



EUROMOD Country Report - Portugal

2021-2024

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EUROMOD is the tax-benefit microsimulation model for the European Union (EU). It 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 covers the 27 Member States and is yearly updated to cover the most recent changes in countries' policy systems. It uses input databases which are also updated on a yearly basis, coming mainly from the European Union Statistics on Income and Living Conditions (EU-SILC) and Household Budget Surveys (HBS). The model yearly update is supported by the following Directorate-Generals of the European Commission: DG EMPL, DG ECFIN, DG TAXUD, DG REFORM, DG JRC, DG ESTAT.

Originally maintained, developed and managed by the Institute for Social and Economic Research (ISER), since 2021 these responsibilities are taken over by the Joint Research Centre (JRC) of the European Commission, in collaboration with Eurostat and 27 national teams from the EU countries.

The EUROMOD governance structure consists of a Steering Committee, allowing partner DGs to monitor the process of the EUROMOD update, and a Scientific Advisory Board to monitor and guide the scientific development of the model.

This report documents the work done in the most recent annual update for Portugal. This work was carried out by the EUROMOD core development team, based at the JRC in Seville, in collaboration with the national team.

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The results presented in this report are derived using EUROMOD version J1.0+. EUROMOD is continually being improved and the results presented here may not match those that would be obtained with earlier or later versions of EUROMOD.

EUROMOD documentation: <https://euromod-web.jrc.ec.europa.eu/resources/documentation>

Glossary of EUROMOD terms: <https://euromod-web.jrc.ec.europa.eu/resources/glossary>

Policy parameters used in EUROMOD: <https://euromod-web.jrc.ec.europa.eu/resources/parameters>

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1. BASIC INFORMATION

1.1 Basic information regarding the tax-benefit system

- The Portuguese tax-benefit system is a **single national system**. However, the autonomous regions (Azores and Madeira) have lower income tax rates.
- **Fiscal year** matches the calendar year (*i.e.*, January 1st to December 31st). Changes to the tax system generally take place in January, whereas changes in benefits can occur throughout the year.
- To compute the **income tax base**, the tax rate is applied to the half of the aggregate income, and then the resulting tax liability is multiplied by two to obtain couple's total tax liability. Some income components, like capital income, are taxed at source and may be left out of the final tax calculations.
- Taxpayers need to fill an **annual tax return**, since some differences between the withholdings at source and the exact tax liability can exist.
- **Consumption taxes** consist of (1) VAT with three rates (standard, intermediate and reduced), (2) harmonised excises on tobacco, petroleum and energy products, alcohol, alcoholic beverages and beverages containing added sugar or other sweetening matter, and (3) taxes on the purchase and ownership of motor vehicles. Special rates apply in the autonomous regions of Azores and Madeira. Although it applies on credit to consumption, stamp duty (as it is mostly targeted on financial and property transactions) is not treated as a consumption tax.
- Since 2016, the **legal retirement age** started to vary according to the evolution of life expectancy at the age of 65, during the 2nd and 3rd years prior to the date of the pension. It is given the option of retiring later with a pension bonus to workers that are already in the legal retirement age or have already exceeded it.
- For tax purposes, **dependent children** are children with 18 years old or less, or those under 25 years old that have a monthly income below the national minimum wage and attend – or successfully completed – 11th or 12th school year during the relevant fiscal year.
- For benefits and tax credit purposes, **single parents** are parents of resident dependent children who are not cohabiting with a partner of the opposite sex. For tax purposes, single parents are parents of resident dependent children who are not married.
- The **means-tested component** relies on different time scales to assess income: entitlement to a means-tested benefit can depend on the income of the previous year, the previous month or even the current income, depending on the specific benefit.
- Most benefits and pensions are indexed to the **Social Support Index (SSI)**, which is updated every year according to the real GDP growth and CPI variation. In 2024, SSI is €509.26.
- The policy parameters saved as constants in the model and their values for the most recent year are available at <https://euromod-web.jrc.ec.europa.eu/resources/parameters>

1.2 Social benefits

National minimum wage (*'retribuição mínima mensal garantida'*): although not truly a social benefit, minimum wage guarantees, by law, a minimum remuneration to full-time workers. In 2024, the amount was €820.

Unemployment benefits (*'subsídio de desemprego'*): insurance/contributory unemployment benefit and assistance/social/non-contributory unemployment benefit are the two main policies that provide financial compensation to the unemployed. The assistance benefit acts as an extension of the first one

or as the only benefit for shorter warranty periods (both modalities are means-tested and restricted to participants in the employees' social insurance scheme). The insurance benefit is related to earnings. A new benefit for long-term unemployed was implemented in 2016.

Old age contributory pension (*'pensão de velhice'*): pension to all the elderly (people at and over the legal age of retirement) that contributed to the compulsory social insurance scheme (both employees and self-employed workers). The amount is a function of the average monthly earnings adjusted over the person's entire insurance life, up to a maximum of 40 years.

Minimum pension (*'pensão mínima'*): new pensioners entitled to an old age or disability pension who have contributed to the compulsory social insurance scheme are entitled to a minimum pension, of different amounts according to the career length. In the case of old age pensions, this safety net is only provided for those who retire at the legal age of retirement or later.

Old age social pension (*'pensão social de velhice'*): non-contributory means-tested pension that provides a minimum pension to low-income elderly individuals at the legal age of retirement.

Survivors' pension (*'pensão de sobrevivência'*): granted to the surviving spouse (with at least 35 years old) of a deceased insured person, or to the divorced surviving spouse if the latter was receiving alimony payments. It can also be granted to children until they have 18 years old (25 or 27 if they are studying – higher education) or, when there are no surviving children or spouses, to the dependent parents. There is also a non-earnings-related survivors' pension (*'pensão de viuvez'* for widows and *'pensão de orfandade'* for orphans).

Disability benefit/pension (*'pensão de invalidez'*): any worker under the legal retirement age who becomes unable to earn more than one third of his standard wage due to illness or a work-related accident not covered by health and safety legislation is entitled to this benefit.

Social benefit for the inclusion (*'prestação social para a inclusão'*): benefit created in October 2017 for disabled and handicapped people. Replaced the non-earnings-related disability benefit (for pensioners who were not able to fulfil the minimum career for the main benefit) and *'subsídio mensal vitalício'* (another handicapped/disability related benefit). Covers recipients with at least a 60% of disability. Since October 2018, it includes a supplement (means-tested) for poor handicapped people, and since 2019 includes a bonus to support certain expenses.

Sickness cash benefit (*'subsídio de doença'*): available to all insured employees as part of the compulsory social insurance scheme. Benefits are earnings-related.

Solidarity supplement for the elderly (*'complemento solidário para idosos'*): non-contributory means-tested benefit to help pensioners who have reached the legal age of retirement and live on low incomes. It considers a wide range of income sources which are not usually considered in this kind of schemes, like the monetary income of the recipients' descendants (even when they do not live with their parents), or residence at an old age care institution funded by the Social Security.

Social integration income (*'rendimento social de inserção'*): cash benefit granted together with an integration contract. Aims to ensure that individuals and their family members have sufficient resources to cover their basic needs, while promoting their gradual social and professional integration.

Child benefit (*'abono de família para crianças e jovens'*): social policy targeted to families with children and young people, as a compensation for their expenditure on educating. Belongs to the same group as funeral expenses allowances or special benefits paid to disabled and dependent people, essentially children. Even though it is means-tested, child benefit has a more universal nature than the other policies that rely on income testing.

Prenatal family allowance (*'abono de família pré-natal'*): allowance assigned for 6 months to pregnant women starting from the 13th week of gestation, to encourage motherhood by compensating the costs increase during this period.

Parental allowance (*‘subsídio parental’*): allowance paid to the mother and/or father to replace the ‘lost’ work income during the period of childbirth leave. Parents need to have a record of remunerations in Social Security. This allowance comprises several modalities (which have different concession periods): initial parental allowance, mother’s initial parental allowance, parent’s original parental allowance, and initial parental allowance of one parent in the event of the impossibility of the other. The daily amount of the allowance is calculated by applying a percentage to the value of the beneficiary’s reference remuneration. It is available as an extended parental allowance.

Parental social allowance (*‘subsídio social parental’*): alongside the parental allowance, this is the main policy that provides financial compensation to the parents of a born child. This allowance is paid to the parents who are not qualified for the parental allowance.

Besides the ones previously mentioned, there are other less important benefits (or specific bonus or complements to the main benefits) in the Portuguese Social Security system, which provide protection in areas like disability, death, or social inclusion. Especially during 2022 and 2023, other temporary and extraordinary benefits were also introduced, to compensate for the increase in prices and consequent cost of living.

1.3 Social contributions

Employee and employer Social Security contributions (*‘contribuições do trabalhador por conta de outrem e da entidade patronal’*): contributions are shared between employees (23.75%) and employers (11%). There are several different regimes reflecting specific occupations such as non-profit organizations, rural workers, football players, clergy, domestic services, young people in their first job, or disabled people.

Self-employed Social Security contributions (*‘contribuições dos trabalhadores independentes’*): since 2019, self-employed workers pay a flat rate of 21.4% over the actual income.

Civil servants’ contributions: workers that entered the Civil Service before 2006 belong to a separate Social Security scheme. From January 1st of 2006, new civil servants (and their employer institutions) contribute to the regular Social Security scheme and follow the general regime rules.

1.4 Taxes

Personal income tax (*‘Imposto sobre o Rendimento das Pessoas Singulares’, IRS*): paid by residents in Portugal and by non-residents receiving income in Portugal. If the resident is part of a family unit composed by spouse and dependents, the tax is applied to all the family members. Capital income is taxed at source (withholdings) and may be left out of the final tax calculations, meaning that a different tax rate can be applied. Labour income is also taxed at source, but it is re-evaluated at the annual tax calculations stage.

Corporate income tax (*‘Imposto sobre o Rendimento das Pessoas Coletivas’, IRC*): paid by companies on their profits at a flat rate of 21%. There is also a local government levy (*‘Derrama’*).

Property transfer municipal tax (*‘Imposto Municipal sobre as Transmissões Onerosas de Imóveis’, IMT*): local government tax on real estate transactions.

Property municipal tax (*‘Imposto Municipal sobre Imóveis’, IMI*): local government tax on rural and urban properties. In 2017, a new extension (*AIMI*) was created for highly valued real estates, which provides funding for the Social Security Financial Stabilisation Fund.

Value Added Tax (*‘Imposto sobre o Valor Acrescentado’, IVA*): general rate of 23%, with intermediate (13%) and reduced (6%) rates applying to specific goods. Lower rates apply to specific classes of goods and in the autonomous regions of Azores and Madeira.

Special taxes on consumption include **alcohol duty/tax** (*‘Imposto sobre o Alcool e as Bebidas Alcoólicas’, IABA*), **fuel duty/tax** (*‘Imposto sobre Produtos Petrolíferos e Energéticos’, ISP*), **tobacco duty/tax** (*‘Imposto sobre o Tabaco’, IT*).

Taxes on vehicles include the sales tax on new cars (*‘Imposto Sobre Veículos’, ISV*) and the annual **vehicles tax** (*‘Imposto Único de Circulação’, IUC*).

Besides the ones previously mentioned, there are other less important taxes in the Portuguese tax system.

1.5 COVID-19 temporary measures

The COVID-19 outbreak, classified as a Pandemic by the World Health Organization on March 2020, also spread to Portugal, where State of Emergency was declared on March 18th, 2020. This outbreak has a very significant social and economic impact, generating a high degree of uncertainty for the households, companies, and entities. Governments had to quick respond during the crisis, and were call to support those who most needed, to help them get through the main challenges that people are facing now and that will foresee in the mid- and long-term.

The measures implemented to mitigate COVID-19 economics and social effects were constantly under revision and subject to change, according to the evolution of the pandemic in the country. As of the first quarter of 2022, the main measures to support the COVID-19 effects ceased, but some of the main ones that were in force during 2020-21, aimed at households, workers, and companies, were the following:

- Treasury support with **credit lines**, preferably aimed at SME and companies within the most affected sectors (tourism, accommodation), to foster economic recovery. Also, the option of credit default to companies regardless of its size.
- **Credit default** also for the households (moratorium that suspends the payment of instalments), as well as deferral of housing rent payment.
- Extraordinary **extension of unemployment benefits** and all benefits of the social security system that guarantee subsistence minimums whose concession period or renewal period ended before the prevention measures ceased.
- If an employee could not work because he needed to **assist his child or grandchild**, he was entitled to the respective daily allowance (100% of the reference remuneration in case of child assistance, and 65% for grandchild).
- It was granted the **deferral of some taxes and contributions**. For instance, there was the postponement and extension of the deadlines regarding corporate income tax compliance and the fractional delivery of PIT and VAT withholdings paid through a 3- or 6-month instalment plan (also applied to self-employed).
- Some workers entered in a **simplified layoff scheme**. Whether there was a reduction in the normal working time or suspension of the contract, workers were entitled to 100% of their gross wage. This compensation could not be less than 1 x NMW or more than 3 x NMW.
- **Employers with layoff workers** were entitled to a Social Security support in the amount of 70% of 2/3 of the normal gross wage of each worker covered, up to a limit of 3 x NMW per worker, to support the payment of wages. It was also granted exemption from Social Security Contributions for employers for the duration of the support.
- It was also provided special financial support for **self-employed** with significant reduction of their economic activity (> 40%) and it was allowed deferral of social contributions. Compensation ranged between 1 x SSI and 1 x NMW. Self-employed that contributed with the minimum level of contribution (€20) were granted an income support of €219.41. Self-employed workers were eligible to income support if they contributed three consecutive months prior to the request, or six months with gaps in the last twelve months.
- Finally, it was created an **extraordinary new social benefit (means-tested)** to support the income of dependent workers who had become unemployed and did not meet the criteria to access the

unemployment benefits or whose allowance had already ended (or ended during 2021), as well as to support self-employed workers with significant reductions in their economic activity (more than 40%, compared to 2019). The benefit amount ranged between €50 and €501.16 for the majority (in case of micro and small enterprises' managers, the upper limit is 3 x NMW). The benefit had to be requested monthly and was granted up to a maximum of 6 months to one year (until 31st of December). The monthly income per equivalent adult of the household had to be less than or equal to €501.16. Workers who were receiving the assistance unemployment benefit received a supplement corresponding to the difference for this extraordinary income support benefit.

2. SIMULATION OF TAXES, SOCIAL INSURANCE CONTRIBUTIONS AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Table 2-1 Simulation of benefits in EUROMOD [2021-2024]

Benefit	Variable	2021	2022	2023	2024	Comments
Survivors' pension	psu	I	I	I	I	No data on the loss of family members. 2022 Extraordinary Pension Supplement modelled.
Disability benefit	pdi	I	I	I	I	No data on disability incidence. 2022 Extraordinary Pension Supplement modelled.
Sickness cash benefit	bhl	I	I	I	I	No data on sick leave incidence
Other family benefits	bfa	I	I	I	I	Composed of several benefits impossible to split and simulate.
Other social assistance benefits	bsaot	I	I	I	I	
Education benefit	bed	I	I	I	I	
Housing benefit	bho	I	I	I	I	
Child benefit	bch_s	S	S	S	S	
Prenatal family allowance	bmapr_s	S	S	S	S	However, the simulation is switched off in the baseline, i.e., non-simulated components (bfa) are used.
Parental allowance	bplct_s	S	S	S	S	
Parental social allowance	bplnc_s	S	S	S	S	
Old age contributory pension	poact_s	PS	PS	PS	PS	No data on contributory career (years, number of contributions). Simulation of the minimum pension only. 2022 and 2024 Extraordinary Pension Supplement modelled.
Old age social pension	poanc_s	PS	PS	PS	PS	No data on contributory career (years, number of contributions). Split of the original microdata aggregated variable related to old age pensions only. 2022 Extraordinary Pension Supplement modelled
Solidarity supplement for the elderly	bsaoa_s	PS	PS	PS	PS	No data on the descendants of beneficiaries that do not live in the same household. No data on residence in Social Security funded institutions. Difficulty in dealing with non-take up issue.
Social integration income	bsa00_s	PS	PS	PS	PS	Difficulty in matching the simulated family unit with the actual one. Difficulty in dealing with non-take up issue.
Unemployment insurance	bunct_s	PS	PS	PS	PS	No data on the reason for becoming unemployed. No data on the contribution history of unemployed individuals, nor on the previous

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Unemployment assistance	bunnc_s	PS	PS	PS	PS	earnings before unemployment. Split of the original aggregated variable only. Benefit recipients are imputed using information of the reported receipt of the respective benefit in SILC data (i.e., simulations are conditional on the report of the benefit receipt in the microdata).
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Table 2-2 Simulation of Extraordinary benefits in EUROMOD [2021-2024] (Cont.)

Benefit	Variable	2021	2022	2023	2024	Comments
COVID-19: Wage compensation scheme	bwkmcee_s	S	-	-	-	This benefit can only produce results if the model is run in combination with the LMA add-on.
COVID-19: Self-employed compensation scheme	bwkmcese_s	PS	-	-	-	General rules assumed. Significantly influenced by individual choices. This benefit can only produce results if the model is run in combination with the LMA add-on.
COST-OF LIVING: Family income support	bfaxp_s	-	S	-	-	
COST-OF LIVING: Extraordinary supplement for vulnerable families	bfaxp01_s	-	-	S	-	
COST-OF LIVING: Rent Support	bhotn_s	-	-	PS	PS	The Mortgage Interest Bonus component cannot be modelled due to a lack of data on several elements such as spread, contract date, and loan maturity date.

Note: “**I**” included in the micro-data but not simulated; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated. “**E**” excluded from the model’s scope, as it is neither included in the microdata nor simulated by EUROMOD; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated.

Table 2-3 Simulation of taxes and social insurance contributions in EUROMOD [2021-2024]

Benefit	Variable	2021	2022	2023	2024	Comments
Personal income tax	tin_s	PS	PS	PS	PS	Influenced by individual choices. No data available on some of the tax allowances (particularly health, one of the most important).
Employee social insurance contribution	tscee_s	S	S	S	S	General rules assumed.
Employer social insurance contribution	tscer_s	S	S	S	S	General rules assumed.
Self-employed social insurance contribution	tscse_s	PS	PS	PS	PS	General rules assumed. Significantly influenced by individual choices.
Value added tax	-	S	S	S	S	Calculations based on extended input files with consumption expenditures from HBS
Excise duties	-	S	S	S	S	Calculations based on extended input files with consumption expenditures from HBS
Tax on the purchase of new vehicles (IMV)	-	E	E	E	E	No data on purchases of new vehicles
Vehicle Circulation Tax (IUC)	-	E	E	E	E	No data on characteristics of vehicle(s) owned by household.
Property transfers municipal tax	-	E	E	E	E	No data on purchases of property(ies)
Property municipal tax	-	E	E	E	E	No data on wealth

Note: “**I**” included in the micro-data but not simulated; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated. “**E**” excluded from the model’s scope, as it is neither included in the microdata nor simulated by EUROMOD; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated.

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 and Table 2.2 classify each of the main tax-benefit instruments (and some minor ones introduced above) into one of these three groups and provide a brief explanation as to why the instrument is not fully simulated if this is the case. In the following tables we present information on EUROMOD using the most recent dataset of combined EU-SILC and national SILC data. Information on earlier input datasets for the Portuguese model can be found in earlier country reports.

2.2 Main policy changes

Table 2-4 Main policy changes [2021 - 2024] ^{a, b, c}

Policies	2021	2022	2023	2024
Upgrading of Wages & Benefits	NMW: €665	NMW: €705	NMW: €760	NMW: €820
	SSI: €438,81 (no change)	SSI: €443.20	SSI: € 480.43	SSI: €509.26

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	Ret. Age: 66.6	Ret. Age: 66.7	Ret. Age: 66.4	Ret. Age: 66.4 (no change)
Social Security Benefits	UB: Change in lower limit	Updated Old Age, Survivors and Disability pensions (but not in line with Updating Formula)	Updated Old Age, Survivors and Disability pensions (but not in line with Updating Formula)	Resumption of Upgrading Formula to update Old Age, Survivors and Disability pensions
		Extraordinary Pension Increase	CSI: Reference amount upgraded to €5,858.63/year.	CSI: Increases to reference amount upgraded to €6,608.00/year (€7,208, July onwards).
		Exceptional Supplement for Pensioners	Child Benefit: Increase of Reference Amounts	CSI: Earnings from children no longer considered in means-test
		Child Benefit: Increase for children in 1 st and 2 nd income brackets	Child Guarantee: Reference amount upgraded to €100/month.	Child Benefit: Updating of Income Brackets
		Introduction of ‘Child Guarantee’	RSI: Reference amount upgraded to €209.11/month.	Child Benefit: Reference amount upgraded to €122/month.
				RSI: Reference amount upgraded to €237.25/month.

