cRO17D
Provider	Eurostat
Year of collection	2017
Period of collection	8-26 May 2017
Income reference period	Year 2016
Sample size	7366 households, 17240 individuals (15688 aged over 16 years)
Response rate	95.41% [1]

Note: [1] household response rate is 95.41%, the overall individual response rate is 99.89%.

3.2 Data adjustment

In order to prepare the dataset to meet the EUROMOD requirements, some adjustments have been made. First, we check whether the relationships within a household are valid and consistent (e.g. the parents of the same children are the partners of one another) and some adjustments are made. Also, income from non-respondents is allocated by splitting the adjustment income among non-respondent individuals according to the main source of income by age. For consistency between demographic and income variables, all children born after the income reference period have been dropped from the database. Missing values for socio-demographic and labour market variables are checked and imputed and the consistency between labour market and income information as well.

3.3 Imputations and assumptions

3.3.1 Time period

The reference period for the socio-demographic variables is the time of data collection, May 2017, except for age, in which case two variables are included in the database, the current age (at data collection, variables rx010) and the age at the end of income reference year (variable rx020). For the labour market and economic information, the situation is similar, some of the variables are collected also for the income reference period and for the current time frame. For example, the main activity status is collected for the current period (variable rb210), but also for the income reference period (variable rb170), the information being completed with the number of month spent in work, unemployment, retirement, studying (variables pl070 –pl090) and with the main activity monthly (pl210A – pl210L).

The income reference period is the calendar year previous to the data collection period, Jan-Dec 2016, and no reconciliation of variables with different reference periods is done by using labour market information from the previous wave.

In EUROMOD it is assumed that the yearly income collected is received equally throughout the months of the year.

3.3.2 Gross incomes

The EU-SILC for Romania included in the household and individual questionnaires a long list of income components, currently existing in Romania (45 income components in the individual questionnaire and 19 income components in the household questionnaire). The aggregated personal and household income categories which are reported in the UDB version of the EU-SILC are calculated from these elementary components, and finally they are aggregated all in the gross (hy010) and disposable income (hy020) for each household who accepted the interview. It should be mentioned that EUROMOD has not gained access to the collected national SILC income components.

No additional income information is used in order to clean or improve the original/ collected data. No administrative records were used and the use of the justifying documents regarding the incomes was the respondents' decision.

The majority of income components were recorded net and the gross variables were obtained by adding to the net values, the value of income taxes retained at source and social contributions paid (in the case of wages, all sums retained at source were added). For self-employment incomes (variables py050g, py050n) the anticipated income tax and social contributions (unemployment, health and pension) were collected as well and any profit or loss.

The only income components calculated in the process of data editing were:
- the value of income tax retained at source for salaries (flat rate of 16% for income tax), the respondents being asked only if they paid or not the income tax for wages;
- the exact value of the social insurance contribution retained at source for salaries, if this was declared in the form of an interval.
- the value of income tax retained at source and health insurance contributions for pensions (if the value of the pension is more than 1000 RON);
- the interest for dividends and money withdrawn from bank.

3.3.3   Disaggregation of harmonized variables

An important number of income components had to be imputed from the aggregate amounts, as they were not available in the EU-SILC UDB version of the survey. These are the following:

- Disability benefit – based on the disaggregation of *py130* which includes the disability benefit and the invalidity pension. It is assumed that the maximum disability benefit is received by the seriously disabled persons (with a positive disability status), the remaining amount is considered invalidity pension. As the invalidity pension cannot be received at the same time with old age pension person, if this is the case, we assume that they are received in different periods over the year.
- Invalidity pension – based on the residual of *py130*, after the disability benefit has been subtracted, under the condition that a person is not eligible for old-age pension (*py100*) and invalidity pension.
- Universal child benefit – disaggregated from family and children allowances (*hy050*) based on the benefit rules (number of children and their ages).
- Child raising benefit – disaggregated from family and children allowances (*hy050*) based on benefit rules: the existence of a child aged less than two in the income reference year, the number of months the mother is entitled to receive the benefit during the income reference period, mother's eligibility (based on work history).
- Maternity benefit – disaggregated from family and children allowances (*hy050*) based on benefit rules: the existence of a child born in income reference period, number of months the mother is eligible to receive the benefit.
- Means-tested family benefits – disaggregated from family and children allowances (*hy050* based on the residual family benefits by subtracting the universal child benefit, the child raising benefit and the maternity benefit.
- Minimum social pension – disaggregated from the sum of all public pensions received; if the sum is around 350 RON (the minimum pension), we assume the person is receiving the guaranteed minimum pension and split the pension into contributory and non-contributory parts. The amount of the contributory part (approx. 14% of the total) has been imputed based on external statistics. All contributory pensions have been recalculated by subtracting the value of the non-contributory part (minimum social pension).
- Unemployment benefit – recomputed based on benefit rules: the benefit entitlement period in months, work history for those with an unemployment spell and the bonus percent depending on work history.
- Severance payments – based on the observed differences between the collected unemployment benefit (*py090*) and the recomputed unemployment benefit.
- Financial capital asset – based on the UDB variable on investment income and external information on the average interest rate for financial market during the year 2016.

3.4   Updating

The updating factors are used in order to update the monetary variables for the time inconsistencies between the input dataset and the policy year. Socio-demographic characteristics and labour market variables are not updated, remaining at their initial values. Updating factors are generally based on indexation rules and/or changes in the average value of an income component between the year of the data and the policy year when indexation is not available. For detailed information about the construction of each updating factor as well as the sources that have been used, see Annex 1.

4.   VALIDATION

4.1   Aggregate Validation

The macro-validation is based on external statistics from official survey data (HBS, LFS) and from administrative records (budgets, number of social benefits' recipients). Differences between input data and external statistics may result also from the different accounting, i.e. external statistics is often based on monthly average or situation at the end of the year, while EUROMOD gives annual results, which could be relevant especially for the number of recipients/ taxpayers.

4.1.1   Components of disposable income

The components of disposable income, as they are defined in EU-SILC vs. EUROMOD can be found in the table below. There are a few differences between the two definitions for disposable income. *Repayments/receipts for tax adjustment* are not taken into account in EUROMOD simulations for the disposable income. Also, in EUROMOD we use a module for the *optimization of tax allowances* which could lower taxes and increase the disposable income.

Table 4.1 Components of disposable income

	EUROMOD [2016-2019]	EU-SILC [2017]
	ils_dispy	HY020
Employee cash or near cash income	+	+
Employer's social insurance contribution	-	-
Contributions to individual private pension plans	0	0
Cash benefits or losses from self-employment	+	+
Pension from individual private plans	+	0
Unemployment benefits	+	+
Old-age benefits	+	+
Survivor' benefits	+	+
Sickness benefits	+	+
Disability benefits	+	+
Education-related allowances	+	+
Income from rental of a property or land	+	+
Family/children related allowances	+	+
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	-	-
Regular inter-household cash transfer paid	-	-
Tax on income and social contributions	-	-
Repayments/receipts for tax adjustment	0	+

4.1.2 Validation of incomes inputted into the simulation

The simulation results on the number of employed are generally consistent with the information offered by the external statistics. The number of unemployed is seriously below external statistics between 2016 and 2019. It should be also noted that the unemployed are under-represented in the original dataset. The differences between EUROMOD and external statistics can be explained also by the different accounting for unemployed and employed, which are computed from external sources as monthly and quarterly averages over the year (see Annex2, Table 4.2).

The simulation results on the number of employees are consistent with the information offered by the external statistics, while the number of self-employed is overestimated in EUROMOD as compared to LFS data, possibly due to the fact that LFS data on employment status refer only the main economic status and thus do not capture self-employed who are also employees while both employment and self-employment are recorded for all individuals in EUROMOD (see Annex2, Table 4.3).

The average employment income is close to external benchmarks, as well as the total employment income. (See Annex 2, Table 4.4).

The self-employment income in EUROMOD is slightly overestimated as consequence of the overestimation of the number of self-employed persons. (See Annex 2, Table 4.4).

The estimations for rent income are much lower in EUROMOD as compared with the external data (See Annex 2, Table 4.4).

While the simulation results regarding the old-age pension are relatively consistent with the information offered by the external statistics, there are discrepancies between the two sources of information in the case of disability (invalidity) pension, but also in the case of survivors' pension, both in number of recipients and amounts. These can be explained by the SILC aggregation of benefits for persons over 65, namely the disability and survivors benefits/ pensions for people aged over the standard retirement age are counted as old age benefits. The discrepancies are substantial in the case of the disability benefits, which are severely underestimated as the dataset underestimates as well the number of disabled persons (See Annex 2, Table 4.5 and Table 4.6).

4.1.3   Validation of outputted (simulated) incomes

The number of recipients of *child raising allowance* is significantly smaller than official statistics. This could be explained by the small number of children aged 0 in the dataset, but also by the fact that we do not simulate benefits for children that turn 2 years during income reference period. The child raising allowance is differentiated for disabled children up to the age of 3, which we do not simulate, so this could also influence our results compared to the external statistics.

The number of recipients of the *child raising incentive* is significantly overestimated in 2016, but relatively close to external statistics for 2017-2018. The main explanation for this gap in 2016 is the non-take-up of the benefit, as the amount is fairly small and the effort involved in applying is significant. However, starting from 2017 the benefit amount is 30% higher, which has probably encouraged benefit take up. The benefit is assigned for all working months, based on the variable number of months in employment in the dataset, which could be problematic. On the other hand, it could be an over-estimation for children born during income reference period, as the number of months in work could be referring to the period before birth (See Annex 2, Table 4.7).

The number of recipients of the *guaranteed minimum income* is severely overestimated. This can be explained by the fact that not all the conditions for receiving social assistance can be simulated in the model – the list of basic necessity goods that are eligibility conditions for receiving social assistance is not implemented in the model, and neither is the eligibility condition regarding community services that must be done by the recipient (or a household member). A calibration has been implemented in the model to improve the simulation eliminates receipt for families that are headed by persons aged 18-26. After the calibration the number of recipients is overestimated approximately 2.5 times in 2016-2017 and 4.8 times in 2018 (See Annex 2, Table 4.7).

The *unemployment benefit* recipients are severely under-simulated. At least part of the under-simulation is explained by the too low number of unemployed in the dataset (See Annex 2, Table 4.7).

The number of recipients *of Money for high-school* overestimated. This can be explained by the non-take up phenomenon and the fact that certain conditions cannot be simulated in the model (such as educational performances, absenteeism etc.) (See Annex 2, Table 4.7).

The *salary guarantee contribution* is overestimated compared to external data. A possible explanation is that the guarantee contribution is paid only by private employers, while the type of the employer is not observed in the data and it was roughly imputed based on occupation. The results underestimate the number of public employers (See Annex 2, Table 4.7).

The number of contributors to *health insurance* is slightly underestimated. The external statistic is the sum of employed contributors and pensioner contributor, so persons who are both employed and pensioners are counted twice, as well as those who are both employees and self-employed (See Annex 2, Table 4.7).

The *support allowance* for families with children is strongly overestimated. This can be explained by the fact that not all the conditions for receiving support allowance can be simulated in the model – the list of basic necessity goods that are eligibility conditions is not implemented in the model. As being a means-tested benefit, the number of recipients could also be affected by the non-take up behaviour. (See Annex 2, Table 4.7).