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Direct Taxes (PIT & SIC)	<p>PIT: Two new income brackets</p> <p>PIT: Reduction of marginal rate of the 3 and 5th income brackets.</p> <p>PIT: Increase in Tax Credits for families with dependent children</p> <p>PIT: Partial exemption for young people.</p>	<p>PIT: Income brackets updated by 5.1%</p> <p>PIT: Marginal rate of the 2nd income bracket reduced from 23% to 21%.</p> <p>PIT: Expansion of partial exemption for young people.</p> <p>PIT: Reduction of Work-Disincentives in ‘Minimum Existence’.</p>	<p>PIT: Income brackets updated by 3%</p> <p>PIT: Reduction of marginal rates for the income brackets 1 to 6.</p> <p>PIT: Expansion of partial exemption for young people.</p> <p>PIT: Reduction of Work-Disincentives in ‘Minimum Existence’.</p>	
Consumption Taxes	<p>VAT: Extension of Reduced Rate to food products.</p> <p>VAT: Expansion of exemption for small businesses/entrepreneurs</p> <p>VAT: COVID-19 related exemptions</p> <p>VAT: IVAucher Scheme</p>	<p>VAT: Extension of Reduced Rate to: electricity consumption (first 100 kWh of monthly consumption), and products for people with disabilities.</p> <p>VAT: COVID-19 related exemptions</p>	<p>VAT: Reduced Rate to electricity consumption (first 100 kWh of monthly consumption) extended.</p>	<p>VAT: Reduced Rate to electricity consumption (first 100 kWh of monthly consumption) extended.</p>
Other	<p>COVID-19: Wage compensation scheme</p> <p>COVID-19: Temporary increase in PIT’s net income guarantee.</p>	<p>COVID-19: Termination of key measures.</p> <p>COST-OF-LIVING: ‘Families First’</p>	<p>COST-OF-LIVING: Extraordinary €15 Supplement per child.</p> <p>COST-OF-LIVING: Extraordinary supplement for vulnerable families</p> <p>COST-OF-LIVING: Rent Support</p>	<p>COST-OF-LIVING: Temporary subsidy for tenants</p>

Note: ^a This table only mentions measures that are modelled in EUROMOD. ^a Measures that reflect the influence of automatic indexation mechanisms are not included. ^c Measures are identified by the date they come into force, not the date they have been approved.

2.2.1 In 2021

National minimum wage: NMW updated to €665.

Unemployment benefit – insurance: the lower bound is updated to 1.15 x SSI if the reference remuneration corresponds, at least, to the NMW.

Pensions: change in the legal retirement age to 66 years and 6 months.

Contributory pensions: in January, fifth extraordinary increase for pensions earned by people who have a total pension income up to 1.5 x SSI of €10.

Consumption Taxes:

- VAT: The VAT reduced rate is extended to the following products:
 - i. Frozen chestnuts and ref berries;
 - ii. Respiratory protection masks and Skin disinfectant gel (extended from 2020);
- VAT: Exemption for all purchases related to the fight against COVID-19.
- VAT: The VAT exemption for small business/independent workers is extended to business/independent workers that had not reached a turnover exceeding €12,500 in the previous calendar year and in the three preceding calendar years;

COVID-19 temporary measures:

- Wage compensation scheme COVID-19: workers that entered in the simplified layoff scheme were now entitled to receive a minimum amount equal to 100% of gross wages (previously it was 2/3).
- Net income guarantee: the PIT net income guarantee had an extraordinary increase of €100, but only temporary.

2.2.2 In 2022

National minimum wage: NMW updated to €705.

Social Support Index: SSI updated to €443.20.

Pensions:

- Change in the legal retirement age to 66 years and 7 months.

Contributory pensions:

- Increase in the amounts of the minimum pension.
- Change in the remaining minimum amounts (regular annual update in pensions): pensions ≤ 2 x SSI are updated by 1.0%; pensions > 2 x SSI and ≤ 6 x SSI are updated by 0.49%; and pensions > 6 x SSI and ≤ 12 x SSI are updated by 0.24%.
- Extraordinary update in pensions: in January, sixth extraordinary increase for pensions earned by people who have a total pension income up to 2.5 x SSI up to €10. The amount of the increase equals the difference between €10 and the amount received as part of the regular update of pensions.

- Exceptional supplement for pensioners: disability, old age and survival pensioners (with pensions $\leq 12 \times$ SSI) are entitled, in October 2022, to an additional amount of pensions. The value corresponds to 50% of the total amount earned in October 2022.

Old age social pension: change in the base amount to €213.91 and in the extraordinary solidarity supplement to €18.62 and €37.23 (depending on age).

Child benefit:

- Update in the amounts of the 1st and 2nd income brackets for children in the age brackets above 36 months.
- Complement for lower income families: new supplement (*'Child Guarantee'*) that guarantees the payment of a total amount of €70 (including the child benefit amount) for children under the age of 18, recipients of the child benefit and belonging to households that are in extreme poverty.

Personal Income Tax:

- Income brackets were segmented (and limits updated), creating two additional intermediate ones.
- Tax credits regarding taxpayers and their dependent children: families with two or more children between 3 and 6 years old will have a tax credit increase from €600 to €750, starting from the second child and regardless of the age of the first child. Each child older than 3 years old continues to enable an automatic tax credit of €600 (and of €726 if the child is under 3 years old); and for families with two or more children aged up to 3 years old, the tax credit is €900 for the second and subsequent children, regardless of the age of the first child.
- Partial exemption for young people: young people between 18 and 26 years old (or 30 years old, if completed a PhD programme), who earn dependent or independent income (previously it did not include self-employed), will benefit from a partial exemption of PIT in the first five years of work (previously was three), according to the following amounts per year of work (now without limit):
 - 1st and 2nd years: 30%,
 - 3rd and 4th year: 20%,
 - 5th year: 10%.

Consumption Taxes:

- VAT: The VAT reduced rate is extended to the purchase (and repair) of products targeted at people with disabilities and chronic diseases;
- VAT: Exemption for all purchases related to delivery of COVID-19 vaccines and tests;
- VAT: As part of response to the COVID-19 crisis the government introduced the IVAucher Scheme allows the final consumer to accumulate the value corresponding to the total VAT incurred on consumption in the accommodation, culture and catering sectors, during a quarter, and use this value, during the following quarter, on consumption in these same sectors.
- VAT: As part of response to the Cost-of-Living Crisis the VAT intermediate rate is extended to the electricity for consumptions (excluding its fixed components) of up to 100 kWh per period of 30 days, or 150 kWh for families of five or more people; in households with contracted power up to 6.90 kVA. This scheme entered in force in October 2021;

COVID-19 temporary measures: the main measures to support the COVID-19 effects ceased in the first quarter of 2022.

COST-OF-LIVING - Family income support: extraordinary support of €125 per adult and €50 per child and young people, to compensate for the increase in prices. The ‘*Families First*’ program assigns this support to residents with an income up to €2,700 per month and who benefit from social benefits. Those receiving an exceptional supplement for pensioners of less than €125 will receive the difference.

2.2.3 In 2023

National minimum wage: NMW updated to €760.

Civil servants’ wages: the following update by bands of the civil servants salaries was applied:

- All workers earning up to €761.58 increased their wage to €761.58;
- All wages between €709.48 and €2,612.03 increased €52.11;
- Wages above €2,612.03 increased 2%.

Additionally, all civil servants in Portugal received an additional 1% salary increase.

Social Support Index: SSI updated to €480.43.

Pensions: change in the legal retirement age to 66 years and 4 months.

Contributory pensions:

- Increase in the amounts of the minimum pension.
- Change in the remaining minimum amounts (regular annual update in pensions). From January to June, pensions are updated (respecting to December 2022) by 4.83% for pensions $\leq 2 \times$ SSI; 4.49% for pensions $> 2 \times$ SSI and $\leq 6 \times$ SSI; and 3.89% for pensions $> 6 \times$ SSI and $\leq 12 \times$ SSI.

From July to December, pensions are updated (respecting to December 2022) by 8.4% for pensions $\leq 2 \times$ SSI; 8.06% for pensions $> 2 \times$ SSI and $\leq 6 \times$ SSI; and 7.46% for pensions $> 6 \times$ SSI and $\leq 12 \times$ SSI

Old age social pension: change in the base amount to €224.24 and in the extraordinary solidarity supplement to €19.53 and €39.03 (depending on age).

Solidarity supplement for the elderly: increase in the reference value to €5,858.63/year.

Social integration income: increase in the reference amount to €209.11.

Child benefit:

- Update of the amounts (including the complement for lower income families, the supplement for large families and the bonus for lone parent families).
- Extraordinary support: to mitigate the effects of inflation, in 2023 there is an extraordinary support of €15 per month for each child receiving the child benefit (for all income brackets).
- Complement for lower income families: the ‘*Child Guarantee*’ supplement now intends to guarantee the payment of a total amount of €100 (including the child benefit amount) for children under the age of 18, recipients of the child benefit and belonging to households that are in extreme poverty.

Personal income tax:

- Income brackets limits are updated by 5.1% and the applicable marginal rate of the 2nd income bracket is reduced from 23% to 21%.
- Tax credits regarding taxpayers and their dependent children: for families with two or more children, the tax credit is €900 for the second and subsequent children now aged up to 6 years old (previously it was 3 years old), regardless of the age of the first child.
- Partial exemption for young people reinforced according to the following amounts per year of work (with upper limits again):
 - 1st year: 50%, with a limit of 12.5 x SSI.
 - 2nd year: 40%, with a limit of 10 x SSI.

- 3rd and 4th year: 30%, with a limit of 7.5 x SSI.
- 5th year: 20%, with a limit of 5 x SSI.
- Structural changes to the net income guarantee (“mínimo de existência”).
- Earnings from the rental of property are taxed at 25% (part of the ‘+Housing’ package)

COST-OF-LIVING - Extraordinary supplement for vulnerable families: extraordinary support for the most vulnerable families of €30 per month per household, paid three times along the year, to compensate for the increase in prices. The definition of vulnerable families is of those that benefit from the social energy tariff or minimum social benefits. In addition, families with children and young people up to the fourth income bracket of the child benefit also receive an extraordinary supplement of €15 per month for each child, also paid on a quarterly basis.

COST-OF-LIVING - Housing benefit: extraordinary and temporary rental support and interest bonus for families in the context of housing.

- The rental support is aimed at tenants with a burden rate exceeding 35% and income up to the maximum limit of the sixth PIT income bracket. The support translates to a monthly amount up to €200 (and corresponds to the difference between the value of the rent and the amount that would be paid if the effort rate was 35 % of the average monthly value of income).
- As for the interest bonus, the support translates to a yearly bonus up to €720.65. The bonus shall cover the difference between the present value of the indexer and the value of the indexer at the start of the loan plus 3 p.p., in the case of an effort rate of 50% (or more, depending on the income bracket). It cannot be implemented in EUROMOD due to a lack of data on several elements such as spread, contract date, and loan maturity date.

2.2.4 In 2024

In this section, we identify the policy measures that have come in force in 2024, until the 31st of October. For the sake of consistency (see Chapter 4), changes to the Portuguese tax-benefit system, are structured as follows:

- i. Upgrading of Wages;
- ii. Changes to Pension Benefits
- iii. Changes to Other Social Security Benefits
- iv. Changes to Direct Taxes
- v. Changes to Consumption Taxes

Tables 2-5 to 2.13 identify the key changes made, the supporting legislation (where applicable), and whether those changes are simulated in the model (or not).

- *Upgrading of Wages*

The Portuguese government approved a set of wage increases well above the projected inflation for 2024 (3.3%) (Ministério das Finanças, 2024: 37) - see Table 2-5. Thus, the **National Minimum Wage (NMW)** for private sector workers was increased by 7.9%, to €820.

In the same way, the **Base Remuneration for Public Sector Workers** was increased by 6.8%, to €821,83. Public sector wages between €821,83 and €1754,49 were increased by €50, i.e. 6.4%. This was not the case, however, for public sector workers with wages over €1754,49 - which were only increased by 3%.

Table 2-5 Changes to National Minimum Wage and Public Sector Wages [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
National Minimum Wage (Private Sector)	NMW updated to €820 <i>Decree-Law 107/2023</i>	S	-
Public Sector Wages	Updating of Public Sector workers' wages: <ul style="list-style-type: none"> The Base Remuneration is increased to €821,83; Wages between €821,83 and €1754,49 are increased by €50; Wages over € 1754,49 are increased by 3%. <i>Decree-Law 108/2023</i>	S	-

• *Changes to Pension Benefits*

Table 2-6 Changes to Pension Benefits [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Legal Age of Retirement	66 years and 4 months (no change) <i>Order 292/2022</i>	S	-
Pension Update Formula	Updating of Old Age, Survivors and Incapacity Pensions: <ul style="list-style-type: none"> Up to €301,41 updated by 6%; Between €301,41 and €1018,52: updated by 6%, subject to a minimum increase of €18.08; Between €1018,52 and €3055,56: updated by 5.65%, subject to a minimum increase of €61,11; Pensions over €3055,56 : updated by 5%, subject to a minimum increase of €172,64. Pensions equal or above to 12xSSI, subject to exceptions, do not receive any increase. <i>Order 424/2023</i>	S	-
Minimum Pensions	Increased by 9.6% <i>Order 424/2023</i>	S	-
Social Old Age Pension	Increased by 9.6%, to €245.79. The Extraordinary Solidarity Supplement (CES) was also upgraded <i>Order 424/2023</i>	S	-

Note: “I” included in the micro-data but not simulated; “PS” partially simulated as some of its applicable rules are not simulated; “S” simulated, although some minor or very specific rules may not be simulated. “E” excluded from the model’s scope, as it is neither included in the microdata nor simulated by EUROMOD; “PS” partially simulated as some of its applicable rules are not simulated; “S” simulated, although some minor or very specific rules may not be simulated.

In 2024, there were some significant changes made to pension benefits (see Table 2-6):

- i. Portuguese authorities have resumed the use of the ‘Pension Upgrading Formula’ to update the value of **Old Age, Survivors and Disability Pensions** (see Table 2-6). As result of this, a significant share of pensioners received increases above the projected rate of inflation for 2024. Pensioners with pensions over €1085,52, received smaller increases, between 5% and 5.65% - but still above the projected rate of inflation for 2024.
- ii. The **Minimum Pension** reference amounts were increased by 9.6% (see Table 2-17, Section 2.5.3);
- iii. The **Old Age Social Pension** was also increased by 9.6%, to €245.79. The **Extraordinary Solidarity Supplement** (CES) was also upgraded to €21.39, for those aged 65 to 69, and to €42.78, for those aged 70 or over (see Table 2-19, Section 2.5.4).

In contrast with previous years, there was no change to the Legal Age of Retirement, which remained at 66 years and 4 months (see Table 2-6).

• *Changes Other Social Security Benefits*

In this section, we cover:

- i. Changes to the indexation mechanism (SSI) that secures the regular uprating of Social Security benefits;
- ii. Changes to non means-tested benefits;
- iii. Changes to means-tested benefits.

Table 2-7 Indexation of Social Security Benefits [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Social Support Index	Social Support Index updated to €509.26 <i>Order 13288-E/2023</i>	S	-

Note: “**I**” included in the micro-data but not simulated; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated. “**E**” excluded from the model’s scope, as it is neither included in the microdata nor simulated by EUROMOD; “**PS**” partially simulated as some of its applicable rules are not simulated; “**S**” simulated, although some minor or very specific rules may not be simulated.

As can be seen in Table 2-7, the **Social Support Index**, which is used as a reference to determine the eligibility and generosity of Social Security benefits (and certain aspects of the Personal Income Tax) was upgraded above the projected rate of inflation for 2024 (6%), to €509.26 – still, below the national minimum wage increase (see Table 2-5).

The changes introduced, during 2024, to non means-tested benefits are relatively minor and refer mostly to by products of the increase in the SSI (see Table 2-8):

- i) Uprating of upper and lower bounds of the **Unemployment Insurance** benefit (see Section 2.5.1);
- ii) Uprating of the minimum daily amount of the **Parental Allowance** (see Section 2.5.9).

Table 2-8 Changes to Non-Means Tested Social Security Benefits [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Unemployment Insurance	Uprating of upper and lower bounds of the Unemployment Insurance benefit, in line with SSI.	S	-
Parental Allowance	Uprating of Minimum Daily Amount, in line with SSI.	S	-

By contrast, we identify a number of substantive changes to a number of means-tested Social Security benefits in 2024 (see Table 2-9):

- i. The value of **Child Benefits** was significantly upgraded. Taking the case of a child aged under 36 months, in the first income bracket, the Child Benefit was increased by 14%. Part of this increase involved the incorporation of the Extraordinary Support for Children - a temporary benefit worth (€15 per child) introduced in 2023 to compensate families for the increase in the cost of living – into the value of the Child Benefit (see Section 2.5.7);
- ii. The **Child Benefit’s Supplement for Lone Parent Families**, for families in the 2nd to 4th income brackets was increased from 42.5% to 50% (see Section 2.5.7);
- iii. The **Child Guarantee** reference value has also been increased from €100 to €122, per month. However, when one considers the increases in the Child Benefit, this means the actual value of the Child Guarantee (differential) benefit has not increased (see Table 2-35, Section 2.5.7);
- iv. Reflecting (an increasing) cross-party consensus about the need to improve the effectiveness of the **Solidarity Supplement for the Elderly (CSI)** in fighting elderly poverty, this benefit was increased – not once, but twice. As part of the 2024 Budget Law, the annual reference amount was increased by 12.8%, to €6,608. Then, from the 1st of June 2024, the CSI annual reference amount was increased (again) by (approximately) 9.1% - to €7,208 (see Table 2-20, Section 2.5.5);
- v. In what can be seen as an effort to expand the eligibility to **CSI**, earnings from applicants’ children/descendants are no longer considered in the means-test that determines the eligibility to the scheme (see Section 2.5.5);
- vi. The temporary **Rent Support** scheme, introduced in 2023 as part of the response to the Cost-of-Living crisis, was extended to 2024 and the value of the payment was increased by 4.6%.

In addition to these substantive changes, we can see a number of automatic adjustments:

- i) Uprating of **Child Benefit’s** reference amount for determining income brackets (see Table, 2-26, Section 2.5.7);
- ii) Uprating of **Prenatal Family Allowance’s** reference amount for income test and financial assets test – although the latest is not simulated (see Table 2-36, Section 2.5.8);
- iii) Uprating of **Parental Social Allowance’s** reference amount for income test and financial assets test – although the latest is not simulated (see Table 2-41, Section 2.5.10).
- iv) Uprating of **Unemployment Assistance** reference amount for income test and benefit amount (see Table, 2-16, Section 2.5.2);
- v) Uprating of **Social Integration Income** reference amount for income test, financial assets test (not simulated) and benefit payment (see Section 2.5.6).

Table 2-9 Changes to Non-Means Tested Social Security Benefits [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Child Benefit	Updating of Reference Amounts <i>Order 422/2023</i>	S	-
	Supplement for Lone Parent Families for families in the 2nd to 4th income brackets was increased from 42.5% to 50% <i>Order 422/2023</i>	S	-
	Child Guarantee (Annual) Reference Amount increased to €1464 (€122, per month) <i>Order 422/2023</i>	S	-
	Updating of Supplement for Families with 2 or More Children, by reference to Child Benefit Amounts	S	-
Prenatal Family Allowance	Updating Income Brackets, in line with Child Benefit <i>Order 422/2023</i>	S	-
	Updating of Reference Amounts, in line with Child Benefit <i>Order 422/2023</i>	S	-
Parental Social Allowance	Updating Income Brackets, in line with Child Benefit <i>Order 422/2023</i>	S	-
Solidarity Supplement for the Elderly (CSI)	Annual Reference Amount updated to €6,608.00. <i>Order 419/2023</i>	S	-
	Annual Reference Amount updated to €7,208. <i>Order 154-A/2024</i>	S	-
	Earnings from children are no longer considered in the CSI means-test. <i>Order 154-A/2024</i>	S	-
Social Integration Income (RSI)	RSI Monthly Reference Amount updated to €237.25 month <i>Order 420/2023</i>	S	-
CoL: Rent Support	The scheme is extended to 2024. Payment is increased by 4.96% <i>Law 82/2023,</i>	S	-

Note: “I” included in the micro-data but not simulated; “PS” partially simulated as some of its applicable rules are not simulated; “S” simulated, although some minor or very specific rules may not be simulated. “E” excluded from the model’s scope, as it is neither included in the microdata nor simulated by EUROMOD; “PS” partially simulated as some of its applicable rules are not simulated; “S” simulated, although some minor or very specific rules may not be simulated.