The number of recipients of the *guaranteed minimum pension* (minimum social pension) is under estimated. (See Annex 2, Table 4.7).

Self-employed social insurance contributions: No clear external information on the number of self-employed who pay social insurance contribution is available. The external data we use for macro-validation stands for the total number of self-employed.

Other taxes are in-line with the external information provided (See Annex 2, Table 4.7).

The difference between the number of beneficiaries from simulation and external statistics leads to discrepancies between the simulated amounts and the external statistics for the benefits under discussion. This is the case of the *child raising allowance,* which is below the external benchmark, but also for the *family support allowance, guaranteed minimum income, heating aid* and *money for high-school* which are much higher than external statistics.

The *guaranteed minimum income* amounts are over-simulated. The discrepancy may be explained by the large number of beneficiaries; but, as the over-simulation is less severe in the case of amounts compared that of the number of beneficiaries indicates that, at least partly, results may be explained by the non-take up of small benefits.

The total *unemployment benefit* amounts are severely under simulated. At least part of the under-simulation is explained by the too low number of unemployed, but also by the small number of months in unemployment in the dataset compared to external data.

The *heating aid* amounts are over simulated. This is because information on several elements that enter the policy does not exist in the dataset and, as a result, is fully imputed based on averages per type of heating and area of residence. The beneficiaries go through a supplementary means-testing on goods, which is not simulated in EUROMOD. For the moment, the simulation will not be changed.

Total revenues from *the personal income tax* are under-simulated. It is not clear yet what explains the observed difference. One possibility is that the optimization of the employee tax allowance leads to its overestimation and subsequent to a very small tax base, but still the difference remains. It could be also a poor coverage of high-income households in the survey.

Self-employed social insurance contributions - we simulate the contribution paid on the minimum contribution base which might explain the under simulation of amounts for 2016 and 2017. Starting from 2018, the over simulation could be at least in part the result of the newly introduced exemption from paying social insurance contribution in the public system if a private pension insurance exists.

Employer accident insurance – No clear information from information from external sources for 2017.

Simulated amounts of *credited social contributions on behalf of recipients of unemployment, maternity & sickness benefits* are too low for 2016 and 2017. A possible explanation stands in the number of unemployed and simulated unemployment benefits in the data that are too low. It is not known whether receipt of maternity and sickness benefits is accurately captured in the data. No clear information from information from external sources for 2018.

Health insurance contributions are underestimated for 2016 and 2017, and information from external sources on this is limited for 2018. Also, the contribution rate increased from 5.5% to 10%, which could explain to some extent the overestimation in 2018.

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

The income distribution indicators in EUROMOD are relatively close to those generated directly using SILC data (See Annex2, Table 4.9). Mean and median incomes in EUROMOD are very close to external benchmarks, as is the Gini coefficient. The decile ratio is however lower in EUROMOD. These differences and their sign are more obvious in the detailed income distribution by decile shares, which is more divergent between the two sources at the bottom of the distribution. The difference is particularly large in the case of the first decile, while discrepancies are small in the case of the other deciles. The over-simulation of benefits may result in over simulation of income at the bottom deciles, and combined with the under-simulation of tax in the 10th decile leads to the under simulation of the S80/ S20 measure.

The aggregated amount of income taxes simulated in EUROMOD is below the external figures, this is what could lead to too high disposable income in EUROMOD, thus a possible explanation for the distributional differences. However, overall differences between EUROMOD generated results and the external benchmark are small.

4.2.2 Poverty rates

The calculations based on EUROMOD are generally consistent with the information from SILC regarding the poverty rates (See Annex2, Table 4.10). In general, EUROMOD produces slightly lower poverty rates compared to SILC. The alignment of poverty rates between the two sources is stronger at the higher poverty lines suggesting that there may be some overestimation of incomes at the very bottom of the distribution in EUROMOD.

Poverty rates using the customary 60% of median equivalised disposable income threshold are relatively well aligned for all age groups and both genders.

4.3 Validation of minimum wage

Including minimum wage in the simulations has little impact on the overall results. As expected, employment, disposable income, simulated taxes and social insurance contributions increase slightly while social assistance remains almost the same. Poverty also is slightly lower when minimum wage is simulated. However, the estimated differences are very small indicating that the number of individuals with recorded hourly wages below the minimum is very small in the dataset.

4.4 Summary of "health warnings"

This final section summarises the main findings in terms of particular aspects of the part of EUROMOD or its database that should be borne in mind when planning appropriate uses of the model and when interpreting results.

- The sample is relatively small and is calibrated by age group (except for the groups 0-15 years and 75+years), residence (rural/ urban) and gender. Therefore, care should be taken in analysing and interpreting the results for small groups.
- The database used in the simulations is the 2017 SILC with 2016 income data, for the subsequent years the monetary variables are uprated with income specific uprating factors. The socio-demographic characteristics and labour market variables are not updated, remaining at their initial values.
- Many of the benefit income variables in the original SILC dataset had to be disaggregated for taxation and social insurance contribution purposes; this inevitably introduces an amount of error.
- The macro-validation is based on external statistics from official survey data (HBS, LFS) and from administrative records (budgets, number of social benefits' recipients) as well.
- Differences between input data and external statistics may result also from the different accounting, i.e. external statistics is often based on monthly average or situation at the end of the year, while EUROMOD gives annual results, which could be relevant especially for the number of recipients/taxpayers.
- While the simulation results on the number of employed are consistent with the information offered by the external statistics, it is obvious that there are quite significant differences between simulation results and the

external statistics regarding the number of unemployed; in particular, the number of unemployed is too low in EUROMOD compared with external benchmarks.