• *Changes to Direct Taxes (SSC & PIT)*

In 2024, there were no significant changes to Social Security Contributions (SSC). The only changes are the product of automatic indexation mechanisms in the tax-benefit system (see Table 2-10):

- i. The upper limit of the **Self-Employed Social Security Contributions**’ contribution base is upgraded in line with the SSI (see Section 2.6.3);
- ii. The upper limit of the exemptions from **Self-Employed Social Security Contributions**’ is upgraded in line with the SSI (see Section 2.6.3).

Table 2-10 Changes to Social Security Contributions [2024]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Self-Employed Social Security Contributions	Upgrading of Self-Employed Social Security Contributions’ maximum base, in line with SSI	S	-
	Upgrading of Self-Employed Social Security Contributions exemptions, in line with SSI	S	-

In contrast, there was a number of substantive changes to the **Personal Income Tax** (see Table 2-11):

- i. **PIT** income brackets were upgraded by 3%, very much in line with the projected inflation for 2024 (see Table 2-47, Section 2.7.1);
- ii. **PIT** marginal tax rates for individuals/households in the first five income brackets were reduced by (see Table 2-47, Section 2.7.1):
 - - 1.25 percentage points in the 1st income bracket;
 - - 3.0 percentage points in the 2nd income bracket;
 - - 3.50 percentage points in the 3rd income bracket;
 - - 2.50 percentage points in the 4th income bracket
 - - 2.25 percentage points in the 5th income bracket.
- iii. Tax allowance for income from work increased to €4350.25, and to be updated annually, in line with SSI (see Table 2-43, Section 2.7.1);
- iv. Tax allowance for income from pensions increased to €4350.25, and to be updated annually, in line with SSI (see Table 2-43, Section 2.7.1);
- v. The partial **PTI** tax allowance for young persons between 18 and 25 was also significantly expanded both in terms of the level of the exemption, both in terms of the limits on the amount covered by those exemptions (see Table 2-43, Note 2, Section 2.7.1);
- vi. In line with the increase in the value of the National Minimum Wage and the SSI, the reference amount of the **PIT** Net Income Guarantee was also significantly increased to a value equal to or greater than €11,480 (14*NMW) (see Table 2-52, Section 2.7.1);
- vii. The rules for determining application of the **PIT** Net Income Guarantee were also subject to changes, namely with the creation of another interval of taxable income for setting the amount of the allowance (see Table 2-52, Section 2.7.1);
- viii. The **PIT** the tax credit for expenses with rents was increased to €900 (see Table 2-47, Section 2.7.1).

Table 2-11 Changes to Personal Income Tax [2024, Continent]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
PIT: Income Brackets	PIT Income Brackets were increased by 3% <i>Law 82/2023, Article 68°</i>	S	-
PIT: Rates	Reduction in marginal rates of the first 5 Income brackets: <ul style="list-style-type: none"> - 1.25 p.p in the 1st income bracket; - 3.0 p.p in the 2nd income bracket; - 3.50 p.p in the 3rd income bracket; - 2.50 p.p in the 4th income bracket; - 2.25 p.p in the 5th income bracket. <i>Law 82/2023, Article 68°</i>	S	-
PIT: Tax Allowances	Increase in tax exemptions for people aged between 18 and 26: <ul style="list-style-type: none"> 1st year: 100%, with a limit of 40 x SSI. 2nd year: 75%, with a limit of 30 x SSI. 3rd and 4th year: 50%, with a limit of 20x SSI. 5th year: 25%, with a limit of 10 x SSI. <i>Law 82/2023, Article 12.°B</i>	S	-
	Tax allowance for income from work to €4350.25 and from now to be updated annually, in line with SSI <i>Law 32/2024</i>	S	-
	Tax allowance for income from pensions to €4350.25 and from now to be updated annually, in line with SSI <i>Law 32/2024</i>	S	-
	Tax Allowance for expenses with rent increased to €900. <i>Law 82/2023, Article 78.°E</i>	S	-
PIT: Minimum Income Guarantee	The (Annual) Reference Value of the Minimum Income Guarantee was increased to the highest value between €11,480 (i.e., 14* NMW), and 1,5 x 14 x IAS, <i>Law 82/2023, Article 70°</i>	S	-
	Changes to Minimum Income Guarantee in the computation of the Income Limit (L) Formula <i>Law 82/2023, Article 70°</i>	S	-
	<ul style="list-style-type: none"> Income Limit (L) Formula, is now computed as: Reference Value of the Minimum Income Guarantee – General Deductions Limit / 1st bracket Rate*2.75 + 1st bracket Limit/2.75 	S	-
	<ul style="list-style-type: none"> Introduction of another interval for assigning the Minimum Existence allowance for taxable incomes below or equal to the Reference Value Limit; Allowance amount set to be equal to: Reference Value of the Minimum Income Guarantee – Allowances + General Deductions Limit / 1st bracket Rate. 	S	-

Table 2-12 Changes to Personal Income Tax [2024, Continent] (cont.)

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
PIT: Minimum Income Guarantee	Changes to Minimum Income Guarantee in the computation of the Income Limit (L) Formula Law 82/2023, Article 70°	S	-
	<ul style="list-style-type: none"> For taxable incomes above Reference Value Limit and below or equal to the Income Limit L, the allowance is set to: Reference Value of the Minimum Income Guarantee – $1.75 * (\text{Taxable Income} - \text{Reference Value}) + (\text{Allowances} + \text{General Deductions Limit} / 1\text{st bracket Rate})$. 	S	-
	<ul style="list-style-type: none"> For taxable incomes above the Income Limit L, the allowance is set to: $\text{Income Limit} - 1\text{st bracket Limit} - 0.9 * (\text{Taxable Income} - \text{Income Limit}) + \text{Allowances}$ 	S	-

Table 2-13 Changes to Personal Income Tax [2024, Azores & Madeira]

Policy	Measure (Legal Basis)	Impact on EUROMOD	Comments
Personal Income tax	Azores: Updating Income Brackets, by 3% Law 82/2023, Article 68°	S	-
	Azores: Reduction in marginal rates of the first 5 Income brackets: <ul style="list-style-type: none"> - 0.875 p.p in the 1st income bracket; - 2.1 p.p in the 2nd income bracket; - 2.45 p.p in the 3rd income bracket; - 1.75 p.p in the 4th income bracket; - 6.83 p.p in the 5th income bracket. Law 82/2023, Article 68°	S	-

Changes were also introduced in Personal Income Tax in the Autonomous Region of Azores:

- i. **PIT** income brackets were upgraded by 3%, very much in line with the projected inflation for 2024 (see Table 2-51, Section 2.7.1);
- ii. **PIT** marginal tax rates for individuals/households in the first five income brackets were reduced by (see Table 2-51, Section 2.7.1):
 - - 0.875 percentage points in the 1st income bracket;
 - - 2.1 percentage points in the 2nd income bracket;
 - - 2.45 percentage points in the 3rd income bracket;
 - - 1.75 percentage points in the 4th income bracket;
 - - 6.83 percentage points in the 5th income bracket.

• *Changes to Consumption Taxes*

There were also some changes to **Consumption Taxes**, namely:

- The VAT intermediate rate is extended to the following products (see Table 2-57, Section 2.8.1):
 - Edible vegetable oils;
 - ‘Alheiras’ (bread sausages);
 - Juices, nectars and carbonated waters or added with carbon dioxide or other substances, provided they are purchase in a context specific to the provision of food and beverage services;
- The VAT reduced rate is extended to the All purchases related with the production of renewable energy (see Table 2-57, Section 2.8.1);
- The VAT Exemption on tutoring services now applies whether the lessons are taught only personally or in a group (see Table 2-57, Section 2.8.1).

2.3 Order of simulations and interdependence

The following table shows the benefits and taxes simulated by EUROMOD for the years of 2021-2024. As there were only a few structural changes in the Portuguese tax-benefit system during this period (excluding, naturally, the COVID-19 temporary measures), the order by which the policies are simulated remains mainly unchanged.

Essentially, the simulation order results from policies’ interdependence, as the income simulated by some policies is then taken as an input by others. For example, the minimum wage and minimum pension policies (as well as the wage compensation scheme for employees related with the COVID-19¹) are simulated first, as their outcomes are employment and pension’s income, which will be used by subsequent policies.

The simulation of social contributions comes next, as employment and COVID-related compensation schemes are subject to social contributions. Importantly, the simulation of the social contributions of the self-employed is repeated, as, first, the contributory base of self-employed is used as input to determine the final amount of the COVID-19 compensation scheme and, second, social contributions are paid on the resulting compensation for self-employed.

Unemployment benefits should be simulated next, as all inputs required are now available (either from the original data or simulated) and its output (unemployment benefit income) will be used after.

Then parental leave benefits are simulated² as their income tests include unemployment benefits and pensions.

All necessary inputs are now available to simulate the personal income tax and the tax on capital income.

The minimum means-tested schemes and social integration income comes next, as they are part of the assessed income to determine child benefit eligibility. Finally, after simulated the child benefits, the remaining temporary and extraordinary benefits are also simulated.

¹ COVID-19 monetary compensation schemes can only produce results if the model is run in combination with the LMA add-on. For more information about the modelling of labour market transitions, please consult the “*Simulating labour market transitions in EUROMOD*” document.

² Even though their simulation is switched off in the baseline. See section 2.3 and the corresponding policies’ descriptions for more information.

Table 2-14 EUROMOD spine: order of simulation [2021-2024]

Policy	2021	2022	2023	2024	
SetDefault_pt	on	on	on	on	DEF: DEFAULT VALUES FOR VARIABLES
uprate_pt	on	on	on	on	DEF: UPDATING FACTORS
Uprate_bands_pt	on	on	on	on	DEF: UPDATING IN BANDS: PENSIONS
Uprate_yempb_pt	n/a	n/a	on	on	DEF_ UPDATING IN BANDS: CIVIL SERVANTS WAGES 2023 & 2024
ConstDef_pt	on	on	on	on	DEF: CONSTANTS
ilsdef_pt	on	on	on	on	DEF: STANDARDISED INCOME LISTS
ilsUDBdef_pt	on	on	on	on	DEF: UDB-RELATED STANDARDISED INCOME LISTS
lldef_pt	on	on	on	on	DEF: NON-STANDARD INCOME CONCEPTS
random_pt	on	on	on	on	DEF: Random assignment for bsaoa_s
TransLMA_pt	off	off	off	off	DEF: Modelling labour market transitions
tundef_pt	on	on	on	on	DEF: ASSESSMENT UNITS
InitVars_pt	on	on	on	on	DEF: Initialise variables
pxp00_pt	a n/	on	n/a	n/a	BEN: Pensions: 2022 Extraordinary (10 euros) increase in pensions
pxp01_pt	n/a	on	n/a	n/a	BEN: Cost of Living: Extraordinary Pension Supplement (2022)
pxp02_pt	n/a	n/a	n/a	on	BEN: Extraordinary Pension Supplement (2024)
yem_pt	switch	switch	switch	switch	INC: Minimum wage (salario mínimo)
yempb_pt	off	off	off	off	INC: Public wages cuts
poacm_pt	off	off	off	off	BEN: Minimum pension (Pensões mínimas)
pcuts_pt	n/a	n/a	n/a	n/a	INC: Pensions cuts and solidarity contributions
neg_pt	on	on	on	on	DEF: recode negative self-employment income to zero
yemcomp_pt	on	off	off	off	BEN: Wage compensation scheme Covid-19
tscee_pt	on	on	on	on	SIC: Employee social insurance contributions
tscer_pt	on	on	on	on	SIC: Employer social insurance contribution
tsce_pt	on	on	on	on	SIC: Self-employed social insurance contribution
ysecomp_pt	on	off	off	off	BEN: Self-employment income compensation scheme Covid-19
tsce_pt	on	on	on	on	SIC: Self-employed social insurance contribution (repetition of policy with order 20)
bunct_pt	on	on	on	on	BEN: Unemployment insurance (Subsídio de desemprego) PART- SIMULATED
bunnc_pt	on	on	on	on	BEN: Unemployment assistance (subsídio social de desemprego) PARTILLY SIMULATED
buncm_pt	on	on	on	on	BEN: Unemployment benefit bonus
poanc_pt	on	on	on	on	BEN: Social Pension (Pensão social de velhice)
bmapr_pt	switch	switch	switch	switch	BEN: Prenatal family allowance (Abono de família pré-natal)
bplct_pt	switch	switch	switch	switch	BEN: Parental allowance (Subsídio parental)
bplnc_pt	switch	switch	switch	switch	BEN: Parental social allowance (Subsídio social parental)
tin00_pt	on	on	on	on	TAX: Progressive personal income tax
tiniy_pt	on	on	on	On	TAX: Income tax on capital income
bsaoa_pt	on	on	on	On	BEN: Solidarity supplement for older persons (Complemento Solidário para Idosos - CSI)
bsa00_pt	on	on	on	on	BEN: Social insertion income (Rendimento social de inserção ou mínimo garantido)

Policy	2021	2022	2023	2024	
bfxp_pt	n/a	on	n/a	n/a	BEN: Cost of Living: Family income support 2022 (Apoio excepcional aos rendimentos e apoio excepcional a crianças e jovens)
bch_pt	on	on	on	on	BEN: Family benefit (Abono de família para crianças e jovens)
bfxp01_pt	n/a	n/a	on	n/a	BEN: COST-OF-LIVING: Extraordinary Supplement for Vulnerable Families 2023 (Apoio extraordinário a famílias mais vulneráveis)
bhotn_pt	n/a	n/a	on	on	BEN: Rent Support (Apoio extraordinário à renda)
tco_pt	on	on	on	on	TAX: Commodities
spp_pt	off	off	off	off	TAX/BEN: Special Price Policies
output_std_pt	on	on	on	on	DEF: STANDARD OUTPUT INDIVIDUAL LEVEL
parben_output_std_pt	switch	switch	switch	switch	DEF: STANDARD OUTUT INDIVIDUAL LEVEL
output_std_hh_pt	off	off	off	off	DEF: STANDARD OUTPUT HOUSEHOLD LEVEL

The last policy included in the spine is tco_pt (consumption taxes). It is placed at the very end because consumption tax liabilities (VAT and excises) depend on household consumption expenditures, and these are estimated by the model based on the income shares (xs_* variables included in the input data) and simulated disposable income (ils_dispy). This is why before running any simulation of consumption tax policy it is required to activate all the other policies intervening in the simulation of disposable income.

2.4 Policy extensions

There are four extensions included in the Portuguese model:

- **Uprating by Average Adjustment (UAA)**, allowing the user to choose between uprating (non-simulated) public pensions based on the growth in average amounts (if extension is on) or by using statutory indexation rules (if extension is off). The default for the baselines is off.
- **Minimum Wage Adjustment (MWA)**, allowing the user to switch on/off the minimum wage simulation. The default for the baselines is off.
- **Full Year Adjustments (FYA)**. While EUROMOD usually simulates policies as of June 30th of the respective year, it is also possible to simulate within-year policy changes. It is now switched off in the baseline scenario.
- **Parental Benefits Extension (PBE)**, allowing the user to choose between the observed (non-simulated) parental leave benefits (extension off) or the simulated ones (extension on). The default for the baselines is off.
- **HHoT – Unemployment extension (HHoT_un)**, improves the simulation accuracy of the unemployment insurance benefit when EUROMOD is run with hypothetical data. For instance, in most countries the legislation of this benefit requires information on variables such as individuals’ employment history, which are not available in SILC; we can define these variables in HHoT and use them to simulate the policy’s rules more precisely when running the model with hypothetical data. This extension is set to on when the model is used with HHoT data.

Apart from the abovementioned extensions, there are two policies that are **turned off** in the baseline:

- ‘**Minimum pensions**’ (*poacm_pt*). This policy is switched off in the baseline due to its underestimating effect on elderly poverty.

- ‘**Labour market transitions**’ (*TransLMA_pt*). This policy defines the individuals that are selected to undergo transitions to monetary compensation schemes and/or unemployment. The transitions are only enabled if used together with the Labour Market Adjustments (LMA) add-on (i.e., the LMA add-on switches on this policy automatically). The transitions are based on a random allocation of individuals and they might be triggered by feeding the parameters of this policy with official or hypothetical information³. This policy, in combination with the LMA add-on, enables the simulation of the wage compensation scheme (*yemcomp_pt*) and the self-employment compensation scheme (*ysecomp_pt*).
- Benefit Calibration Adjustments (BCA), allowing the user to calibrate the receipt of benefits to match the simulated total expenditure of a benefit to real expenditure from external statistics. The extension is implemented for the simulation of the social assistance benefit (*bsa00_pt*) and Solidarity supplement for older persons (*bsaoa_pt*). The default for the baseline is off. When the extension is on, a subset of eligible observations is selected randomly as beneficiaries so that the real expenditure is reached, removing the benefit from the rest of the eligible observations; when off, all eligible observations are kept as beneficiaries. This extension shares most of its functions with the BTA extension; as a general rule, only one of the extensions should be on, but if both are, the lowest rate between the take-up rate and the calibration rate will be applied. More details on the specific implementation of BCA and BTA extensions are provided in the subsections describing the corresponding benefits.
- Benefit Take-up Adjustments (BTA), allowing the user to apply non-take-up corrections. The extension is used for the simulation of the social assistance benefit (*bsa00_pt*) and Solidarity supplement for older persons (*bsaoa_pt*). The default for the baseline is off. When the extension is on, a share of (weighted) eligible observations equal to the take-up rate is selected randomly as beneficiaries, removing the benefit from the rest of the eligible observations; when off, all eligible observations are kept as beneficiaries. This extension shares most of its functions with the BCA extension; as a general rule, only one of the extensions should be on, but if both are, the lowest rate between the take-up rate and the calibration rate will be applied. More details on the specific implementation of BCA and BTA extensions are provided in the subsections describing the corresponding benefit(s).

³ For more information about the modelling of labour market transitions, please consult the “*Simulating labour market transitions in EUROMOD*” document.

2.5 Benefits

2.5.1 Unemployment benefit – insurance (*bunct_pt*)

- **Definition**

The unit of analysis is the individual. There are no benefit units (*i.e.*, the units are single), and no income test.

- **Eligibility conditions**

- Have been fired (exclusively by decision of the employer) after working for at least 360 days over the previous 24 months (insurance period). It excludes self-employment.
- Actively looking for work.

- **Benefit amount**

- Reference remuneration: wages' average of the first 12 of the 14 months before the firing date.
- Amount: 65% of the reference remuneration. Lower bound: 1 x SSI (unless the net reference remuneration is lower than the SSI) in 2020 and 1.15 x SSI (if the reference remuneration corresponds, at least, to the NMW) since 2021. Upper bound: 2.5 x SSI.
- Bonus of 10% for couples with children if both parents claim insurance unemployment benefit. The increase is attributed to each of the beneficiaries and if one of them no longer receives the insurance unemployment benefit and starts receiving the assistance unemployment benefit or, remaining unemployed, does not receive any benefit for it, the other beneficiary continues to receive the bonus.

- **Unemployment benefit for chairmen and self-employed**

Chairmen and self-employed may also be entitled to an unemployment benefit, under specific rules. (NOT SIMULATED)

- **EUROMOD modelling**

The unemployment benefits cannot be fully simulated in EUROMOD, as there is no information on the reason why people became unemployed (voluntary or compulsory), nor on the duration of the most recent jobs. These constraints apply to the main unemployment benefit – called contributory or insurance unemployment benefit – and to the social unemployment benefit (see next section), also referred to as non-contributory benefit (although there was some limited contribution) or assistance unemployment benefit.

Nonetheless, a split of the original variable in the database (*bun*) can be simulated by observing some of the occurrences more easily associated with the latter kind of benefit (see next section for a more detailed description of the splitting process).

Table 2-15 Characteristics of the insurance unemployment benefit (*bunct_pt*)

		2021	2022-2024	
Eligibility	Contribution period	1 year out of the last 2	No changes	
	Other conditions	Have been fired & listed on the unemployment register (actively looking for work)	No changes	
	Eligibility of self-employed (NOT SIMULATED)	Yes (under specific rules)	No changes	
Payment	Contribution base	Wages' average of the first 12 of the 14 months before the firing date	No changes	
	Basic amount	65% of the contribution base	No changes	
	Additional amount	10% bonus for couples with children if both partners claim insurance unemployment benefit	No changes	
	Floor	SSI	Or 1.15xSSI	
	Ceiling	2.5 x SSI	No changes	
Duration in months	Up to 29 years old	Up to 14 months	5 months	No changes
		15-23 months	7 months	No changes
		24+ months	11 months	No changes
		Bonus	30 days for every 5 years employed	No changes
	30-39 years old	Up to 14 months	6 months	No changes
		15-23 months	11 months	No changes
		24+ months	14 months	No changes
		Bonus	30 days for every 5 years employed	No changes
	40-49 years old	Up to 14 months	7 months	No changes
		15-23 months	12 months	No changes
		24+ months	18 months	No changes
		Bonus	45 days for every 5 years employed	No changes
50+ years old	Up to 14 months	9 months	No changes	
	15-23 months	16 months	No changes	
	24+ months	18 months	No changes	
	Bonus	60 days for every 5 years employed	No changes	
Subject to	Taxes	No	No changes	
	SIC	No	No changes	

2.5.2 Unemployment benefit – assistance (*bunnc_pt*)

- **Definition**

Either this benefit is granted as an initial benefit to claimants who have not worked long enough to claim the main unemployment benefit, or as an extension to those who cease to be entitled to the main unemployment benefit (as long as they meet the additional conditions listed below).