- Some types of market incomes such as rental or investment income are not fully captured while total employment income is over estimated in the dataset.

- The number of recipients of the guaranteed minimum income is severely overestimated in EUROMOD. This can be explained by the fact that not all the conditions for receiving social assistance can be simulated in the model – the list of basic necessity goods that are eligibility conditions for benefiting of social assistance is not implemented in the model, and neither is the eligibility condition regarding community services that must be done by the recipient (or a household member).

- Total revenues from personal income tax are under simulated. It is not clear yet what explains the observed difference. One possibility is that the optimisation of the employee tax allowance leads to its overestimation and subsequent to a too small tax base, but still the difference remains. It could also be due to a poor coverage of high income households in the survey.

- The family allowances related to children less than 2 years (*child raising allowance*) are under-simulated both in numbers and amount mainly because there are not enough children aged 0 in the dataset.

- The income distribution slightly differs between the two sources, EUROMOD and SILC. The possible explanations that could be mentioned concerning the differences in the income distribution is the *optimisation of tax allowances* which is done in EUROMOD, thus the disposable income of especially low income households is lifted up by this procedure.

- With the exception of the guaranteed minimum income where some adjustments are made, 100% benefit take-up is assumed.

- Adjustments for tax compliance (social insurance, health insurance, income tax) are implemented in the case of self-employed in agriculture, living in rural areas with income level below the average gross wage.

5. REFERENCES

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- Law no.416/2001
- Law no. 116/2002
- Law no. 19/2000
- Law on social insurance budget
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ANNEX 1: UPRATING FACTORS

Factor name		2016	2017	2018	2019	Source
Harmonised CPI (2005=100)	$f_HICP	152.434	154.083	160.37	160.37	Source: Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en
Average monthly wage (gross), Lei	$f_yem	2809	3223	4357	4357	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Labour Cost Survey, table FOM107C) 2014: monthly data Decembre - Ministry of Labour, http://www.mmuncii.ro/j33/index.php/ro/transparenta/statistici/date-statistice
Average monthly self-employment income, Lei	$f_yse	1305	1466.3	1625.3	1625.3	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Household Budget Survey, table BUF104I),
Average monthly property income, Lei	$f_ypr	4.53	3.88	2.36	2.36	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Household Budget Survey, table BUF104I),
Average monthly old-age pension (public),Lei	$f_poa	1149	1280	1390	1390	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (National House of Pensions, table PNS102A),
Average monthly survivors pension, Lei	$f_psu	530	617	669	669	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (National House of Pensions, table PNS102A),
Average monthly disability pension, Lei	$f_pdi00	583	619	642	642	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (National House of Pensions, table PNS102A),
Lagged average monthly wage (gross), Lei	$f_prevyem	2555	2809	3223	3223	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Labour Cost Survey, table FOM107C)
Average monthly universal child benefit (bchnm), Lei	$f_bchnm	100.46	100.78	100.76	100.76	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,

Average monthly means-tested family benefit (bchmt), Lei	$f_bchmt	160.34	162.2	164.69	164.69	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,
Avearge monthly means-tested social assistance (bsa), Lei	$f_bsa	276	278	272	272	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,
Average annualy heating benefit (bhoen), Lei	$f_bhoen	260.83	266.13	291.17	291.17	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,
Average monthly child raising allowancs (bccnw), Lei	$f_bccnw	1216.34	1782.77	1916.64	1916.64	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,
Average monthly disability benefit (bdi), Lei	$f_bdi	141.06	140.36	191.8	191.8	Source: Ministry of Labour, Family, Social Protection and Elderly, http://www.mmuncii.ro/j33/images/buletin_statistic/,
Value of the basic unemployment benefit, Lei	$f_bun_Index	375	375	375	375	Source: Ministry of Labour, Family, Social Protection and Elderly
Value of the pension point (bais for all types of public pensions indexation), Lei	$f_pen_Index	871.7	917.5	1000	1000	Source: National House of Pensions, http://www.cnpas.org/portal/media-type/html/language/ro/user/anon/page/pensions.psml?weblog_name=pensions&subject_id=1141805689624
Child allowance- Benefit amount, Lei	$f_bchnm_Index	84	84	84	150	Source: Ministry of Labour, Family, Social Protection and Elderly
Allowance for newborn - Benefit amount, Lei	$f_bchba_Index	380	380	380	380	Source: Ministry of Labour, Family, Social Protection and Elderly

Average monthly unemployment benefit (bun), Lei	$f_bun	443	460	460	460	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (table SOM105A)
Household disposable income, Lei	$f_yds	2448.75	2817.383	3047.413	3047.413	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Household Budget Survey, table BUF104I, 106I),
Educational allowance, Lei	$f_bed_Index	180	180	180	180	Source: Ministry of Labour, Family, Social Protection and Elderly
Private pensions	$f_ypp	1	1	1	1	Consider nominal value unchanged
Guaranteed minimum pension	$f_bsaoa	400	520	520	640	Source: Maximum level for guaranteed minimum level
Leaded average monthly wage	$f_yemLead	3223	3223	3223	3223	Source: National Institute of Statistics, https://statistici.insse.ro/shop/, (Labour Cost Survey, table FOM107C) 2014: monthly data Decembre - Ministry of Labour, http://www.mmuncii.ro/j33/index.php/ro/transparenta/statistici/date-statistice
Harmonised CPI (2005=100)	$f_HICP	152.434	154.083	160.37	160.37	Source: Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en

ANNEX 2: VALIDATION TABLES

ANNEX 3: POLICY EFFECTS 2018-2019

Table A1 and Figure A1 show the effect of 2019 policies on the mean equivalised household disposable income by income component and income decile group, as a percentage of mean equivalised household disposable income in 2018. The effect is estimated as a difference between simulated household net income under the 2019 tax-benefit policies (deflating monetary parameters by *projected* Eurostat's Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2018 policies.