Unlike the main benefit, the social benefit considers both individual and family units. Family units are defined as:

- The individual;
- His/her partner;
- Any dependent children (those below 18 years old).

- **Eligibility conditions**

- For the ‘initial benefit modality’: Have been fired (exclusively by decision of the employer) after working for at least 180 days over the previous 12 months (insurance period). It excludes self-employment.
- For the ‘extended modality’: Having ended the main unemployment benefit.
- For the long-term unemployed: Previous recipients of the means-tested social unemployment benefit who are still unemployed six months after the end of the benefit and still fulfil the remaining conditions.
- Actively looking for work.

- **Income test**

The family unit equivalent income must be less than 80% of the SSI. The equivalent income is defined by total income after applying the following equivalence scale:

- Recipient – 1
- Every other adult (18+) – 0.7
- Every under-18 – 0.5

There are specific rules regarding investment income (NOT SIMULATED): family’s total financial assets amount must be lower than 240 x SSI.

Table 2-16 Unemployment benefit – assistance (*bunnc_pt*): assessed income

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory (simulated)
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypr	INCOME: Property
ypt	INCOME: Private transfers received
yyi	INCOME: Investment
bho	BENEFIT/PENSION: Housing (new from August 2010) ⁽¹⁾

⁽¹⁾ For non-monetary housing benefits (benefits in kind), the maximum amount of rent subsidy is considered, in progressive terms along the duration of the unemployment benefit. (NOT SIMULATED)

• ***Benefit amount***

- Amount: 80% of the SSI for individuals in a single benefit unit and 100% of the SSI if the benefit unit size is larger than one.
- Bonus of 10% x NMW per child in the household.
- Amount of the long-term unemployed benefit: 80% of the previous one.

• ***Benefit's length***

‘Initial modality’: Same as for the insurance unemployment benefit.

‘Extended modality’: if age at the end of the insurance benefit is below 40 years old, the length is half of that benefit’s length. Otherwise, it is the same as the ‘initial modality’.

• ***EUROMOD modelling***

As mentioned above, the unemployment benefits cannot be fully simulated, but it is possible to simulate a split of the original unemployment benefit variable (*bun*) into assistance/social and insurance/contributory related variables (*bunnc_s* and *bunct_s*, respectively).

The original splitting of the unemployment benefit variable (*bun*) into two variables, namely the ones respecting to the contributory unemployment benefit (*bunct*) and the non-contributory unemployment benefit (*bunnc*), was made through the EU-SILC variables py092g and py09g, respectively.

Table 2-17 Characteristics of the assistance unemployment benefit (*bunnc_pt*)

		2021-2024
Eligibility	Contribution period	180 days over the last year (<i>“initial modality”</i>) OR having ended the main unemployment benefit (<i>“extended modality”</i>)
	Other conditions	Family unit equivalent income < 80% of the SSI & actively looking for work)
	Eligibility of self-employed	No
Payment	Contribution base	n/a
	Basic amount	80% of the SSI for single benefit units OR 100% of the SSI for larger benefit units
	Additional amount	Bonus of 10% x NMW per child in the household.
	Floor	No
	Ceiling	No
Duration in months	Standard	<i>Initial modality</i> : same as for the insurance unemployment benefit
	Special cases	<i>Extended modality</i> : if < 40 years old, the length is half of that benefit’s length. Otherwise, it is the same as the “initial modality”
Subject to	Taxes	No
	SIC	No

2.5.3 Minimum pension (*poacm_pt*)

- **Definition**

The unit of analysis is the individual.

- **Eligibility conditions**

Minimum pensions are guaranteed to individuals with past contributions that retire at legal age or later and have a statutory pension amount lower than the minimum that the pensioner is entitled.

- **Benefit amount**

Minimum pensions are composed by two parts: the statutory pension and the ‘social supplement’ (difference between the statutory and the minimum amount). The former is financed by the Social Security budget, while the latter is financed by the state budget. The minimum value is fixed each year and varies with the pensioners’ working career length. In the simulation, the variable *liwwh* (work history, in months) is used as a proxy to the working career length. Thus, every old age contributory pension (*poact*) in the database is ‘corrected’ accordingly to the following grid:

Table 2-18 Old age contributory pension: minimum amounts [2021-2024] (monthly, in €)

Career length	2021	2022	2023	2024
Less than 15 years	275.30	278.05	291.48	319.49
15 to 20 years	288.79	291.68	305.77	335.15
21 to 30 years	318.67	321.86	337.41	369.83
More than 30 years	398.34	402.32	421.75	462.28

- **EUROMOD modelling**

The simulation of the old age contributory pensions is not achievable using the available microdata, due to the lack of information on several attributes. However, it is possible to simulate the non-contributory pensions and, with some degree of simplification, the level of minimum pensions. Furthermore, this methodology offers the possibility of ‘correcting’ the original data regarding the low declared old age pension income.

This policy is switched off (*i.e.*, not executed) in the baseline, due to its underestimating effect on elderly poverty.

2.5.4 Old age social pension (*poanc_pt*)

- **Definition**

The recipient is the individual, although if living with a partner, the income of the couple is considered in the income test.

- **Eligibility conditions**

Minimum age: 66 years and 6 months in 2021, 66 years and 7 months in 2022, and 66 years and 5 months in 2023 and 2024.

- **Income test**

- Single recipient: monthly gross income up to 40% of the SSI.
- Couple: monthly gross income up to 60% of the SSI.

The framework of the old age social pension is unclear regarding which types of income should be included in the means-test evaluation, but they should include, at least:

Table 2-19 Old age social pension (*poanc_pt*) assessed income

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
bun	BENEFIT/PENSION: Unemployment
poact_s	BENEFIT/PENSION: Old age: contributory
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypr	INCOME: Property
bsaot	Other social assistance benefits
bho	BENEFIT/PENSION: Housing
yiy	INCOME: Investment
yot	INCOME: Other

Important rule to consider while simulating the old age social pension (especially when testing couples): although the social pension itself (of the partner, in this case) amounts to the total couple income, it should be considered only its base value. So, for example, Extraordinary Solidarity Supplement should not be included.

- **Benefit amount**

The monthly amount of the old age social pension is €224.24 in 2023. Notwithstanding, besides that amount, every recipient receives an Extraordinary Solidarity Supplement (*Complemento Extraordinário de Solidariedade*), that differs according to their age (€19.52 for those aged up to 70 years old, and €39.03 for those with more than 70 years old).

Table 2-20 Old age social pension (*poanc_pt*) amounts [2021-2024] (monthly, in €)

	2021		2022		2023		2024	
	65-69	70+	65-69	70+	65-69	70+	65-69	70+
Old age social pension base amount	211.79		213.91		224.24		245.79	
Extraordinary solidarity supplement	18.44	36.86	18.62	37.23	19.52	39.03	21.39	42.78
Sum	230.23	248.65	232.53	251.14	243.76	263.27	267.18	288,57

These amounts are paid monthly and there is a 13th (in July) and 14th (in December) extra payment in the same amounts.

- ***EUROMOD modelling***

The original EU-SILC py102g, py103g and py104g variables are used to split old age benefits into old age contributory pension (*poact*) and old age social pension (*poanc*). The values of this initial splitting are checked to assure that the value of *poanc* cannot be higher than the maximum value of the old age social pension.

This disaggregation should be done according to the policy rules described before and if the original value of the variable *poa* is within the band [-3.5%, +3.5%] of the individual income.

2.5.5 Solidarity supplement for the elderly (*bsaoa_pt*)

• **Definition**

The recipient is the individual, although if living with a partner, the income of the couple is observed. Their children/descendants' income is also indirectly observed. Thus, the family unit is the individual, if living alone, or the couple otherwise.

Equivalence scale for the recipient's 'family unit': 1 for the single recipient and 1.75 for the couple. This benefit also considers a second family unit: the household of the recipient's children.

• **Eligibility conditions**

Minimum age: 66 years and 6 months in 2021, 66 years and 7 months in 2022, and 66 years and 5 months in 2023 and 2024.

Since 2018, to compensate the penalties in early pensions since 2014, an exception to the minimum age is granted in cases where the pensioner had an early pension starting since January 2014 (NOT SIMULATED). Additionally, from October 2018, invalidity pensioners who are not recipients of the new benefit for handicapped people ('*Prestação Social para a Inclusão*'), may also be entitled to the solidarity supplement.

• **Income test**

- Single recipient: annual gross income up to the reference amount.
- Couple: annual gross income up to 1.75 x reference amount. However, the single recipient means-test must also be met.

Table 2-21 Solidarity supplement for the elderly (*bsaoa_pt*): reference value (RV) [2021-2024] (annual, in €)

	2021-2022	2023	2024	
Single	5,258.63	5,858.63	6,608.00*	7,208.00**
Couple (1.75 x Single)	9,202.60	10,252.60	11,564.00*	12,614.00**

(*) From 1st of January to 31st of May 2024. (*) From 1st of June 2024.

The income of both elements of the family unit (Y_1 and Y_2 in the formula in Table 2-25 below) include a wide range of income variables in EUROMOD, as listed below (although some types of income are impossible or difficult to simulate).

Table 2-22 Solidarity supplement for the elderly (*bsaoa_pt*): assessed income

Variable	Label
Yem	INCOME: Employment
Yse	INCOME: Self-employment (only 65% of the amount)
bunct_s	BENEFIT/PENSION: Unemployment: insurance
bunnc_s	BENEFIT/PENSION: Unemployment: assistance
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory (simulated)
Psu	BENEFIT/PENSION: Survivors
Pdi	BENEFIT/PENSION: Disability
Bed	BENEFIT/PENSION: Education
Ypp	INCOME: Private pension
Ypr	INCOME: Property
bsaot	Other social assistance benefits
bho	BENEFIT/PENSION: Housing
yy	INCOME: Investment
yot	INCOME: Other
ypt	INCOME: Private transfers
-	Family solidarity (not fully simulated – see below)
-	Institution attendance: annual subsidy paid by Social Security to social institutions. Impossible to simulate.
-	Income imputation from wealth: 5% of the value of financial assets (when this value is higher than the investment income declared) and 5% of real estate (when this value is higher than the property income declared). Impossible to simulate.

‘Family Solidarity’

Before 2024, this benefit also considered the income of the recipients’ children/descendants. They were evaluated within their own households and comprise their own partners and any dependent children.⁴ However, in 2024, this was excluded from the means test to assess the eligibility to CSI.

Previous to 2024, the assessment of children/descendants’ income was done as follows:

- i. The types of income of the recipients’ descendants that are evaluated are:
- ii. Then, the household’s total income is equivalised through an ‘OECD modified’ resembling scale of equivalence (1 for the first adult, 0.5 for other adults with more than 18 years old, and 0.3 for every child aged 0-17). The computed equivalent income is then used to position the descendant on a scale.
- iii. If the income level of each recipients’ descendants is high enough – if it is included in the 4th rank (above 5 x reference value) –, the parent/recipient is automatically excluded from the Solidarity Supplement for the elderly. If the income of the recipients’ children/descendants is included up to the 3rd rank (< 5 x reference value), the FS is 0%.
- iv. One important remark: the FS only happens when a parent is a recipient. For example, if an elderly couple have a daughter together, but only the wife is a recipient, then she will only “generate” the FS to her mother.

⁴ However, it is only possible to simulate the Family Solidarity component when both the recipient and descendants lived in the same household

Table 2-23 Solidarity supplement for the elderly (*bsaoa_pt*): assessed income (Family Solidarity)

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
poa	BENEFIT/PENSION: Old age
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypt	INCOME: Private transfers
ypr	INCOME: Property
bsaot	Other social assistance benefits
bho	BENEFIT/PENSION: Housing

- **Benefit amount**

The amount paid is the difference between the reference value (see Table 2-20) and the annual income of the recipient. Calculations are simple when the recipient lives alone, but complicated when living in couples:

- When there is only one recipient in the couple, the amount paid is the minimum of two values: the difference between the reference value and the actual individual income of the recipient (or half of the actual income of the couple), and the difference between the ‘total equivalent reference value’ (€7,208.00 x 1.75 in 2024) and the couple's total income.
- When both are recipients, the amount paid is given by the difference between the ‘total equivalent reference value’ and the couple's total income. This amount is then divided between the two recipients according to specific rules.

Table 2-24 Solidarity supplement for the elderly (*bsaoa_pt*): Family Solidarity scale [2021-2024]

	Rank
Below or equal to 2.5 x reference value (RV)	1 st
Between 2.5 and 3.5 x RV	2 nd
Between 3.5 and 5 x RV	3 rd
Above 5 x RV	4 th

Table 2-25 Calculation of the solidarity supplement for the elderly (*bsaoa_pt*)

Single recipient:	$amount = RV - Y_1$
Couple, one recipient:	$amount = \min \left\{ \begin{array}{l} RV - Y_1 \\ RV \times 1.75 - Y_1 - Y_2 \end{array} \right.$
Couple, two recipients:	$amount = RV \times 1.75 - Y_1 - Y_2$

Note: Y_1 is the total individual income of the sole recipient or of the first recipient in a couple where both are recipients, while Y_2 is the total individual income of the partner or second recipient in the couple. RV is the reference value. Y_1 and Y_2 include the FS, but only in the case of the recipients.

The solidarity supplement for the elderly is paid monthly, twelve times a year.

- **EUROMOD modelling**

The EU-SILC hy060g variable (*social exclusion not elsewhere classified*) contains information about several benefits: solidarity supplement for the elderly, social integration income and others.

In EU-SILC UDB hy06g, hy062g and hy064g are missing and have the flag=-2. This implies that hy060g = hy063g and all the hy060g amount is non-contributive and means-tested. The option is to split *bsa* into *bsaoa* and *bsa00* and make *bsaot*=0 for all cases.

The solidarity supplement for the elderly is the first variable to get from the split, considering the rules of this policy. Basically, for households with a positive amount of this variable (*bsa* > 0) and with at least one person within the legal retirement age or more, the expected amount of solidarity supplement for the elderly is calculated. If the original value (*bsa*) is greater or equal to that expected amount, then the solidarity supplement is equal to that amount, otherwise it is equal to the original value of *bsa*.

Given the impossibility of simulating all means-tested conditions of the non-resident descendants, the simulation overestimates the number of recipients and the benefit amounts. Thus, we have introduced a calibration and take up adjustment. BTA and BCA extensions are off, so the baseline model neither adjusts for non-take-up of the benefit nor calibrates its receipt, but the user can activate them if necessary. See section 2.4 for technical details on both extensions and their interactions.

Users can enable the necessary extensions in Country Tools/Set Switches. For proper functioning, the extensions require the following inputs:

- BTA: The estimated take-up rate of the benefit should be set as the value of the \$bsaoa_BTA_rate constant in the model. Currently, the value is set to 1, indicating no adjustment for non-take-up.
- BCA: The aggregate expenditure to be filled out in the External Statistics table, so that the calibration rate (\$bsaoa_BCA_rate) is computed accordingly. Data are currently available for the years 2016-2023; given the absence of information for 2024, the calibration rate is not computed within the 2024 system, but the one computed within the 2023 system is used instead. For the modelling of reforms, the 2024 system should be used in order to allow for variation in the number of beneficiaries (hence expenditure): beneficiaries will change when the eligibility conditions change by applying the share of 2023 to the new pool of eligible units. If previous systems were used for reforms, total expenditure would remain constant irrespective of the reform applied, since the model would always stick to the existing external statistics.

2.5.6 Social integration income (*bsa00_pt*)

• **Definition**

The unit of analysis is the family. This unit comprises:

- The head of the family;
- His/her partner;
- All his/her under-18 relatives;
- Other direct descendants of the head aged 18+ that are his dependents. Dependency is defined by having an income level up to 70% of the social pension.

Equivalence scale for income evaluation: 1 for the first adult (aged 18+); 0.7 for each additional adult; 0.5 for each child.

• **Eligibility conditions**

Individuals of all ages. However, the head of the family must be an adult (aged 18 or older).

• **Income test**

The family’s total income must be lower than their ‘Social Integration Income (SII) value’, which is equal to the scale of equivalence multiplied by the SII reference amount (€509.26 in 2024).

There is also a specific test on financial assets, which must be less than 60 x SSI (NOT SIMULATED).

Table 2-26 Social integration income (*bsa00_pt*): assessed income

Variable	Label
yem	INCOME: Employment (only 80% of the amount)
yse	INCOME: Self-employment (only 80% of the amount)
bunct_s	BENEFIT/PENSION: Unemployment: insurance
bunnc_s	BENEFIT/PENSION: Unemployment: assistance
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory (simulated)
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypt	INCOME: Private transfers
ypr	INCOME: Property
yy	INCOME: Investment
yot	INCOME: Other

• **Benefit amount**

The amount paid results from the difference between the ‘SII value’ and the family’s total income. The SII is paid in a monthly basis, twelve times a year.

Other modifications (beyond the equivalence scale and threshold) not documented here, can affect the benefits claiming, renewal and administrative processes, and may have a negative impact on the number of recipients, such as:

- New rules for new claims and renewals of the SII may increase the bureaucratic process and create additional difficulties to families, leading to an increase in non-take-up and exit issues.
 - Increased emphasis in inspection checks to combat fraudulent claims.
 - Individuals must now follow stricter rules concerning their integration programs. If an individual fails to attend a Social Security services meeting without reasonable motive, the benefit is cancelled.
 - Individuals who live in institutions funded by the state (including jail) are no longer eligible.
- ***EUROMOD modelling***

SII is just one of the possible benefits included in the original variable *hy060g*. Previously, solidarity supplement for the elderly has been extracted by estimation from *hy060g*. The difference between *bsa* and *bsaoa* is attributed to *bsa00*.

BTA and BCA extensions are off, so the baseline model neither adjusts for non-take-up of the benefit nor calibrates its receipt, but the user can activate them if necessary. See section 2.4 for technical details on both extensions and their interactions.

Users can enable the necessary extensions in Country Tools/Set Switches. For proper functioning, the extensions require the following inputs:

- BTA: The estimated take-up rate of the benefit should be set as the value of the *\$bsa00_BTA_rate* constant in the model. Currently, the value is set to 1, indicating no adjustment for non-take-up.
- BCA: The aggregate expenditure to be filled out in the External Statistics table, so that the calibration rate (*\$bsa00_BCA_rate*) is computed accordingly. Data are currently available for the years 2016-2023; given the absence of information for 2024, the calibration rate is not computed within the 2024 system, but the one computed within the 2023 system is used instead. For the modelling of reforms, the 2024 system should be used in order to allow for variation in the number of beneficiaries (hence expenditure): beneficiaries will change when the eligibility conditions change by applying the share of 2023 to the new pool of eligible units. If previous systems were used for reforms, total expenditure would remain constant irrespective of the reform applied, since the model would always stick to the existing external statistics.

2.5.7 Child benefit (*bch_pt*)

• **Definition**

The unit of analysis is the family. The recipients are the children. The number of recipients is the only data needed for the equivalence scale calculations, although the family income is also observed.

It assumes a wider concept of benefit unit than the one that is generally used. The *de facto benefit* unit is a tax unit including the recipient child (or children), siblings, parents, tutors, and stepparents.

Equivalence scale for income evaluation: 1 for each recipient plus one (e.g., the income of a family with 2 recipient children is divided by 3).

• **Eligibility conditions**

Children up to 16 years old. It can be extended to individuals up to 24 years under certain conditions:

- Aged between 16 and 18: if attending primary education (1st to 6th grade) or higher.
- Aged between 18 and 21: if attending secondary education (7th to 12th grade) or higher.
- Aged between 21 and 24: if attending higher/superior education.
- Also until 24 years old: if disabled children and receiving disability allowance (not simulated), and children not working.

• **Income test**

The annual ‘reference income’ cannot exceed 2.5 x 14 x SSI. It results from the total annual family unit income divided by the total number of recipients plus one. According to the ‘reference income’, families are ranked along four income brackets:

Table 2-27 Child benefit (*bch_pt*) income brackets upper bounds (1) [2021-2024]

Income bracket	Formula				Value
	2021	2022	2023	2024	2024 ⁽¹⁾
1 st		0.5 x 14 x SSI			€3,363.01
2 nd		1.0 x 14 x SSI			€6,726.02
3 rd	1.5 x 14 x SSI	1.7 x 14 x SSI			€11,434.23
4 th		2.5 x 14 x SSI			€16,815.05

⁽¹⁾ The SSI is not necessarily the amount of SSI in the year that the benefit is paid, but rather the amount that was in force in the income reference year. For example, in 2023 the income assessed will probably date to 2022 or even 2021, so it should be assessed by the SII amount of that corresponding year.

Table 2-28 Child benefit (*bch_pt*): assessed income

Variable	Label
Yem	INCOME: Employment
yse	INCOME: Self-employment (70% of earnings, 20% of sales)
bunct_s	BENEFIT/PENSION: Unemployment: insurance
bunnc_s	BENEFIT/PENSION: Unemployment: assistance
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory (simulated)
bsaoa_s	BENEFIT/PENSION: Solidarity supplement for the elderly
bsa00_s	BENEFIT/PENSION: Social integration income
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypr	INCOME: Property
yy	INCOME: Investment
yot	INCOME: Other

- **Benefit amount**

The amount paid every month depends on the child's age and on the income bracket of the child's family.

Table 2-29 Child benefit (*bch_pt*) amounts [2021] (monthly, in €)

Income bracket	<=36 months	>36 and <=72 months	>72 months
1 st	149.85	49.95	37.46
2 nd	123.69	41.23	30.93
3 rd	97.31	32.44	28.00
4 th	58.39	19.46	-

Table 2-30 Child benefit (*bch_pt*) amounts [2022] (monthly, in €)

Income bracket	From January to June			From July to December		
	<=36 months	>36 and <=72 months	>72 months	<=36 months	>36 and <=72 months	>72 months
1 st	149.85	49.95	37.46	149.85	50.00	41.00
2 nd	123.69	41.23	30.93	123.69	50.00	41.00
3 rd	97.31	32.44	28.00	97.31	32.44	28.00
4 th	58.39	19.46	-	58.39	19.46	-

Note: in EUROMOD it is used the average amounts referring to the two semesters.

Table 2-31 Child benefit (*bch_pt*) amounts [2023] (monthly, in €)

Income bracket	<=36 months	>36 and <=72 months	>72 months
1 st	161.03	50.00	50.00
2 nd	132.92	50.00	50.00
3 rd	104.57	34.86	30.09
4 th	62.75	20.91	-

Table 2-32 Child benefit (*bch_pt*) amounts [2024] (monthly, in €)

Income bracket	<=36 months	>36 and <=72 months	>72 months
1 st	183.03	72.00	72.00
2 nd	154.92	72.00	72.00
3 rd	126.57	56.86	52.09
4 th	84.75	42.91	-

Supplement for large families: between 2020 and 2022, every child up to 36 months entitled to the benefit with one other sibling, received an additional amount equal to what a child aged 36+ receive in the same income bracket, and if the child had two or more other siblings, the additional amount was equal to two times what a child aged 36+ receive in the same income bracket. As of 2023, the following supplements apply:

Table 2-33 Child benefit (*bch_pt*): supplement for large families [2024] (monthly, in €)

Income bracket	2 children	2+ children
1 st	62.25	102.51
2 nd	55.24	88.47
3 rd	52.09	82.18
4 th	37.64	51.38

Bonus for lone parent families: 35% increase in the above amounts between 2020 and 2022. For 2023 and, the increase is of 50% for the 1st income bracket and 42.5% for the 2nd, 3rd and 4th income brackets. For 2024 and, the increase is of 50% for all income brackets.

Number of payments: the child benefit is paid in a monthly basis, twelve times a year. There is an extra payment (of the same amount) in September, for children that fulfil the following conditions:

- The child’s heir family is in the 1st income bracket.
- The child is between 6 and 16 years old (age attained during the civil year);
- The child attends school.

Education allowance: twice the amount of the benefit that the child is receiving. Conditions that must be fully observed:

- The family income bracket is the 1st or the 2nd.
- The child is attending the 10-12th grade.
- The child’s age is less than 18 years (can be 18 if that age is attained during the school year).
- The child has school success. (NOT SIMULATED)

Child Guarantee: since July 2022, a new supplement is in place, the Child Guarantee (*‘Garantia para a Infância’*), aimed at children under the age of 18, recipients of the child benefit and belonging to households that are in extreme poverty (*i.e.*, placed in the 1st income bracket). This support consists of a benefit that complements the child benefit in order to guarantee the payment of a total amount (including the child benefit amount) of €70 in 2022, €100 in 2023 and €122 in 2024.

Table 2-34 Child Benefit (*bch_pt*): Child Guarantee [2022] (Reference Amount, and Differential Payment, in €)

Income bracket	Age	Child Benefit	Child Guarantee	
			Reference Amount (Monthly)	Differential Payment
1st	≤ 32 months	149.85	70*	0
	> 32 months & ≤ 32 months	50.00	70*	20
	>72 months	41.00	70*	29
2nd	-	-	-	-
3rd	-	-	-	-
4th	-	-	-	-

(*) Based on an annual reference amount of €840, for 6 months.

Table 2-35 Child Benefit (*bch_pt*): Child Guarantee [2023] (Reference Amount, and Differential Payment, in €)

Income bracket	Age	Child Benefit	Child Guarantee	
			Reference Amount (Monthly)	Differential Payment
1st	≤ 32 months	161.03	100	0
	> 32 months & ≤ 32 months	50.00	100	50
	>72 months	41.00	100	59
2nd	-	-	-	-
3rd	-	-	-	-
4th	-	-	-	-

(*) Based on an annual reference amount of €1200.

Table 2-36 Child Benefit (*bch_pt*): Child Guarantee [2024] (Reference Amount, and Differential Payment, in €)

Income bracket	Age	Child Benefit	Child Guarantee	
			Reference Amount (Monthly)	Differential Payment
1st	≤ 32 months	183.03	122*	0
	> 32 months & ≤ 32 months	72.00	122*	50
	>72 months	72.00	122*	50
2nd	-	-	-	-
3rd	-	-	-	-
4th	-	-	-	-

(*) Based on an annual reference amount of €1464.

- ***EUROMOD modelling***

The EU-SILC variable *hy050g* (family/children related allowances) contains information regarding two benefits: child benefit (*bch*) and other family/children related allowances (*bfa*). The identification of the *bch* variable was done using the information of the EU-SILC variable *hy053g* (family/children-related allowances non-contributory and means-tested). The remains components of the variable *hy050g* were affected to *bfa*.

2.5.8 Prenatal family allowance (*bmapr_pt*)

• **Brief description**

A pregnant woman receives the benefit. It is an allowance attributed to the pregnant woman from the 13th week of gestation, which aims to encourage motherhood by compensating for the increased costs during the period of pregnancy. The applicant cannot have a reference income higher than 1.7 x SSI x 14.

• **Definition**

The unit of analysis is the family.

• **Eligibility conditions**

- Have reached the 13th week of gestation.
- Be resident in Portugal or equivalent to a resident.
- Have the reference income equal to or less than the value established for the third income bracket (equal to or less than 1.7 x SSI x 14).
- Do not have financial capital more than 240 x SSI.

• **Income test**

The assessment of eligibility is based on the households' reference income. The reference income is calculated by summing the total income of all family members in the year previous to the application to the Prenatal Family Allowance, divided by the number of children and young people entitled to the family allowance in that same household plus one and the number of unborn children.

The decision on eligibility is made by reference to income brackets, computed by reference to the value of the SSI in the year of the reference income.

Table 2-37 Prenatal family allowance (*bmapr_pt*) income brackets [2021-2024]

Income bracket	Formula				Value
	2021	2022	2023	2024	2024
1 st		0.5 x 14 x SSI			€3,564.82
2 nd		1.0 x 14 x SSI			€7,192.64
3 rd	1.5 x 14 x SSI	1.75 x 14 x SSI			€12,476.87
4 th		2.5 x 14 x SSI			€17,824.1

Table 2-38 Prenatal family allowance (*bmapr_pt*): assessed income

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
bunct_s	BENEFIT/PENSION: Unemployment: insurance
bunnc_s	BENEFIT/PENSION: Unemployment: assistance
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory
psu	BENEFIT/PENSION: Survivors
bsaoa_s	BENEFIT/PENSION: Solidarity supplement for the elderly
bsa00_s	BENEFIT/PENSION: Social integration income
bsaot	BENEFIT/PENSION: Other social assistance benefits
bho	BENEFIT/PENSION: Housing benefits
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypt	INCOME: Private transfers
ypr	INCOME: Property
yy	INCOME: Investment
yot	INCOME: Other

• ***Benefit amount***

The prenatal family allowance is assigned for 6 months, from the month following that in which the 13th week of pregnancy is reached.

If the period of pregnancy is:

- Over 40 weeks, it is attributed for 6 months or until the month of birth, inclusive.
- Less than 40 weeks, it is attributed for 6 months, and can be accumulated with the child benefit after birth.

If an interruption of pregnancy occurs, it is attributed until the month of termination of pregnancy.

The amount of prenatal family allowance is variable based on the reference income of the household and corresponds to the amount of child benefit in the first year of life. It is increased by 35% in single parenting situations.

Table 2-39 Prenatal family allowance (*bmapr_pt*) amounts [2021-2024] (monthly, in €)*

Income bracket	2021-2022	2023	2024
1 st	149.85	161.03	183.03
2 nd	123.69	132.92	154.92
3 rd	97.31	104.57	126.57
4 th	58.39	62.75	84.75

* The amounts in case of twins are doubled (tripled if triplets).

• ***Subject to taxes/SIC***

Not taxable. Not subject to SICs.

- ***EUROMOD modelling***

In the next EUROMOD Public Release this benefit will only be simulated from 2015 to 2023. The simulation is, however, switched off as part of the baselines, i.e., non-simulated components (*bfa*) are being used.

The benefit can only be simulated for those women who already gave birth and therefore could be eligible for the allowance for up to 6 months before the childbirth during each policy year. The duration of this allowance depends on the month of birth of the child.

2.5.9 Parental allowance (*bplct_pt*)

- **Brief description**

This benefit is intended for citizens' beneficiaries of the Social Security system and is intended to replace the lost work income (of the mother and/or the father) during the period of childbirth leave. It is not compatible with work income and unemployment benefits (that will be suspended while receiving the parental allowance). There are different concession periods considering the different modalities that this allowance comprises.

- **Definition**

This benefit is intended for citizens:

- Beneficiaries of the Social Security system covered by the employees/self-employed/voluntary social insurance scheme;
- Beneficiaries in pre-retirement status who carry out an activity under any of the aforementioned schemes;
- Beneficiaries receiving unemployment benefits (insurance and assistance);
- Beneficiaries who receive a relative disability pension or survivor's pension and that are working and with records of remuneration in the Social Security.

This allowance comprises several modalities (which have different concession periods):

- **Initial parental allowance:** attributed for a period up to 120 or 150 consecutive days, according to the parents' option. This period can be extended by 30 days in cases of shared license or birth of twins (for each twin, in addition to the first).
- **Mother's exclusive initial parental allowance:** assigned to the mother for a period up to 72 days (30 days, at most, before childbirth and 42 mandatory days immediately after delivery). This period is included in period corresponding to the initial parental allowance.
- **Father's exclusive initial parental allowance:** assigned to the father for a period of 20 mandatory working days (of which 5 immediately after the birth and 15 within 6 weeks of the birth) and 5 optional working days (consecutive or not) which must be taken after the 20 mandatory days and within the period of the mother's maternity leave. This period is additional to the initial parental allowance.
- **Initial parental allowance of one parent in the event of impossibility of the other:** assigned to the father or mother in the event of physical or mental incapacity, or death of one of them, for the period of the initial parental allowance which the other parent lacked.

- **Eligibility conditions**

- Have a minimum period of contributions of at least 6 months.
- Enjoy the respective licenses, absences and unpaid waivers under the Labour Code or equivalent periods.
- Have Social Security contributions paid by the end of the third month immediately preceding the month in which the parents leave work for the birth child (if self-employed person or if covered by the voluntary social insurance scheme).

- **Income test**

This is not a means-tested benefit.

- **Benefit amount**

The daily amount of the allowance is calculated by applying a percentage to the amount of the beneficiary's reference remuneration (RR), defined by:

- $RR = R/180$, where R is equal to the total of the salaries registered in Social Security in the first six calendar months immediately preceding the second month preceding the beginning of the incapacity for work; or
- $RR = R/(30 \times n)$ if there is no remuneration record in that six-month period because there has been a totalization of taxable periods, and where R is equal to the total remuneration recorded in Social Security since the beginning of the reference to the day before the impediment to work, and n is the number of months to which they report.

Table 2-40 Parental allowance (*bplct_pt*) amounts [2021-2024]

Periods of concession	Monthly amounts
120 days of leave	
150 days of shared leave (120 + 30)	
30 additional days for each twin (plus the first)	100% of RR
Days of father's exclusive license	
180 days of shared leave (150 + 30)	83% of RR
150 days of leave	80% of RR

Minimum daily amount: the amount of the allowance cannot be less than 80% of 1/30 of the SSI, which corresponded to €13.58 in 2024, €12.81 in 2023, €11.82 in 2022, and €11.70 in 2021.

- **Extended parental allowance**

Allowance paid to the mother or the father or both, alternatively aiming to replace the lost work income during the period of childbirth leave, provided that the leave is taken immediately after the end of the period of the parental allowance or the extended parental allowance of the other parent.

It is assigned for a period up to 3 months.

The daily amount of the allowance is calculated by applying 25% to the value of the beneficiary's reference remuneration.

Minimum daily amount: the amount of the allowance cannot be less than 40% of 1/30 of the SSI, which corresponded to €6.41 in 2023, €5.91 in 2022, and €5.85 in 2021.

- **Subject to taxes/SIC**

Not taxable. Not subject to SICs.

- **EUROMOD modelling**

In the next EUROMOD Public Release this benefit will only be simulated from 2015 to 2023. The simulation is, however, switched off as part of the baselines, i.e., non-simulated components (*bfa*) are being used.

We assume that the mother takes the whole duration of leave and chooses to take a shorter leave at higher replacement rate (120 days including 30 days before the childbirth, extended to 150 days in total in case of multiple births)⁵. For the partner we assume that they take the maximum duration (25 working

⁵ However, external statistics shows that it exists a clear preference on choosing 150 days (for the mothers, in the initial parent allowance). The same does not happen when one considers the initial parental social allowance.

days given the 6 working days week or 29 calendar days). We also assume that parents do not decide to make use of the extended parental allowance.

Besides, as the benefit amount depends on the previous earnings, we assume those to be equal to the imputed wage ($yivwg$) or the current wage, whichever is higher. The imputed wage is recorded in hourly terms; hence we assume a country-specific standard number of hours worked per week (40 hours) and we recalculate $yivwg$ in monthly terms ($yivwg*40 *(52/12)$).

2.5.10 Parental social allowance (*bplnc_pt*)

- **Brief description**

This benefit is intended for citizens that are not covered by any compulsory social protection scheme or by the voluntary social insurance scheme. This allowance is paid to the father and/or mother who do not work and do not have Social Security contributions, or who do not qualify for parental allowance. It is not compatible with work income and unemployment benefits (that will be suspended while receiving the parental social allowance).

- **Definition**

This benefit is intended for citizens:

- Not beneficiaries of any compulsory social protection scheme or by the voluntary social insurance scheme;
- Beneficiaries receiving unemployment benefits (insurance and assistance).

This allowance comprises several modalities (which have different concession periods): initial parental social allowance, mother's exclusive initial parental social allowance, parent's exclusive initial parental social allowance, and initial parental social allowance of one parent in the event of the impossibility of the other. The concession periods are the ones equal to the contributory parental allowance.

- **Eligibility conditions**

- Be resident in Portugal or equivalent to a resident.
- Have a monthly income, per person, of the household, equal or less than 80% of the SSI.
- Do not have financial capital more than 240 x SSI.

- **Income test**

The reference income is the sum of all the monthly income of the household of the applicant divided by the elements of his household, considering the following weighting for each element of the household:

- Recipient: 1
- Every other adult (18+): 0.7
- Every under 18: 0.5

Table 2-41 Parental social allowance (*bplnc_pt*): assessed income

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
bunct_s	BENEFIT/PENSION: Unemployment: insurance
bunnc_s	BENEFIT/PENSION: Unemployment: assistance
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory
psu	BENEFIT/PENSION: Survivors
bsaoa_s	BENEFIT/PENSION: Solidarity supplement for the elderly
bsa00_s	BENEFIT/PENSION: Social integration income
bsaot	BENEFIT/PENSION: Other social assistance benefits
bho	BENEFIT/PENSION: Housing benefits
bed	BENEFIT/PENSION: Education
ypp	INCOME: Private pension
ypt	INCOME: Private transfers
ypr	INCOME: Property
yy	INCOME: Investment
Yot	INCOME: Other

- ***Benefit amount***

The amount of the allowance corresponds to a percentage of the SSI, as indicated below:

Table 2-42 Parental social allowance (*bplnc_pt*) amounts [2021-2024]

Periods of concession	Monthly amounts	In 2024
120 days of leave		
150 days of shared leave (120 + 30)	80% x SSI	€407.41
30 additional days for each twin (plus the first)		
10 days of father’s exclusive license		
180 days of shared leave (150 + 30)	66% x SSI	€336,11
150 days of leave	64% x SSI	€325.93

- ***Subject to taxes/SIC***

Not taxable. Not subject to SICs.

- ***EUROMOD modelling***

In the next EUROMOD Public Release this benefit will only be simulated from 2015 to 2023. The simulation is, however, switched off as part of the baselines, i.e., non-simulated components (*bfa*) are being used.

The duration of this allowance is modelled for both parents the same way as for the contributory parental allowance.

2.6 Social insurance contributions

2.6.1 Employee social contributions (*tscee_pt*)

Generally, employees pay contributions on their gross employment income at an 11% flat rate. Civil servants that started working before 2006 contribute to a separate scheme with multiple rates, but their average rate is like the private sector general regime rate.

- **EUROMOD modelling**

There are several regimes, according to specific activities/situations (non-profit organizations, rural workers, football players, clergy, domestic services, young people in their first job, handicapped). Due to the lack of detailed information in the available data, EUROMOD can only simulate the general rule.

2.6.2 Employer social contributions (*tscer_pt*)

Employers pay contributions on their employees' gross income according to a flat rate of 23.75%.

- **EUROMOD modelling**

The policy can be fully/perfectly simulated in EUROMOD, without any particular data or modelling limitations.

2.6.3 Self-employed social contributions (*tscse_pt*)

Self-employed social contributions since 2019:

- **Contribution rates** (applied to the monthly average income): 21.4% (25.2% for rural workers).
- **Contribution base:** actual income, rather than a conventional income based on brackets. Still, not all the gross income is considered. Relevant income: 70% of services or 20% of sales, according to the nature of the business. In the income declaration, the self-employed has the option to change the total income used for the calculation of contributions, increasing, or lowering it by up to 25%.
 - Maximum base: 12 x SSI.
 - Minimum base: a base of incidence resulting in a contribution amount lower than €5 is considered null.
- **Quarterly reporting:** every quarter (end of January, April, July, October) the self-employed are obliged to communicate their income from the previous quarter. The quarterly income is then divided by three to get the monthly average income. Quarterly update: every quarter, contribution amounts are updated according to the updated monthly average income derived from the quarterly income declaration.
- **Minimum contribution:** €20/month.
- **Exemptions:** the self-employed workers are exempt of paying social contributions if they receive old age/disability pensions, and if they simultaneously have received as employees an income above 12 x SSI and a monthly average income from self-employment below 4 x SSI (the exceeding amount is relevant and is considered in the contribution base).
- **Self-employed 'employers' contribution:** if the self-employed individual works on a regular basis for one institution, i.e., more than 50% (or 80%) of the self-employment income is paid by this institution and the individual has no other source of employment income, then the institution must pay a contribution of 7% (or 10%, respectively) of the total amount paid for the services.

2.7 Direct taxes

2.7.1 Personal income tax (*tin00_pt*)

• **Tax unit**

Personal income tax (*‘Imposto sobre o Rendimento Singular’ – IRS*) is due by individuals residing in Portugal and by non-residents receiving income in Portugal. When the individual residing in Portugal is part of a family unit, the income tax applies to all its members. The basic tax unit is composed by the two partners and their dependent children who are defined as:

- Children, adopted children and stepchildren younger than 18 years old and not emancipated.
- Children, adopted children and stepchildren aged between 18 and 25 (adults), with a monthly income below the national minimum wage, who have attended school the 11th or 12th grade of schooling or have attended the compulsory military or civic service.
- Children, adopted children and stepchildren aged 18+ that have been declared unfit for work and have a monthly income below the national minimum wage (the model assumes that all disabled individuals are unfit to work);
- Minors (less than 18) living with a guardian and earning no income.

The age assessment’s date is December 31st.