As a result of policy changes between 2018 and 2019 the disposable income of all households has increased on average by approximately 0.9% (see Table A1 and Figure A1). By deciles, the income changes are noticeably different with the poorest deciles experiencing a very large increase compared to the richer deciles.

The relatively large effects that we observe for disposable income in the case of the poorest deciles are more likely the consequence of a combination of an increase in the state allowance for children, its amount growing by 50% for children under two years and by 79% for other children. Changes in self-employment income contributions between 2018 and 2019 and an increase by 9.5% on the national minimum wage, well above the consumer prices index used for monetary parameters deflation, might also have also had an effect, especially for the poorest deciles (on average around 6.2 for the lowest three deciles).

The effects are noticeable in the increase of income from non means-tested benefits, by 1.85% overall, but also for the poorest decile, by 11.96%, where most of the families with more than onechildren belong to.

On the other hand, in the area of means-tested benefits, there have been two major changes with large income effects. One of the changes is related to the educational allowance for high-school students, which increased by 39%, but also its threshold for income testing has been multiplied 3.3 times (from 150 Lei to 500 Lei per family member). This change is however not manifested with a decrease of 3.04% reported for means-tested benefits in the poorest decile, but seems to have increased them for the second decile (2.91%). The other policy change concerns the minim social pension setting a lower limit on every public pension, which has been raised by 23%.

Table A1: Policy effects for RO in 2018-2019, using the CPI indexation [**1.035837**] on dataset RO_2017_a2, %

Decile	Original income	Public pensions	Means-tested benefits	Non-means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.26	-3.04	11.96	0.00	-0.79	0.00	0.12	8.00
2	0.00	-1.05	2.91	5.40	0.00	-0.09	0.00	0.00	7.17
3	0.00	-1.13	1.11	3.74	0.00	-0.19	0.00	-0.08	3.45
4	0.00	-1.13	0.48	2.64	0.00	-0.14	0.00	-0.10	1.76
5	0.00	-1.09	0.16	2.50	0.00	-0.15	0.00	-0.09	1.32
6	0.00	-0.92	0.26	1.63	0.00	-0.08	0.00	-0.11	0.78
7	0.00	-1.00	0.26	1.47	0.00	-0.08	0.00	-0.11	0.54
8	0.00	-1.03	0.09	1.02	0.00	-0.07	0.00	-0.12	-0.10
9	0.00	-1.05	0.10	0.70	0.00	-0.10	0.00	-0.10	-0.45
10	0.00	-1.06	0.02	0.57	0.00	-0.08	0.00	-0.01	-0.56
Total	0.00	-1.03	0.25	1.85	0.00	-0.12	0.00	-0.07	0.89

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 2018, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2019 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure A1: Policy effects in 2018-2019, using the CPI-indexation [1.0358378170638], %
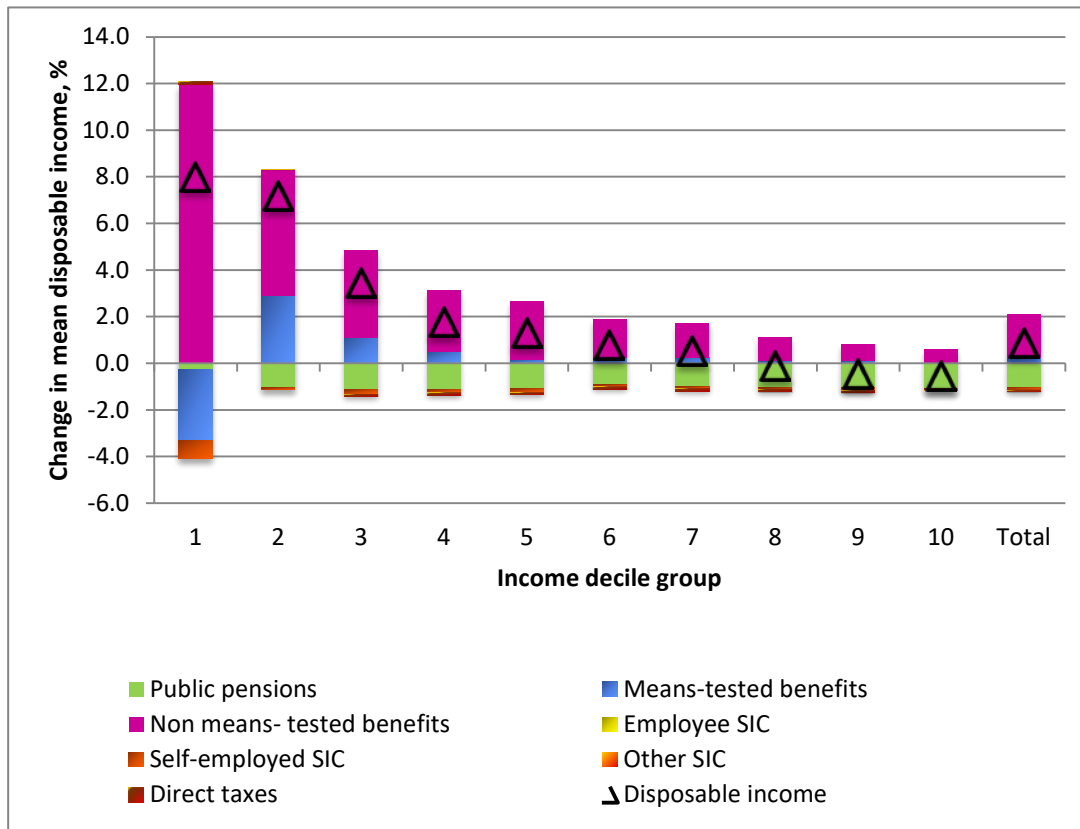
Table 4.2-Number of employed and unemployed