Dependent parents do not belong to the tax unit. They constitute a different tax unit of their own, that is only accounted in the deductions phase. However, if they fulfil the conditions required to be considered dependent parents (*i.e.*, income below the minimum pension) they are exempt from tax obligations.

• **Taxable income**

Methods for income determination and tax collection may vary between different income sources. Nevertheless, the taxable income is always the total income resulting from the aggregation of gross incomes of different sources minus income specific deductions applied to each income category, and specific reductions/allowances.

Table 2-43 Personal income tax (*tin00_pt*): assessed income (before allowances deduction)

Variable	Label
yem	INCOME: Employment
yse	INCOME: Self-employment
poact_s	BENEFIT/PENSION: Old age: contributory
poanc_s	BENEFIT/PENSION: Old age: non-contributory
psu	BENEFIT/PENSION: Survivors
pdi	BENEFIT/PENSION: Disability
ypp	INCOME: Private pension
ypr	INCOME: Property
yi	INCOME: Investment (Although interest is subject to personal income tax, it is generally taxed at source, through the banking system, at a flat rate of 28%. Thus, in EUROMOD, it is simulated separately and not added to the families’ income)

• **Tax allowances**

Deductions are applied at the individual level, even on joint taxation. For instance, if both partners work, the deductions of the first income category (see next table) are applied separately to their individual

incomes, with zero as limit for the outcome for each of them. Hence, if only one of the partners received employment income, only one deduction is applied. The same rule applies to pensions.

Table 2-44 Personal income tax (*tin00_pt*) allowances [2021-2024]

Income category	Deductions
A – Employment income ⁽¹⁾⁽²⁾⁽³⁾	Deduction limit: €4350.25 (or Social Security contributions, if higher), with the upper limit of the yearly employment income (if lower).
B – Business and professional income ⁽¹⁾⁽²⁾⁽³⁾	Simplified regime: taxable income is 15% of sales or 75% of liberal job earnings or 35% of other services provision earnings. For the simulation, we assume a 25% tax allowance on self-employment income (or $y_{se} \times 15\% - €4,104$, for amounts higher than €27,360).
E – Investment income	No deduction, but only 50% of the yearly gain is taxable. (NOT SIMULATED)
F – Rental income	Repairs and maintenance expenses effectively incurred, municipal tax and expenses with building administration. (NOT SIMULATED)
G – Net worth increases	50% of the net yearly gain is taxable. This rule does not apply to realized gains from the sale of financial assets, where a 10% special rate is applied. (NOT SIMULATED)
H – Pensions ⁽¹⁾	Deduction limit: €4350.25 (or Social Security contributions, if higher), with the upper limit of the yearly pension (if lower).

⁽¹⁾ Specific considerations regarding income in A, B and H categories from disabled people (90% incapacity): only 85% of income from categories A and B, and 90% of income from category H, is considered as taxable (upper limit per income category: €2,500).

⁽²⁾ In 2020 and 2021, there is a partial deduction for young people between 18 and 26 years old, who earn dependent income, in the first three years of work, according to the following amounts per year of work: 1st year, 30% with a limit of 7.5 x SSI; 2nd year, 20% with a limit of 5 x SSI; and 3rd year, 10% with a limit of 2.5 x SSI.

In 2022, this partial deduction is also applicable for young people aged up to 30 years old, if completed a PhD programme. Additionally, the deduction started to also consider those who earn independent income; the limits of deductions were abolish; and the exemption was extended to 5 years, according to the following amounts per year of work: 1st and 2nd years, 30%; 3rd year and 4th years, 20%; 5th year, 10%.

In 2023, there was an increase in the deductions (again with upper limits), according to the following amounts per year of work: 1st year, 50% with a limit of 12.5 x SSI; 2nd year, 40% with a limit of 10 x SSI; 3rd and 4th years, 30% with a limit of 7.5 x SSI; and 5th year, 20% with a limit of 5 x SSI.

In 2024, there was an increase in the deductions (again with upper limits), according to the following amounts per year of work: 1st year, 100%, with a limit of 40 x SSI; 2nd year, 75%, with a limit of 30 x SSI; 3rd and 4th years, 50%, with a limit of 20x SSI; and 5th year, 25%, with a limit of 10 x SSI.

⁽³⁾ Since 2020, there is a deduction for dependent students, who earn employment and self-employment income, up to 5 x SSI.

- **Tax base**

Personal Income Tax = Tax base * Rate – Tax credits,

Where **Tax base** = **Gross income** – **Income specific deductions** – **Reductions**

According to the splitting system, income from married couples is divided by 2 before applying the tax rate. In the case of married couples, the resulting tax is multiplied by two to obtain the tax liability (before tax credits).

- **Tax schedule**

The taxable income is subjected to tax rates according to income brackets. In Azores and Madeira, the marginal tax rates are lower than in the mainland⁶.

Table 2-45 Personal income tax (*tin00_pt*) marginal rates [2021]

Marginal Rate	Income bracket	Deduction
14.5%	Up to 7,112	0
23.0%	>7,112 – 10,732	604.54
28,5%	>10,732 – 20,322	1,194.80
35,0%	>20,322 – 25,075	2,515.63
37.0%	>25,075 – 36,967	3,017.27
45.0%	>36,967 – 80,882	5,974.54
48.0%	Above 80,882	8,401.21

Plus ‘**additional solidarity tax**’: income above €80,000 and below €250,000 is additionally taxed at 2.5%. Income above €250,000 is additionally taxed at 5%.

Table 2-46 Personal income tax (*tin00_pt*) marginal rates [2022]

Marginal Rate	Income bracket	Deduct
14.5%	Up to 7,116	0
23.0%	>7,116 – 10,736	604,86
26.5%	>10,736 – 15,216	980,63
28,5%	>15,216 – 19,696	1,284.99
35,0%	>19,696 – 25,076	2,565.21
37.0%	>25,076 – 36,757	3,066.79
43.5%	>36,757 – 48,033	5,455.84
45.0%	>48,033 – 75,009	6,176.56
48.0%	Above 75,009	8,426.51

Plus “**additional solidarity tax**”: income above 80,000 and below 250,000 is additionally taxed in 2.5%; income above 250,000 is additionally taxed in 5%.

Table 2-47 Personal income tax (*tin00_pt*) marginal rates [2023]

Marginal Rate	Income bracket	Deduct
14.5%	Up to 7,479	0
21.0%	>7,479 – 11,284	486,14
26.5%	>11,284 – 15,992	1,106.73
28,5%	>15,992 – 20,700	1,426.65
35,0%	>20,700 – 26,355	2,772.14
37.0%	>26,355 – 38,632	3,299.12
43.5%	>38,632 – 50,483	5,810.25
45.0%	>50,483 – 78,834	6,567.33
48.0%	Above 78,834	8,932.68

Plus “**additional solidarity tax**”: income above 80,000 and below 250,000 is additionally taxed in 2.5%; income above 250,000 is additionally taxed in 5%.

⁶ Since 2018 EU-SILC, the EUROMOD input data contains regional information at NUTS2 level, allowing to simulate the different existing tax schedules in Azores and Madeira.

Table 2-48 Personal income tax (*tin00_pt*) marginal rates [2024]

Marginal Rate	Income bracket	Deduct
14.5%	Up to 7,703	0
21.0%	>7,703 – 11,623	269,21
26.5%	>11,623 – 16,472	908.92
28,5%	>16,472 – 21,321	1,403.08
35,0%	>21,321 – 27,146	2,895.61
37.0%	>27,146 – 39,791	3,845.50
43.5%	>39,7912 – 43,00	7,029.08
45.0%	>43,000 – 80,000	7,673.78
48.0%	Above 80,000	10,073.60

Plus “**additional solidarity tax**”: income above 80,000 and below 250,000 is additionally taxed in 2.5%; income above 250,000 is additionally taxed in 5%.

Table 2-49 Personal income tax (*tin00_pt*) marginal rates [2021-2022], Azores and Madeira

Income bracket	Madeira		Azores	
	2021	2022	2021	2022
Up to 7,112	10.15%	10.15%	10.15%	10.15%
>7,112 – 10,732	16.10%	16.10%	17.25%	16.10%
>10,732 – 20,322	24.51%	22.80%	21,38%	19.95%
>20,322 – 25,075	32.55%	29.75%	28,00%	24.50%
>25,075 – 36,967	34.78%	33.67%	29.60%	25.90%
>36,967 – 80,882	44.95%	43.65%	36.00%	31.50%
Above 80,882	48.00%	47.52%	38.40%	33.60%

Plus ‘**additional solidarity tax**’: income above €80,000 and below €250,000 is additionally taxed at 2.5%. Income above €250,000 is additionally taxed at 5%.

Table 2-50 Personal income tax (*tin00_pt*) marginal rates [2023], Azores and Madeira

Income bracket	Madeira	Azores
Up to 7,479	10.15%	10.15%
>7,479 – 11,284	14.70%	14.70%
>11,284 – 15,992	18.55%	18.55%
>15,992 – 20,700	19.95%	19.95%
>20,700 – 26,355	29.75%	24.50%
>26,355 – 38,632	33.67%	25.90%
>38,632 – 50,483	42.20%	30.45%
>50,483 – 78,834	43.65%	31.50%
Above 78,834	47.52%	33.60%

Plus ‘**additional solidarity tax**’: income above €80,000 and below €250,000 is additionally taxed at 2.5%. Income above €250,000 is additionally taxed at 5%.

Table 2-51 Personal income tax (*tin00_pt*) marginal rates [2024], Madeira

Income bracket	Marginal Rate
Up to 7,479	10.15%
>7,479 – 11,284	14.70%
>11,284 – 15,992	18.55%
>15,992 – 20,700	19.95%
>20,700 – 26,355	29.75%
>26,355 – 38,632	33.67%
>38,632 – 50,483	42.20%
>50,483 – 78,834	43.65%
Above 78,834	47.52%

Plus '**additional solidarity tax**': income above €80,000 and below €250,000 is additionally taxed at 2.5%. Income above €250,000 is additionally taxed at 5%.

Table 2-52 Personal income tax (*tin00_pt*) marginal rates [2024], Azores

Income bracket	Marginal Rate
Up to 7,703	9.275%
>7,703 – 11,623	12.6%
>11,623 – 16,472	16.1%
>16,472 – 21,321	18,2%
>21,321– 27,146	22,92%
>27,146 – 39,791	25.9%
>39,791– 51,997	30.45%
>51,997 – 81,199	31.5%
Above 81,199	33.6%

Plus '**additional solidarity tax**': income above €80,000 and below €250,000 is additionally taxed at 2.5%. Income above €250,000 is additionally taxed at 5%.

Table 2-53 Net income guarantee ('*mínimo de existência*') [2021-2024] (€/year)

	2021-2022	2023	2024
Reference Value: a) For 2021 to 2022, tax rates cannot reduce net income below X euros if income originates mainly from employment and pensions; b) From 2023 onwards, taxable incomes originated mainly from employment income below X euros are entitled to the allowance amount of the Minimum Income Guarantee	14 x 1.5 x SSI ⁽²⁾ (or 14 x NMW, if higher) ⁽³⁾	14 x 1.5 x SSI (or 14 x NMW, if higher)	14 x 1.5 x SSI (or 14 x NMW, if higher)
Households with 3 or 4 dependent children and a taxable income less or equal to X euros/year are exempt ⁽¹⁾	11,320	-	-
Households with 5+ dependent children and a taxable income less or equal to X euros/year are exempt ⁽¹⁾	15,560	-	-
Income Limit (L) ⁽⁴⁾	-	Reference Value- limit for household general expenses + $\frac{1st\ tax\ rate\ x\ 3.3}{3.3}$	Reference Value- limit for household general expenses + $\frac{1st\ tax\ rate\ x\ 2.75}{2.75}$

⁽¹⁾ Or half the amount in couples choosing individual taxation.

⁽²⁾ In 2021 there was an extraordinary increase of €100 to the referred amount (14 x 1.5 x SSI + €100), but only temporary.

⁽³⁾ In the period covered, it is the case for 2022.

⁽⁴⁾ Parameter employed to compute the taxpayers' deductions in the 2023 Reform.

Since 2019, self-employed start being covered by the PIT net income guarantee. This means that now these workers also have part of their income tax-free, similarly to what already happened in previous years with dependent employees. Net income guarantee should then also include self-employment income (*yse*).

In 2023, there have been several changes in how the Net Income Guarantee deduction is implemented. It now applies to taxable income to determine the tax base before the tax schedule is applied, instead of being adjusted after tax credits. Under this reform, the deduction is applicable when the total of all taxpayers' gross incomes is less than 2.2 times the SSI multiplied by the number of taxpayers in the tax unit. To calculate the deduction for taxpayers, there are three different scenarios were defined for 2023:

a) For those whose total gross taxable income equal to or less than the reference value, the deduction is the positive difference between the reference value and specific allowances plus the $\frac{\text{limit for household general deductions}}{1st\ tax\ rate}$,

b) For those whose total gross taxable income is higher than the reference value but equal to or less than the income limit L, the deduction is the positive difference between the reference value and 1.75 x (gross taxable income - reference value), and specific deductions plus $\frac{\text{limit for household general deductions}}{1st\ tax\ rate}$,

c) For those with total gross taxable income higher than the income limit, L, the deduction is the positive difference between L - 1st bracket limit – 0.9 x (gross taxable income - L) and the sum of specific allowances.

For 2024, the above intervals were increased to three and defined as follows:

a) For those whose total gross taxable income equal to or less than the reference value, the deduction is the positive difference between the reference value and specific allowances plus the $\frac{\text{limit for household general deductions}}{\text{1st tax rate}}$,

b) For those whose total gross taxable income is higher than the reference value but equal to or less than the income limit L, the deduction is the positive difference between the reference value and $2.6 \times (\text{gross income} - \text{reference value})$, and specific deductions plus $\frac{\text{limit for household general deductions}}{\text{1st tax rate}}$,

c) For those with total gross taxable income higher than the income limit, L, the deduction is the positive difference between L - 1st bracket limit – 1.35 x (gross taxable income - L) and the sum of specific allowances.

- ***Tax credits***

Certain expenses related to health, education, old age-care, housing, insurance premiums, and disability can be deducted from the taxable income, reducing the total tax liability. Table below lists all personal tax credits and other deductions.

Besides the ones presented, there are also other tax credits associated with private retirement plans, stocks, shares savings plans, mortgage savings accounts, acquisition of computers, acquisition of renewable energy equipment, legal counselling fees, among others. (NOT SIMULATED)

Table 2-54 Personal income tax (*tin00_pt*) credits [2021-2024]

Tax credit group	Maximum limit
Dependent children	<ul style="list-style-type: none"> • 2021: €600 (or €726 if aged <3) per dependent child. Increased amounts for families with 2+: €900 per child aged <3. • 2022: €600 (or €726 if aged <3) per dependent child. Increased amounts for families with 2+: €900 per child aged <3 and €750 per child aged between 3 and 6 • 2023: €600 (or €726 if aged <3) per dependent child. Increased amounts for families with 2+: €900 per child aged <6
Dependent parents / grandparents	€525 per dependent parent (€635 if only one)
Health	15% of expenses (up to €1,000)
Education and training	30% of expenses (up to € 800)
Retirement homes residency ⁽¹⁾	25% of expenses (up to €403.75)
Housing (for mortgages – both capital and interest – and rents)	15% of expenses (up to € 296 for mortgages or up to €502 for renters in the official renting regime and other specific limits – see below)
Paid alimonies ⁽¹⁾	20% of the alimonies annual amount
Disability	€3,843.44 per couple both disabled (or €1,921.72 per individual) + €1,201.07 per disabled dependent + 30% of expenses on special education + 25% of expenses on life insurance of covering exclusively the risks of death, disability, or old age
Invoice claiming ⁽¹⁾	15% of the VAT paid in products and services from specific sectors (restaurants, hotels, car repair, ...) up to €250
Household general expenses ⁽²⁾	35% of expenses (up to €250) supported by each partner in the couple or by each single taxpayer or 45% of expenses (up to €335) in the case of lone parents – see below

⁽¹⁾ EU-SILC contains no data on these expenses, so the simulated tax credits are equal to zero.

⁽²⁾ From 2015 on, a new tax credit is given according to documented general expenses. Data may not yield information on consumption, but the limit of €250/year (€335 if single parent) should prove to be easily attainable for every non-exempt taxpayer, thus providing strong arguments to simulate the full limit to every household without the need to regard consumption.

Table 2-55 Specific limits for housing tax credit [2021-2024]

	2021-2023	2024
	For individual tax bases up to the 1 st income bracket, the limit is €800	For individual tax bases up to the 1 st income bracket, the limit is €900
For renters paying rent	For individual tax bases between the 1 st income bracket and €30,000: $\begin{aligned} & \text{Limit} \\ & = 502 + (800 - 502) \\ & \quad \times \frac{30,000 - \text{Ind. Tax Base}}{30,000 - 1\text{st income bracket amount}} \end{aligned}$	For individual tax bases between the 1 st income bracket and €30,000: $\begin{aligned} & \text{Limit} \\ & = 600 + (900 - 600) \\ & \quad \times \frac{30,000 - \text{Ind. Tax Base}}{30,000 - 1\text{st income bracket amount}} \end{aligned}$
For owners paying mortgage	For individual tax bases up to the 1 st income bracket, the limit is €450 For individual tax bases between the 1 st income bracket and €30,000: $\begin{aligned} & \text{Limit} \\ & = 296 + (450 - 296) \\ & \quad \times \frac{30,000 - \text{Ind. Tax Base}}{30,000 - 1\text{st income bracket amount}} \end{aligned}$	€600

Limits for tax credits: the tax credits total amount (only on health, education, housing, alimonies, invoice claiming, residential homes and fiscal benefits) is restricted accordingly to the table below. Note: the limits refer to the sum of the tax credits due to expenses on health, education, housing, alimonies, invoice claiming, residential homes and other fiscal benefits. Fixed tax credits regarding the number of taxpayers or other elements in the tax units, disability or tax credits regarding general expenses are not considered for these limits.

Table 2-56 Limits for tax credit [2021-2024]

	2021-2024
For individual tax bases up to the 1st income bracket, there is	No limit
For individual tax bases between the 1st and last income brackets:	$\begin{aligned} & \text{Limit} = 1,000 + (2,500 - 1,500) \\ & \quad \times \frac{\text{last income bracket amount} - \text{Ind. Tax Base}}{\text{last} - 1\text{st income bracket amounts}} \end{aligned}$
For individual tax bases above the last income bracket	€1,000

Note: In tax units with 3+ dependent children, all the above limits are further increased in 5% for each one.

- **EUROMOD modelling**

Joint taxation for unmarried couples is not compulsory (although it is by far the most frequent option), but for EUROMOD purposes it is assumed as such. To be specific, from January 1st, 2015, two adult individuals that share the same fiscal dwelling during at least two years – as well as in the period of the income tax – are entitled to joint taxation (under civil union, ‘*união de facto*’, without need for additional proof). Comparing the percentage of individuals in EUROMOD/SILC eligible for joint taxation with administrative microdata from the income tax, the share of adult individuals that fills the declaration in joint taxation is only slightly higher (difference of 1 p.p.).

2.8 Consumption taxes

As mentioned above (see section 1.4), the Portuguese tax system encompasses a variety of consumption taxes. In this section we depict the implementation (and modelling) of the Value Added Tax ('Imposto sobre o Valor Acrescentado', IVA) and the various excise taxes that levy upon the consumption of tobacco, alcohol, alcoholic and non-alcoholic drinks and energy products.

2.8.1 VAT (il_tva)

The Portuguese VAT Tax Code (Decree-Law n.º 102/2008) contemplates three rates: A 'Standard Rate', and 'Intermediate Rate' and a Reduced Rate. Since 2011 (Decree-Law n.º 134/2010), these rates are set as follows:

- i) Standard Rate, is set at 23%;
- ii) Intermediate Rate is set at 13%;
- iii) 'Reduced Rate' is set at 6%.

Portuguese legislation allows for the application of lower VAT rates in the regions of Azores (16%, 9% and 4%, respectively) Madeira (22%, 12% and 5%, respectively).

The Portuguese VAT Tax Code does, however, consider a number of exemptions namely on goods medical and education supplies, transfer and leasing of immovable property or goods (and services) provided by public bodies or social solidarity private organizations. There are also VAT exemptions for companies or self-employed persons with low turnover (€14,500 in 2024), and a Special Scheme that provides a VAT exemption for small retailers.

In 2023 (see Section 2.2.3), in response to the Cost-of-Living crisis, Portuguese authorities have introduced a 'Zero Rate' (Law n.º 17/2023), that applied to a variety of primary consumption goods (see Table 2.40), below. This special rate was terminated in 2024.