	EUROMOD	External				Ratio			
	2016	2016	2017	2018	2019	2016	2017	2018	2019
Number of employed	8279.638	8448.777	8670.556	8688.539	N/A	0.98	0.95	0.95	N/A
Number of unemployed	244.3433	529.869	449.331	379.678	N/A	0.46	0.54	0.64	N/A

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

	EUROMOD	External				Ratio			
	2016	2016	2017	2018	2019	2016	2017	2018	2019
Employment income	6251.309	6200.6	6389.7	6497.2	N/A	1.01	0.98	0.96	N/A
Self-employment income	2168.833	1444.1	1482	1412.1	N/A	1.50	1.46	1.54	N/A

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

	EUROMOD				External				Ratio			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
Average employment income	23470.89	26930.11	37499.95	37499.95	24552.00	28608.00	32347.00	#N/A	0.96	0.94	1.16	#N/A
Employment income	146723.80	168348.50	234423.80	234423.80	152238.09	182765.58	210164.48	#N/A	0.96	0.92	1.12	#N/A
Self-employment income	16480.23	18517.22	19751.02	19751.02	13248.72	13455.36	14689.24	#N/A	1.24	1.38	1.34	#N/A
Rent income	19.82	16.98	11.55	11.55	385.22	329.94	224.50	#N/A	0.05	0.05	0.05	#N/A
Investment income	290.02	293.15	305.12	305.12	N/A	N/A	N/A	#N/A	N/A	N/A	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			
	2016	2016	2017	2018	2019	2016	2017	2018	2019
Benefits									
Old-age pensions	4137.37	3566.00	3629.00	3685.00	N/A	1.16	1.14	1.12	N/A
Disability (invalidity) pensions	439.87	629.00	587.00	549.00	N/A	0.70	0.75	0.80	N/A
Survivor pensions	320.48	542.00	531.00	525.00	N/A	0.59	0.60	0.61	N/A
Disability benefit	89.49	1357.19	1397.49	1362.98	N/A	0.07	0.06	0.07	N/A
Sickness benefit	5.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance contributions									
Property tax	6700.81	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			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
Benefits												
Old-age pensions	49562.77	52166.85	56857.61	56857.61	49168.01	55741.44	61465.80	#N/A	1.01	0.94	0.93	#N/A
Disability (invalidity) pensions	3628.81	3819.47	4162.91	4162.91	4400.48	6466.39	4229.50	#N/A	0.82	0.59	0.98	#N/A
Survivor pensions	2241.23	2358.99	2571.10	2571.10	3447.12	3931.52	4214.70	#N/A	0.65	0.60	0.61	#N/A
Disability benefit	315.30	313.74	428.72	428.72	2297.31	2353.83	3137.03	#N/A	0.14	0.13	0.14	#N/A
Sickness benefit	51.27	56.37	64.68	90.07	N/A	N/A	N/A	#N/A	N/A	N/A	N/A	#N/A
Maternity benefit	#N/A	#N/A	#N/A	#N/A	N/A	N/A	N/A	#N/A	N/A	N/A	N/A	#N/A
Taxes and Social Insurance contributions												
Property tax	1775.13	1794.34	1867.55	1867.55	N/A	N/A	N/A	#N/A	N/A	N/A	N/A	#N/A

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

	EUROMOD				SILC	Ratio	External				Ratio			
	2016	2017	2018	2019	2016	2016	2016	2017	2018	2019	2016	2017	2018	2019
Benefits														
Universal child benefit (Child state allowance)	4003.44	4003.44	4003.44	4003.44	2335.32	1.71	3662.79	3635.79	3610.50	N/A	1.09	1.10	1.11	N/A
Child raising allowance	45.74	45.74	45.74	45.74	22.48	2.04	141.15	159.37	174.33	N/A	0.32	0.29	0.26	N/A
Child raising incentive (Monthly incentive)	100.07	100.07	100.07	100.07	0.00	N/A	41.33	74.59	90.43	N/A	2.42	1.34	1.11	N/A
Complementary family allowance	1386.08	1231.89	1164.94	1067.06	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Support allowance for the single parent family	213.20	191.13	167.84	139.14	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Family support allowance	1599.28	1423.01	1332.77	1206.21	2023.39	0.79	273.34	257.54	224.44	N/A	5.85	5.53	5.94	N/A
Social assistance (Guaranteed minimum income)	621.64	596.25	972.80	986.67	300.59	2.07	244.81	233.97	202.98	N/A	2.54	2.55	4.79	N/A
Unemployment benefit	3.05	3.05	3.05	3.05	3.05	1.00	90.11	72.92	62.00	N/A	0.03	0.04	0.05	N/A
Guaranteed minimum pension	265.12	630.51	463.40	1086.51	103.50	2.56	570.31	811.47	1061.46	N/A	0.46	0.78	0.44	N/A
Money for highschool	131.28	124.52	147.41	271.05	0.00	N/A	44.79	33.06	40.86	N/A	2.93	3.77	3.61	N/A
Heating aid	2050.83	1856.12	1727.51	1393.53	0.00	N/A	569.58	456.84	263.98	N/A	3.60	4.06	6.54	N/A
Taxes and Social Insurance contributions														
Personal income tax	8208.32	7124.78	7442.24	7367.84	0.00	N/A	7644.77	7871.76	7909.31	N/A	1.07	0.91	0.94	N/A
Employee social insurance contributions (old-age, invalidity and death)	6251.31	6251.31	6251.31	6251.31	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.96	N/A
Employee unemployment insurance contributions	6251.31	6251.31	0.00	0.00	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.00	N/A
Self-employed social insurance contributions (old-age, invalidity and death)	301.92	296.41	228.43	209.12	0.00	N/A	1444.13	1482.03	1412.13	N/A	0.21	0.20	0.16	N/A
Self-employed sickness insurance contributions	301.92	296.41	0.00	0.00	0.00	N/A	1444.13	1482.03	1412.13	N/A	0.21	0.20	0.00	N/A
Self-employed accident insurance contributions	301.92	296.41	0.00	0.00	0.00	N/A	1444.13	1482.03	1412.13	N/A	0.21	0.20	0.00	N/A
Employer social insurance contributions (old-age, invalidity and death)	6251.31	6251.31	0.00	0.00	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.00	N/A
Employer unemployement insurance contributions	6251.31	6251.31	0.00	0.00	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.00	N/A
Employer sickness insurance contributions	6251.31	6251.31	0.00	0.00	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.00	N/A
Employer accident insurance contributions	6251.31	6251.31	0.00	0.00	0.00	N/A	6200.64	6389.73	6497.19	N/A	1.01	0.98	0.00	N/A
Salary guarantee contribution	5212.65	5212.65	0.00	0.00	0.00	N/A	4003.50	3693.60	N/A	N/A	1.30	1.41	N/A	N/A
Health insurance contributions paid by employees, self-employed, pensioners etc.	9180.34	6890.76	8423.44	8423.44	0.00	N/A	12381.77	12618.76	12668.31	N/A	0.74	0.55	0.66	N/A
Social insurance contributions paid on behalf of the unemployed and recipients of sickenss and maternity benefits	8.59	8.59	8.59	8.59	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Health insurance contributions paid on behalf of recipients of child raising allowance, sickness and maternity indemnities and recipients of the guaranteed minimum income	633.03	609.08	392.22	386.91	0.00	N/A	476.08	466.25	439.31	N/A	1.33	1.31	0.89	N/A