Table 2-57 VAT rates [2021-2024]

Rate	Products	2021	2022	2023	2024
Standard		23%	23%	23%	23%
		(22%) ^a	(22%) ^a	(22%) ^a	(22%) ^a
		(16%) ^b	(16%) ^b	(16%) ^b	(16%) ^b
Intermediate	Applies to:	13%	13%	13%	13%
	a) Bread, rice and other products from cereals; b) Meats, fish and seafood (fresh or frozen); c) Dairy products (milk, cheese, yogurts), eggs and honey; d) Salt, Olive oils, pig fat; e) Fruits, vegetables; f) Water, except bottled and gasified water; g) Pharmaceutical products and dietary products made from fruits or cereals; h) Books, magazines and newspapers; i) Diesel, passenger transport, fire-fighting equipment; j) Hotel accommodation and rental of areas reserved for camping sites; k) Entries into singing, dancing, music, theater, cinema, circus shows, exhibitions, zoos, botanical gardens and public aquariums; l) Construction contracts for economic or cost-controlled housing properties, as well as for local authorities and associations or fire brigades.	(12%) ^a	(12%) ^a	(12%) ^a	(12%) ^a
		(9%) ^b	(9%) ^b	(9%) ^b	(9%) ^b
Reduced	Applies to:	6%	6%	6%	6%
	a) Meat, fish and seafood preserves; b) Fruit and vegetable preserves; c) Edible and vegetable oils, margarine;	(5%) ^a	(5%) ^a	(5%) ^a	(5%) ^a
	d) Vegetable aperitives, corn based snacks; e) Cereals, without added sugar; f) Cofee; g) Bottled water, common wines; h) Ready made meals (eat in or take-out); i) Muscal instruments; j) Eletricity, for consumptions under 100 kWh /150kWh per months (in contracts with power equal or under 6.90 kVA)	(4%) ^b	(4%) ^b	(4%) ^b	(4%) ^b
	k) Equipment for agriculture or environmental purposes;				
Super reduced	n.a.	n.a.	n.a.	n.a.	n.a.

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Rate	Products	2021	2022	2023	2024
Zero	<p>Applies to:</p> <p>a) Bread, rice, and pastas (except filled pastas); b) Fresh vegetables, specifically potatoes, onions, tomatoes, cauliflower, lettuce, broccoli, carrots, courgettes, leek, pumpkins, greens, Portuguese cabbage, spinach, turnip, peas.</p> <p>b) Dried vegetables, specifically red beans, black-eye peas, chickpeas;</p> <p>c) Fruits, specifically banana, oranges, pears, and melon;</p> <p>d) Dairy, specifically cow milk, yogurt or fermented milk and cheeses.</p> <p>e) Meat (pork, chicken, turkey and veal) and fish (cod, sardines, hake, mackerel, horse mackerel);</p> <p>f) Oil, vegetable oil and edible oils, butter;</p> <p>g) Other products, specifically canned tuna, chicken eggs, vegetable-based drinks and yogurts, dietary and gluten-free products.</p>	n.a.	n.a.	0%	n.a.
Exempted	<p>Applies to:</p> <p>a) Medical care and education supplies;</p> <p>b) Food and beverages supplied by employers to its staff;</p> <p>c) Transfer and leasing of immovable property;</p> <p>d) Insurance and reinsurance operations;</p> <p>e) Certain financial operations;</p> <p>f) Certain services rendered by non-profit making organisations;</p> <p>g) Subscription fees of non-profit organisations;</p> <p>h) Services related with the interpretation of Portuguese sign language;</p> <p>i) Tutoring services.</p>	-	-	-	-

Note: ^a Rates applied in Madeira region. ^a Rates applied in Madeira region.

2.8.2 Excise Duties: Ad-valorem (il_tvx) and Specific (il_txa)

As mentioned above, Excise Duties in Portugal cover five groups of products: alcohol, alcoholic drinks, non-alcoholic drinks, tobacco products and energy products.

Table 2-58 Ad-valorem excise rates [2021-2024]

Products	2021	2022	2023	2024
Tobacco				
Cigarettes	14%	14%	12%	10%
Fine cut smoking tobacco (for rolling of cigarettes)	15%	15%	15%	15%
Cigars	25%	25%	25%	25%
Cigarillos	25%	25%	25%	25%
Other smoking tobacco (Smoking tobacco, snuff, chewing tobacco)	n.a.	n.a.	n.a.	n.a.
Other smoking tobacco (Hookah tobacco)	n.a.	n.a.	n.a.	n.a.
Other smoking tobacco (Liquid tobacco, with nicotine)	n.a.	n.a.	n.a.	n.a.
Other smoking tobacco (Liquid tobacco, without nicotine)	n.a.	n.a.	n.a.	n.a.

Source: TEDB ([Taxes in Europe Database v4 - Homepage \(europa.eu\)](https://ec.europa.eu/economy_finance/tedb/))

Table 2-59 Specific (*ad-quantum*) excise rates [2021-2024]

Products	2021	2022	2023	2024
Ethyl alcohol (pure alcohol)	€1386.93.83/Hl	€1386.93/Hl	€1456.83/Hl	€1602.51/Hl
Alcoholic Drinks				
Low Alcohol Beer	€8.34/Hl	€8.42/Hl	€8.76/Hl	€9.64/Hl
Beer, per Plato of finished product				
Plato <=7°	€10.44/Hl	€10.54/Hl	€10.96/Hl	€12.06/Hl (€12.06/Hl)
Plato >7° & <= 11°	€16.70/Hl	€16.87/Hl	€15.54/Hl	€19.29/Hl (€19.29/Hl)
Plato >11° & <= 13°	€20.89/Hl	€21.10/Hl	€21.94/Hl (€21.94/Hl)	€24.13/Hl (€24.13/Hl)
Plato >13° & <= 15°	€25.06/Hl	€25.31/Hl	€26.32/Hl	€28.95/Hl (€28.95/Hl)
Plato >15°	€29.30/Hl	€29.59/Hl	€30.77/Hl	€33.85/Hl (€33.85/Hl)
Wine	€0	€0	€0 (€0)	€0 (€0)
Fermented	€10.44/Hl	€10.54/Hl	€10.96/Hl	€12.06/Hl (€12.06/Hl)
Intermediate	€76.10/Hl	€76.86/Hl	€79.93/Hl	€87.92/Hl (€87.92/Hl)
Spirits	€1386.93.83/Hl	€1400.80/Hl	€1456.83/Hl	€1602.51/Hl
Non-alcoholic beverages				
With added sugar or sweetening				
< 25 grams	€1.00/l	€1.01/l	€1.05/l	€1.16/l
>=25 to < 50 grams	€6.02/l	€6.08/l	€6.32/l	€6.95/l
>=50 to < 80 grams	€8.02/l	€8.10/l	€8.42/l	€9.26/l
>80 grams	€20.06/l	€20.26/l	€21.07/l	€23.18/l
Low alcohol (> 0,5% vol. & <= 1,2% vol.)				
< 25 grams	€1.00/l	€1.01/l	€1.05/l	€1.16/l
>=25 to < 50 grams	€6.02/l	€6.08/l	€6.32/l	€6.95/l
>=50 to < 80 grams	€8.02/l	€8.10/l	€8.42/l	€9.26/l
>80 grams	€20.06/l	€20.26/l	€21.07/l	€23.18/l
Concentrates (Liquid Form)				
< 25 grams	€6.02/l	€6.08/l	€6.32/l	€6.95/l
>=25 to < 50 grams	€36,11/l	€36,47/l	€37,93/l	€41,72/l
>=50 to < 80 grams	€48.14/l	€48.62/l	€50.56/l	€55.62/l
>80 grams	€112.36/l	€121.56/l	€126.42/l	€139.06/l
Concentrates (Solids)				
< 25 grams	€10.03/100 Kg	€10.13/100 Kg	€10.54/100 Kg	€11.59/100 Kg
>=25 to < 50 grams	€60.18/ 100 Kg	€60.78/ 100 Kg	€63.21/ 100 Kg	€63.53/ 100 Kg
>=50 to < 80 grams	€80.24/ 100 Kg	€81.04/ 100 Kg	€84.28/ 100 Kg	€92.71/ 100 Kg
>80 grams	€200.60/ 100 Kg	€202.61/ 100 Kg	€210.71/ 100 Kg	€231.78/ 100 Kg

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Note: **g** - Gramm; **l** - Liter; **ml** - Milliliter; **hl** – Hectoliter (100 Liters); **MGW** – Megawatt; **T** – Ton (1000 Kg); **KT** – Kiloton (1000 Tons); **GJ** - Gigajoule (1,000,000,000 Joules).

Table 2-60 Specific (*ad-quantum*) excise rates [2021-2024] (cont.)

Products	2021	2022	2023	2024
Tobacco				
Cigarettes	€101.00/ 1000 units	€102.01/ 1000 units	€112.50/ 1000 units	€151.88/ 1000 units
Fine cut smoking tobacco (for rolling of cigarettes)	0.0837/g	0.0845/g	0.0896/g	0.0935/g
Cigars ^a	€412.10/ 1000 units	€416.22/ 1000 units	€432.87/ 1000 units	€451.92/ 1000 units
Cigarillos ^a	€61.81/ 1000 units	€62.43/ 1000 units	€64.93/ 1000 units	€75.94/ 1000 units
Other smoking tobacco (Smoking tobacco, snuff, chewing tobacco)	€0.081/g	€0.082/g	€0.087/g	€0.091/g
Other smoking tobacco (Hookah tobacco)	n.a.	n.a.	n.a.	n.a.
Other smoking tobacco (Liquid tobacco, with nicotine)	€0.320/ml	€0.323/ml	€0.336/ml	€0.351/ml
Energy Products^a				
Electricity	1/MGW	1/MGW	1/MGW	1/MGW
Coal (heating fuel for non- business use)	€2.17/T	€2.17/T	€2.17/T	€4.16/T
Petroleum Coke (heating fuel for non-business use)	n.a.	n.a.	n.a.	n.a.
Petrol				
Leaded	n.a.	n.a.	n.a.	n.a.
Unleaded	€667.98/KT	€667.98/KT	€514.21/KT	€704.64/KT
Diesel				
Regular (Propellant)	€333.15/KT	€171.96/KT	€303.54/KT	€303.54/KT
Regular (Heating fuel for non-business use)	€330.00/KT	€330.00/KT	€330.00/KT	€330.00/KT
Colored (Propellant)	€107.51/KT	€47.19/KT	€47.19/KT	€47.19/KT
Natural Gas				
Propellant	€0.307/GJ	€0.307/GJ	€0.307/GJ	€0.307/GJ
Heating fuel for non- business use	€1.65/GJ	€1.65/GJ	€1.65/GJ	€3.467/GJ
Heavy Fuel Oil				
If Sulphur content ≤0.5%	€15.65/T	€15.65/T	€15.65/T	€15.65/T
If Sulphur content >0.5%	€29.92/T	€29.92/T	€29.92/T	€29.92/T (€204.06/T)
LPG				

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Propellant	€136.56/T	€136.56/T	€133.56/T	€136.56/T
Heating fuel for non-business use	€7.99/T	€7.99/T	€7.99/T	€7.99/T

Notes: **g** - Gramm; **l** - Liter; **ml** - Milliliter; **hl** – Hectoliter (100 Liters); **MGW** – Megawatt; **T** – Ton (1000 Kg); **KT** – Kiloton (1000 Tons); **GJ** - Gigajoule (1,000,000,000 Joules). ^a This product is not subjected to a specific rate. The values refer to the minimum tax applicable per 1000 units, under the Portuguese legislation. ^a An additional carbon related-tax is applied in these products.

Table 2-61 Prices of Excise products [2021-2024]

Products	2021	2022	2023	2024
Alcohol				
Ethyl Alcohol	24.77 EUR/l	25.49 EUR/l	27.48 EUR/l	29.19 EUR/l
Wine	8.05 EUR/l	7.41 EUR/l	6.84 EUR/l	6.79 EUR/l
Sparkling Wine	34.73 EUR/l	36.00 EUR/l	37.46 EUR/l	37.19 EUR/l
Beer	2.66 EUR/l	2.92 EUR/l	3.27 EUR/l	3.25 EUR/l
Tobacco				
Cigarettes	232.00 EUR/ 1000 pieces	235.00 EUR/ 1000 pieces	239.00 EUR/ 1000 pieces	246.50 EUR/ 1000 pieces
Cigars	272.72 EUR/ 1000 pieces	273.04 EUR/ 1000 pieces	277.45 EUR/ 1000 pieces	286.45 EUR/ 1000 pieces
Other Tobacco	258.14 EUR/kg	256.71 EUR/kg	263.56 EUR/kg	271.96 EUR/kg
Energy Products				
Electricity	224.20 EUR /MWh	233.40 EUR /MWh	229.40 EUR /MWh	254.26 EUR /MWh
Natural – Gas (Heating)	24.78 EUR/GJ	33.21 EUR/GJ	47.05 EUR/GJ	38.59 EUR/GJ
Liquefied hydrocarbons (LPG)	2057.86 EUR /1000kg	2534.47 EUR /1000kg	2647.88 EUR /1000kg	2744.99 EUR /1000L
Gas Oil (Heating)	1221.80 EUR /1000l	1736.41 EUR /1000l	1592.65 EUR /1000l	1641.80 EUR /1000l
Coal and Coke (Heating)	19.27 EUR/GJ	23.77 EUR/GJ	26.73 EUR/GJ	27.05 EUR/GJ
Petrol (Unleaded)	1621.67 EUR /1000l	1847.29 EUR /1000l	1719.10 EUR /1000l	1735.08 EUR /1000lt
Gas Oil (Propellant)	1426.49 EUR/ 1000l	1795.96 EUR /1000l	1589.38 EUR /1000l	1597.42 EUR /1000l

n: nowcasted

Consumer prices of goods subject to excise duties are nowcasted, similarly to what the model does to update incomes from SILC. We combine the latest available data from the following sources:

- Inflation: Harmonised Index of Consumer Prices (HICP, Eurostat) at COICOP 5 digits, usually for the first quarter for beta release and up to third quarter 3 for final release.
- Inflation quarter-on-quarter forecasts (DG ECFIN, confidential) by HICP main groups (Unprocessed food, Processed food including alcohol and tobacco, Non-energy industrial goods, Energy, Services - overall index excluding goods) of quarters 2, 3 and 4, as needed for each release.

For more details on the specific source of the price of each good, see Akoğuz et al (2020).

The price of Cigarettes and Fuels (Petrol and Gas Oil) did not follow this general sources/nowcasting strategy but were sourced from “Taxes in Europe” Database (DG-TAXUD) and the Weekly Oil Bulletin, respectively. While the “Taxes in Europe” database seems to report more accurately the prices of this particular excise item, the Weekly Oil Bulletin registers fuels’ weekly prices, allowing for estimating a more updated evolution of fuel prices.

- ***EUROMOD modelling***

Consumption taxes (tco_cc policy) require extended EUROMOD input data (with imputed income shares of consumption expenditures at the household level) and an add-on to run. The policy is set to off in the baseline. To activate it, the CT_xbase add-on must be run, and the extended EM input files (see Section 3 for more information on the methodology and features behind these extended input files) should be selected (as defined in the database configuration of each country). The other add-ons (CT_*) are designed for reform simulations and assume different behavioural responses: i) constant quantities (CT_XCQ), ii) constant income shares (CT_XCIS), and iii) constant expenditure shares (CT_XCES). These reform-scenario add-ons require the auxiliary output files are generated by running the first baseline simulation (as either the quantities or expenditures and savings from the baseline are kept constants and enter as inputs in the simulated reform scenarios).

When modelling the implementation of VAT, we take in consideration four orders of factors:

- a) The type and level of VAT tax rates;
- b) The products covered by each type of VAT rate;
- c) The possibility of exemptions to VAT;
- d) The existence of relevant regional variations, applicable to the autonomous regions of Azores and Madeira.

When modelling the implementation of Excise Duties, we take in consideration four orders of factors:

- a) Differences in approach, i.e. whether products are taxed by reference to their value (*ad-valorem* excise rates), or by reference to the quantity consumed (*ad-quantum* or specific excise rates);
- b) The types of products covered by reference to the type of taxation approach adopted;
- c) The existence of relevant regional variations, applicable to the autonomous regions of Azores and Madeira.

In cases where no specific rate is specified in the legislation, we use the minimum tax applicable as the functional equivalent for the specific rate.

Further information on methodology and specific calculations and the independence of these consumption taxes is common across countries (this is why they are placed in an add-on and not in the policy spine of each country) and can be found in Akoğuz et al (2020).

2.9 Extraordinary measures

2.9.1 COVID-19: Wage compensation scheme COVID-19 (*yemcomp_pt*)

- **Definition**

This benefit intended to support employees via a simplified layoff scheme, available to companies whose economic activity was totally or partially closed by legislative determination (at least a 40% activity breakdown), to compensate wages loss. Employers participating in this regime could not dismiss/fire their employees.

Whether there was a reduction in the normal working time or suspension of the contract, in 2021 workers were entitled to receive 100% of their gross wage (in 2020 they were entitled to a minimum amount equal to 2/3 of their gross salary). Employers could apply this system either for total or partial layoffs, *i.e.*, workers could work zero hours or a proportion of the hours in their contracts. This compensation had an initial duration of up to one month, and could be extended monthly, if justified.

This measure to support the COVID-19 effects ceased in the first quarter of 2022.

- **Eligibility conditions**

There were no specific eligibility conditions.

- **Benefit amount**

The replacement rate of the salary for the non-worked hours was 100% of the gross wage (original salary) in 2021 (in 2020, workers were entitled to an amount equal to 2/3 of their gross wage). Workers were entitled to a minimum compensation of €665 (1 x NMW) and a maximum of €1,995 (3 x NMW). These limits were adjusted proportionally if the worker had a part-time contract.

In 2020, employers with layoff workers were entitled to a Social Security support in the amount of 70% of 2/3 of the normal gross wage of each worker covered, up to a limit of €1,995 per worker (3 x NMW), to support the payment of wages. The employer paid the remaining 30%. In 2021, workers were entitled to the full payment of their gross wages (and for that to not represent an increase to the employer's expenses, the compensation amount paid by Social Security was increased to the extent strictly necessary in order to ensure the worker a compensation of 100% of the gross wage). The employer still supported the remaining 30% of the 2/3.

In partial layoff, the worker earned the proportion of the salary corresponding to the hours lost, and 100% of the proportion of the salary corresponding to the hours worked. Limits were additionally adjusted by the share of lost hours over total hours in the contract.

- **Subject to taxes/SIC**

Income from this compensation scheme was treated as salaries for tax and benefit purposes, being thus subject to income taxation, employees' SIC and means tested benefits.

On the other hand, employers that entered in the simplified layoff scheme were temporarily exempt from paying the 23.75% flat rate regarding employers' SIC for the workers covered by the temporary compensation scheme.

- **EUROMOD modelling**

This policy can only produce results if the model is run in combination with the LMA add-on. The individuals that are selected to undergo transitions to monetary compensation schemes are defined in

the *TransLMA_pt* policy, which is switched on automatically by the add-on. For more information about the modelling of labour market transitions, please consult the “*Simulating labour market transitions in EUROMOD*” document.

For 2020, labour transition model based data are produced by Eurostat, using detailed distributional information on the loss of jobs and short-term work schemes from the Labour Force Survey and administrative data. The impact across different categories of individuals, the duration of unemployment/absence and percentage of hours worked are modelled using the EU-LFS longitudinal and quarterly transitions as target. For more information please consult the methodological note available at 9a70fb55-ceb7-d25a-1b31-ab0c030095d2 (europa.eu). For 2021, not enough information was available, so all parameters were set to zero.

2.9.2 COVID-19: Self-employed compensation due to COVID-19 (*ysecomp_pt*)

- **Definition**

It was provided special financial support for self-employed with significant reduction of their economic activity. This compensation had an initial duration of up to one month, and could be extended monthly, if justified.

This measure to support the COVID-19 effects ceased in the first quarter of 2022.

- **Eligibility conditions**

Self-employed were eligible to income support if they had contributed to Social Security 3 consecutive months or 6 months with gaps in the last 12 months prior to the lockdown. They needed to be self-employed exclusively (for example, not be a pensioner).

They also needed to prove that their activity (or the activity of the respective sector) was stopped because of the COVID-19 outbreak, or that they registered a breach of at least 40% of their invoice in the 30 days prior to the request submitted to Social Security.

- **Benefit amount**

Self-employed were entitled to financial support corresponding to the amount of the average remuneration recorded as a contributory base in the 12 months prior to the request, with an upper limit of 1 x SSI, when the average is lower than 1.5 x SSI. On the other hand, when the amount of the average remuneration recorded as a contributory base was equal or higher than 1.5 x SSI, the benefit amount corresponded to 2/3 of the remuneration recorded as a contributory base, with an upper limit of 1 x NMW.

In the case of an abrupt break of at least 40% of the invoice, the benefit amount was multiplied by the respective break, expressed in percentage terms.