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

	EUROMOD				SILC				Ratio				External				Ratio			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
Benefits																				
Universal child benefit (Child state allowance)	4231.159	4231.159	4231.159	7459.24	3944.10	3944.10	3944.10	7043.03	1.07	1.07	1.07	1.06	4415.501616	4396.915235	4365.541008	#N/A	0.96	0.96	0.97	#N/A
Child raising allowance	294.664	605.2891	613.8834	613.8834	88.47	129.67	139.41	139.41	3.33	4.67	4.40	4.40	2060.258501	3409.424201	4009.48497	#N/A	0.14	0.18	0.15	#N/A
Child raising incentive (Monthly incentive)	556.0316	722.8411	722.8411	722.8411	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	263.9329	575.599491	704.224572	#N/A	2.11	1.26	1.03	#N/A
Complementary family allowance	2349.734	2167.475	2084.916	1900.18	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	N/A	N/A	#N/A
Support allowance for the single parent family	421.4403	391.2402	349.315	284.1068	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	N/A	N/A	#N/A
Family support allowance	2771.174	2558.715	2434.231	2184.287	1042.52	1054.61	1070.80	1070.80	2.66	2.43	2.27	2.04	525.91992	501.271395	443.539554	#N/A	5.27	5.10	5.49	#N/A
Social assistance (Guaranteed minimum income)	1123.652	1070.892	4266.808	4421.502	589.32	593.59	580.78	580.78	1.91	1.80	7.35	7.61	811.680726	783.876013	663.255265	#N/A	1.38	1.37	6.43	#N/A
Unemployment benefit	8.210383	8.345395	8.565455	9.237859	5.03	5.22	5.22	5.22	1.63	1.60	1.64	1.77	498.024361	437.378	383.243526	#N/A	0.02	0.02	0.02	#N/A
Guaranteed minimum pension	531.6178	1061.493	854.0737	1995.123	177.92	231.30	231.30	284.68	2.99	4.59	3.69	7.01	916.568292	1388.27536	2236.67278	#N/A	0.58	0.76	0.38	#N/A
Money for highschool	283.5609	268.968	318.4044	813.1392	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	96.74208	71.40312	122.589	#N/A	2.93	3.77	2.60	#N/A
Heating aid	346.6728	300.2148	309.7553	274.0498	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	148.565951	121.577892	76.862523	#N/A	2.33	2.47	4.03	#N/A
Taxes and Social Insurance contributions																				
Personal income tax	19403.4	21805.06	14316.79	14275.33	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	27454	29930.2	20508.25	#N/A	0.71	0.73	0.70	#N/A
Employee social insurance contributions (old-age, invalidity and death)	15401.49	17676.59	58605.95	58605.95	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	16398.9	19713.7	59113.659	#N/A	0.94	0.90	0.99	#N/A
Employee unemployment insurance contributions	733.619	841.7423	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	778.893	940.337	N/A	#N/A	0.94	0.90	N/A	#N/A
Self-employed social insurance contributions (old-age, invalidity and death)	354.9917	406.9646	1295.997	1298.267	0	0	0	0	N/A	N/A	N/A	N/A	465.1	522.9	1009.963	#N/A	0.76	0.78	1.28	#N/A
Self-employed sickness insurance contributions	28.73744	32.94477	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	2.9	7.643	N/A	#N/A	9.91	4.31	N/A	#N/A
Self-employed accident insurance contributions	45.03748	51.28428	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.011	0.011	N/A	#N/A	4094.32	4662.21	N/A	#N/A
Employer social insurance contributions (old-age, invalidity and death)	23175.58	26599.06	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	25948.4	30494.8	2745.464	#N/A	0.89	0.87	0.00	#N/A
Employer unemployement insurance contributions	733.619	841.7423	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	809.321	933.333	N/A	#N/A	0.91	0.90	N/A	#N/A
Employer sickness insurance contributions	1246.961	1430.76	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	1339.208	778.275	N/A	#N/A	0.93	1.84	N/A	#N/A
Employer accident insurance contributions	220.0857	252.5227	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	349.567	411.957	N/A	#N/A	0.63	0.61	N/A	#N/A
Salary guarantee contribution	294.4341	337.8288	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	294.437	365.821	N/A	#N/A	1.00	0.92	N/A	#N/A
Health insurance contributions paid by employees, self-employed, pensioners etc.	9589.545	10184.54	35295.84	36416.96	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	20061.215	23179.233	26814.129	#N/A	0.48	0.44	1.32	#N/A
Social insurance contributions paid on behalf of the unemployed and recipients of sickenss and maternity benefits	8.624168	9.880277	30.23269	33.06208	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	166.945	105.169	87.54553	#N/A	0.05	0.09	0.35	#N/A
Health insurance contributions paid on behalf of recipients of child raising allowance, sickness and maternity indemnities and recipients of the guaranteed minimum income	77.62318	92.44344	141.3044	137.6813	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	185.048	232.698	24.979	#N/A	0.42	0.40	5.66	#N/A

Table 4.9-Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
D1	2.54	2.38	1.38	1.47	2.00	1.70	0.00	#N/A	1.27	1.40	N/A	#N/A
D2	4.29	4.20	3.46	3.70	4.10	3.90	0.00	#N/A	1.05	1.08	N/A	#N/A
D3	5.77	5.70	5.11	5.33	5.60	5.30	0.00	#N/A	1.03	1.08	N/A	#N/A
D4	7.10	6.93	6.70	6.80	7.00	6.70	0.00	#N/A	1.01	1.03	N/A	#N/A
D5	8.35	8.29	8.17	8.21	8.30	8.00	0.00	#N/A	1.01	1.04	N/A	#N/A
D6	9.74	9.74	9.91	9.89	9.70	9.40	0.00	#N/A	1.00	1.04	N/A	#N/A
D7	11.26	11.24	11.48	11.47	11.30	11.20	0.00	#N/A	1.00	1.00	N/A	#N/A
D8	13.06	13.15	13.69	13.52	13.30	13.30	0.00	#N/A	0.98	0.99	N/A	#N/A
D9	15.46	15.56	16.16	15.95	15.80	16.00	0.00	#N/A	0.98	0.97	N/A	#N/A
D10	22.42	22.81	23.93	23.66	23.10	24.50	0.00	#N/A	0.97	0.93	N/A	#N/A
Median	12794.53	14266.56	15516.66	15735.19	12314.00	15004.00	0.00	#N/A	1.04	0.95	N/A	#N/A
Mean	14072.73	15703.82	16990.03	17311.14	13736.00	17475.00	0.00	#N/A	1.02	0.90	N/A	#N/A
Gini	31.32	32.10	35.77	34.86	33.10	35.10	0.00	#N/A	0.95	0.91	N/A	#N/A
S80/S20	5.55	5.83	8.29	7.65	6.50	7.20	0.00	#N/A	0.85	0.81	N/A	#N/A

Table 4.10-Poverty rates by gender and age

	EUROMOD				External				Ratio			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
40% median HDI												
Total	10.93	11.42	15.81	14.60	12.10	12.60	0.00	#N/A	0.90	0.91	N/A	#N/A
Males	11.29	11.97	16.62	15.69	12.00	12.50	0.00	#N/A	0.94	0.96	N/A	#N/A
Females	10.58	10.89	15.04	13.56	12.20	12.80	0.00	#N/A	0.87	0.85	N/A	#N/A
50% median HDI												
Total	16.39	17.28	21.41	20.28	17.60	17.20	0.00	#N/A	0.93	1.00	N/A	#N/A
Males	16.16	16.86	21.42	20.39	17.10	16.70	0.00	#N/A	0.94	1.01	N/A	#N/A
Females	16.61	17.68	21.40	20.18	18.10	17.60	0.00	#N/A	0.92	1.00	N/A	#N/A
60% median HDI												
Total	22.61	23.25	27.08	25.69	23.60	23.50	0.00	#N/A	0.96	0.99	N/A	#N/A
Males	22.07	22.70	26.69	25.49	22.90	22.50	0.00	#N/A	0.96	1.01	N/A	#N/A
Females	23.13	23.77	27.44	25.89	24.20	24.50	0.00	#N/A	0.96	0.97	N/A	#N/A
70% median HDI												
Total	29.29	30.41	32.99	32.10	29.80	30.10	0.00	#N/A	0.98	1.01	N/A	#N/A
Males	28.21	29.02	32.00	31.15	28.70	28.80	0.00	#N/A	0.98	1.01	N/A	#N/A
Females	30.32	31.72	33.94	33.00	30.80	31.40	0.00	#N/A	0.98	1.01	N/A	#N/A
60% median HDI												
0-15 years	29.82	30.16	36.32	33.43	31.50	31.80	0.00	#N/A	0.95	0.95	N/A	#N/A
16-24 years	31.11	31.58	35.72	34.36	32.90	28.30	0.00	#N/A	0.95	1.12	N/A	#N/A
25-49 years	20.14	20.45	24.25	22.94	21.40	20.70	0.00	#N/A	0.94	0.99	N/A	#N/A
50-64 years	18.96	19.34	22.68	22.44	19.20	19.90	0.00	#N/A	0.99	0.97	N/A	#N/A
65+ years	20.15	22.09	24.15	22.82	20.00	22.80	0.00	#N/A	1.01	0.97	N/A	#N/A