Self-employed workers that contributed with the minimum level of contribution (€20) were granted a lump sum amount of 0.5 x SSI.

- **Subject to taxes/SIC**

Income from this compensation scheme was treated as salaries for tax and benefit purposes, being thus subject to income taxation, employees' SIC and means tested benefits.

Only self-employed with employees at their charge were temporarily exempt from paying SIC. (NOT SIMULATED)

- **EUROMOD modelling**

This policy can only produce results if the model is run in combination with the LMA add-on. The individuals that are selected to undergo transitions to monetary compensation schemes are defined in the *TransLMA_pt* policy, which is switched on automatically by the add-on. For more information about the modelling of labour market transitions, please consult the “*Simulating labour market transitions in EUROMOD*” document.

For 2020, labour transition model based data are produced by Eurostat, using detailed distributional information on the loss of jobs and short-term work schemes from the Labour Force Survey and administrative data. The impact across different categories of individuals, the duration of unemployment/absence and percentage of hours worked are modelled using the EU-LFS longitudinal and quarterly transitions as target. For more information please consult the methodological note available at 9a70fb55-ceb7-d25a-1b31-ab0c030095d2 (europa.eu). For 2021, not enough information was available, so all parameters were set to zero.

COST-OF-LIVING temporary measures

Following the COVID-19 pandemic, Portugal has experienced a significant increase in prices (see Moreira et al (2024)). In 2022, and the subsequent year, Portuguese authorities have introduced a number of measures to deal with the impact of the Cost-Of-Living Crisis, namely:

- **Family Income Support:** Introduced (in 2022) as part of the ‘*Families First*’ program, this scheme grants €125 per adult and €50 per child and young people, to residents with an income up to €2,700 per month and who benefit from social benefits. Those receiving an exceptional supplement for pensioners of less than €125 will receive the difference.
- **Extraordinary Supplement for Vulnerable Families:** Introduced in 2023, this scheme grants families that benefit from the social energy tariff or minimum social benefits a €120 benefit, paid four times throughout the year. For families receiving the Child Benefit, up to the 4th income bracket, this also includes an add on of €60, per child - also paid quarterly.
- **Supplement to Child Benefit:** Families with children and young people up to the fourth income bracket of the child benefit also receive an extraordinary supplement of €15 per month for each child, also paid on a quarterly basis. Introduced in 2023.
- **Housing benefit:** Introduced in 2023, this scheme provided extraordinary and temporary rental support and interest bonus for families experiencing a high burden with housing costs. As part of this scheme, families in rented accommodation, with a burden rate exceeding 35% and income up to the maximum limit of the sixth PIT income bracket, are entitled to a monthly benefit of up to €200. Families with mortgages on their house, and that are subject to an effort rate of 50% (or more, depending on the income bracket), are entitled to a benefit of up to €720.65 on the interest of their mortgage. The bonus covers the difference between the present value of the indexer and the value of the indexer at the start of the loan plus 3 p.p.. This scheme was extended in 2024.

2.9.3 COST-OF-LIVING Crisis: Family income support (bfxp_pt)

- **Brief description**

This extraordinary benefit was introduced in 2022 and intended to partially compensate families for the increase in prices and cost of living faced during that year, within the ‘*Families First*’ program scope. It was a one-off payment done in October 2022.

- **Definition**

The unit of analysis is the individual.

- ***Eligibility conditions***

This extraordinary income support is granted to residents with a gross income of up to €2,700 gross per month (€37,800 annually), equivalent to twice the average monthly earnings in Portugal.

Recipients of the measure are also beneficiaries of certain social benefits (such as unemployment benefit, sickness benefit, social insertion income or child benefit, among others) and scholarship holders who pay voluntary social insurance.

- ***Benefit amount***

Exceptional income support of €125 per adult and €50 per child or young people up to 24 years old (inclusive), or with no age limit in the case of dependents due to disability.

Those receiving an exceptional supplement for pensioners of less than €125 will received the difference.

2.9.4 COST-OF-LIVING Crisis: Extraordinary supplement for vulnerable families (*bfxp01_pt*)

- ***Brief description***

This extraordinary supplement for vulnerable families was introduced in 2023 and intended to partially compensate families for the increase in prices and cost of living faced during that year.

- ***Definition***

The unit of analysis is the family.

- ***Eligibility conditions***

This support is granted to residents who are beneficiaries of the Social Electricity Tariff, in reference to the month of March 2023.

Families that are not beneficiaries of the Social Electricity Tariff, but in which at least one member of the household is a beneficiary of one of the minimum social benefits (such as unemployment benefit, sickness benefit or social insertion income, among others) or in which one of the children is entitled to the 1st or 2nd income bracket of the child family, are also entitled to this support.

- ***Benefit amount***

This extraordinary supplement for vulnerable families is of €30 per month per household, paid quarterly. Families with children and young people, receiving Child Benefit (up to the fourth income bracket) are also receive an extraordinary supplement of €15 per month for each child, which is also paid on a quarterly basis.

- ***EUROMOD modelling***

EU-SILC does not include information on recipients of the Social Electricity Tariff. Therefore, in the model, families eligible for the benefit are those in which at least one household member receives one of the minimum social benefits.

2.9.5 COST-OF-LIVING Crisis: Rent Suport (*bhotn_pt*)

- ***Brief description***

This housing benefit was introduced in 2023 and is an extraordinary and temporary support for families in the context of housing, encompassing two different measures: a rental support, to support for the payment of rent from a lease or sublease of first dwellings; and an interest bonus, to support for the payment of the provision of a credit agreement for own and permanent housing.

- ***Definition***

The unit of analysis is the individual.

- ***Eligibility conditions***

The rental support is aimed at resident tenants with a rent burden rate exceeding 35% and an income up to the maximum limit of the sixth PIT income bracket. This benefit, which is automatically assigned by the Social Security with no need to request it, is also intended for individuals who, although not obligated to submit an annual PIT declaration, have monthly work incomes declared to social security or are recipients of social benefits, up to a monthly amount corresponding to 1/14 of the maximum limit of the sixth bracket of the PIT.

The interest bonus presents the same eligibility conditions, and it comprises contracts concluded by 15 March 2023. The request has to be made by the beneficiary from the financial institution.

- ***Benefit amount***

As for the rental support, it translates to a monthly amount up to €200 (and corresponds to the difference between the value of the rent and the amount that would be paid if the effort rate was 35 % of the average monthly value of income). This income support is intended for a maximum period of five years.

As for the interest bonus, it translates to a yearly amount up to €720.65 (and corresponds to the difference between the present value of the indexer and the value of the indexer at the start of the loan plus 3 p.p., in the case of an effort rate of 50% (or more, depending on the income bracket)). In addition to this support, credit institutions are required to allow consumers to choose between variable, fixed or mixed interest rates.

- ***EUROMOD modelling***

The interest bonification cannot be implemented in EUROMOD due to a lack of data on several elements such as spread, contract date and loan maturity date.

The simulation of the Rent Support benefit makes uses of some interpretation room of [Decreto-Lei n.º 20-B/2023](#) to adjust the income lists used to compute the household rate of effort, to avoid unequal situations in the access to the benefit between taxpayers and non-taxpayers

3. DATA

3.1 General description

EUROMOD database results from EU-SILC, (EU-SILC containing 2022 cross-sectional and 2021 longitudinal Version 230724⁷). The Portuguese EU-SILC survey is an annual survey with a four-year rotational panel. Fieldwork was carried out in 2021, between March and September, and contains data regarding the incomes of 2020. The database is provided by Eurostat.

The EU-SILC sample is composed of four independent sub-samples, where each one follows a stratified two-stage cluster sampling design. The 2022 sampling frame was selected from the National Dwellings Register (NDR). It is constituted by private dwellings of usual residence and excludes collective households and institutions. Its size is approximately 1,4 million dwellings of usual residence.

The selection of the sample followed a stratified (NUTS II stratification) and multistage sampling design. The primary sampling units, consisting of cells of the INSPIRE grid of 1km², were selected with probability proportional to the number of dwellings of usual residence. And the secondary sampling units (dwellings) were systematically selected in each primary sampling unit. Information is collected on all households and individuals living in the selected dwelling.

Table 3-1 EUROMOD database description

EUROMOD database	PT_2022_b2
Original name	EU-SILC
Provider	Eurostat
Year of collection	2021
Period of collection	Fieldwork executed between March and September
Income reference period	2020
Sampling	Stratified, multi-stage, clustered
Unit of assessment	Household and personal
Coverage	Private households (households living at private residential addresses). Individuals living in institutional households (e.g., in care or imprisonment institutions, etc.) are excluded.
Original sample size	10,973 households (of which 26,822 individuals)

Source: Statistics Portugal (2019) ‘ICOR - Documento Metodológico Versão 3.7’; Statistics Portugal (2021) *Income and Living Conditions 2020* (Provisional Data).

3.2 Sample quality and weights

The Portuguese EU-SILC information regularly collected on an annual basis through computer-assisted face-to-face interviews (CAPI) in the second quarter of each year. Yet, as a result of public health measures following the COVID-19 pandemic, in particular social lockdown and distancing, the survey was conducted exclusively through telephone interviews (CATI) in 2020 and 2021.

⁷ As it constitutes the most recent dataset in the EUROMOD model, the EU SILC 2021 dataset would normally be considered the ‘best-match’ for the 2021 system. However, it may not be the most appropriate for the 2021 system due to:

- The significant employment income losses experienced in Portugal during the COVID-19 pandemic in 2020 make the EU SILC 2021 dataset, which takes 2020 as the income reference period, less reflective of the economic conditions in 2021. For instance, using the pt_2020_a1 dataset would better replicate the decrease in the AROP rate in Portugal in 2021, as identified by ESTAT.
- There are no substantial differences in the income distribution between pt_2020_a1 and pt_2021_b1.
- There are no significant differences in other outcomes of the 2021 system produced by the two datasets.

Based on these factors, we have come to the conclusion that the 2020 dataset (i.e., pt_2020_a1) is the ‘best-match’ in the 2021 system of the model.

The sample size usually considers a compensation factor of the effect of the total non-responses. Being impossible to carry out face-to-face interviews due to the context of the COVID-19 pandemic, this factor has been substantially reinforced by taking into account that telephone data collection usually has lower response rates than face-to-face interviews, as well as the effect of outdated telephone numbers in the database.

3.2.1 Non-response

In 2021, the survey addressed 16,478 households, of which 10,973 with full response (with data collection on 26,822 people; 23,730 with 16 and over). Non-response is corrected by reweighting the final sample, *i.e.*, by recalculating the sample weights.

3.2.2 Weights

Adjustments to the sample weights are made for the whole sample (combining the four sub-samples) at household and individual level using the SAS macro CALMAR. An integrative calibration is applied to ensure consistency between households and individuals, because all household members receive the same cross-sectional weight as the household they belong to.

The estimated results are obtained using household and individual weights, calibrated by region, household size, age, and sex.

The following table shows the descriptive statistics for the grossing-up weights used.

Table 3-2 Descriptive statistics of the grossing-up weight *rb050*

	EU-SILC UDB Portuguese data
Number	26,822
Mean	383.95
Median	198.46
Maximum	3,483.34
Minimum	7.14
Max/Min	487.83
Decile 1 (P10)	30.13
Decile 9 (P90)	960.68
Decile 9 / Decile 1 (P90/P10)	31.88

3.3 Data adjustment

Adjustments to the variables are kept to a minimum. Some minor data cleaning is done to ensure that the relationships of individuals within households are consistent. In order to guarantee consistency between demographic and income variables which refer to the previous year (and on which EUROMOD simulation are based), all children born between the end of the income reference period and the data of the interview (45 cases) were dropped from the sample.

However, the weights were not readjusted to consider the drop of these individuals. EUROMOD final sample contains 10,973 households and 26,777 individuals.

3.4 Imputations and assumptions

3.4.1 Time period

In the EU-SILC dataset, the income reference period is the previous year of the survey. All monetary amounts are expressed in annual terms. Dividing them by 12, these are converted into monthly amounts for the EUROMOD database.

There are two age variables in the EU-SILC dataset: one relates to the age of the individual at the moment of the survey, and the other to the age at the end of the income reference period. EUROMOD uses the first one to characterise all individuals in the dataset.

3.4.2 Gross incomes

The EU-SILC survey contains information on both gross and net monetary incomes, if applicable, and flag variables, which indicate if the observation has been collected in a gross or net form.

Income data can be provided by respondents in either gross or net values. Hence, the net series is obtained by Statistics Portugal using a specific gross-to-net micro simulation model (see more information regarding the model in Rodrigues, 2007).

3.4.3 Disaggregation of harmonized variables and other imputations

Some variables required for the simulation of the tax-benefit system in Portugal are not available in the EU-SILC UDB. However, the Euromod team has also access to EMSD file provided by Eurostat that contains some national variables not included in the EU-SILC UDB. The use of the EMSD file provided by Eurostat contains imputations in some variables and a disaggregation of other variables.

The use of EMSD allows the split of the following variables:

- a. **Old age pension** splits into contributory pensions (*poac*) and means-tested non-contributory benefit for the elderly (*poanc* – old age social pension). The EMSD provides two variables obtained from the national EU-SILC PDB: *poact_nsilc* and *poanc_nsilc*. Each of those national variables are divided by 12, these are converted into monthly amounts for the EUROMOD database.
- b. **Unemployment benefit** in the UDB split into contributory unemployment benefit (*bunct*) and the means-tested unemployment benefit (*bunnc*). The splitting is based on the variables PY09g (Unemployment benefits – Contributory and means-tested) and PY092G (Unemployment benefits – Contributory and non-means-tested).
- c. **The aggregate family benefits** variable in the UDB splits into two components: child benefit (*bch*) and Other family benefits (*bfa*). The EMSD provides two variables obtained from the national EU-SILC PDB: *bch_nsilc*, *bcpn_nsilc*. Those variables are added and divided by 12 to obtain the monthly amount of *bch*. The difference between *bch* and *hy050/12* are included in *bfa*.
- d. **Social exclusion benefits** split into three components: Solidarity supplement for the elderly (*bsaoa*), minimum income benefit (*bsa00*) and Other social assistance benefits (*bsaot*). The EMSD provides three variables obtained from the national EU-SILC PDB: *bsa00_nsilc*, *bsaoa_nsilc* and *bsaot_nsilc*. Each of those national variables are divided by 12, these are converted into monthly amounts for the EUROMOD database.

Education level is imputed to children aged under 16 according to their age and the rules of the Portuguese education system.

Incomes reported at household level are assigned to the relevant member of the household or to the first member closer to 45 years old.

3.5 Extended input data (with household expenditures for the simulation of consumption taxes)

For the simulation of consumption taxes, the model needs to be run with extended EUROMOD input files. They consist of the core EUROMOD input files based on EU-SILC or National SILC, extended with new variables (household-level income shares of expenditures by product) imputed from EU/National-HBS. The semi-parametric method implemented for the imputation follows the methodology developed by Akoğuz et al (2020).

Table 3-3 summarizes the major features of the most recent database used to be run with the policy systems of 2021-2024.

Table 3-3 Extended EUROMOD database description

Extended EUROMOD database for the simulation of consumption taxes	
EUROMOD database	PT_2022_b2_2015_03_e2
Year of collection (HBS) and source	HBS 2015 – EU
Year of collection (SILC) and source	SILC 2022 – EU
Coverage and sample size	1 2161 households (30 207 individuals)
Share of households with negative incomes excluded from the matching procedure	0%

z: source of expenditure shares data with u (EU-HBS), e (EMSD) n (national HBS), a (admin data)
M: version of matching (correlative number), f: source of SILC dataset (National, UDB, ESMD): a, b or c
N: version of SILC processing (correlative number)

These extended EUROMOD files contain all the variables included in the standard EUROMOD input files plus the income shares of each consumption category included in HBS. For example, for countries with consumption disaggregation at 4 COICOP level (5 digits), there will be close to 200 additional variables, each one with the income shares of expenditure (household level) for that particular consumption category (e.g. starting from the income share of rice consumption: xs_01111; bread: xs_01112, and so on and so forth). The number of additional variables depends on the granularity available in HBS, and it varies across countries).

For the case of Portugal, data PT_2022_b2_2015_03_e2, the number of variables included (income shares of expenditures, xs_c*) are 193, corresponding to the harmonized consumption categories defined at COICOP 2003 level 4 (five digits)

This database is an extension of the core EUROMOD input database, and so it is based on the same sample (i.e., same identifiers "idperson" and "idhh" to identify persons and households, respectively) and contains the same variables plus the income shares of expenditure (xs_* variables).

In Table 3-4 we present the share of households' consumption expenditures by product (and total) captured in our matched databases (extended EM input files) with respect to the original reported expenditures in HBS. The column that refers to the same year (in this case, HBS 2015 with Extended EM Input 2015) directly depends on the quality of the imputation procedure, while the comparison across different years is influenced not only by the matching noise but also by the changes in population characteristics and in the underlining distribution of income. Therefore, the coverage displayed in the second column is just informative but is not and should not be used to evaluate nor validate the imputation procedure.

Information on the coverage of these simulated expenditures (coming from the imputation of HBS 2015 to more recent SILC-based data) with respect to the expenditures reported by National Accounts is included in section 4 of this report, together with the other macro-validation results.

Below we summarize the main findings from the imputation validation checks for Portugal.

Table 3-4 Expenditure coverage of Extended EM Input files

COICOP group	HBS 2015 – Extended EM Input 2015 (%)	HBS 2015 – Extended EM Input 2022 (%)
1	103.7	100.3
2	116.4	108.6
3	92.09	90.6
4	102.7	99.4
5	97.6	93.1
6	110.9	106.4
7	93.6	92.7
8	106.4	103.2
9	89.9	85.9
10	74.1	80.1
11	91.8	90.6
12	104.5	98.4%

The original HBS data seems to be generally underestimating consumption figures over National Accounts (NA) for Portugal, with a weighted average of aggregate expenses shares equal to 64.4%. The only first level COICOP groups that are within the 30% range are CP04, CP06, CP07, CP08, and CP10.

The matching process generally worsen the coverage of NA consumption (61.5%) respect to the performance of original HBS, specifically for the COICOP groups CP03, CP04, CP05, CP07, CP09, CP10, CP11 and CP12.

The matched SILC/HBS rates are in the acceptable range of 80.13%-106.39% for all COICOP level 1 categories. On the 3-digit COICOP level, the matching performs good, where we do not have deviations larger than 30%, except for CP081(193.64%), and CP103 (64.93%).

3.6 Uprating factors

Uprating factors are used to account for any time inconsistencies between the input dataset and the policy year. Each monetary variable (*i.e.*, each income component) is updated to account for changes in the non-simulated variables that have taken place between the year the data was collected and the simulation year of the tax-benefit system. Uprating factors are generally based on the changes in the average value of the relevant income component between the two years. For detailed information on the construction of each uprating factor and corresponding sources, see Annex 1.

As a rule, uprating factors are given in Annex 1 for both simulated and non-simulated income components included in the input dataset. Note, however, that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the uprated original variables in the dataset. Uprating factors for simulated variables are given to enable the user to turn off the simulation of a particular variable if and when required.

4. VALIDATION

4.1 Aggregate Validation

In this section we assess the accuracy of EUROMOD based estimates by reference to the following categories of groups of indicators:

- i. (Non-Simulated) Market Incomes in the input dataset;
- ii. Simulated Taxes and Social Security contributions;
- iii. Simulated Benefits;
- iv. Simulated indicators of Income Distribution.

For each of these categories, we confront EUROMOD baseline estimates with readily available official statistics, for the period between 2021 and 2024. It is important to remark that unlike in the previous Country Report ('PORTUGAL (PT) 2020-2023'), EUROMOD baseline simulations for the 2021-2024 system years are produced using the 2022 dataset.⁸ Hence, in some cases, the results presented here might not be consistent with the assessment made in the previous Country Report.

It is also important to remark that, since labour market transitions are switched OFF in EUROMOD baselines, COVID-19 temporary measures (policies *wage compensation scheme COVID-19* and *self-employed compensation due to COVID-19*) do not produce any effect in baseline simulations, i.e., the EUROMOD results do not consider the effect of the pandemic in the Portuguese economy.

4.1.1 Components of disposable income

This subsection outlines the differences in the disposable income definition in EUROMOD and EU-SILC 2022. The major components of disposable income are the same in both sources: original incomes (+); benefits (+), taxes (-), employee social insurance contributions (-); and self-employed social insurance contributions (-). However, there are two differences at the individual level components:

- i) The EU-SILC 2022 definition includes the (imputed) annual value of (using) a company car, while EUROMOD excludes it; and
- ii) Pensions from individual private plans are included in the EUROMOD definition used in EUROMOD, while EU-SILC 2022 excludes it.

Besides these differences, the amount of the disposable income of the same household can be different because the simulated income components in EUROMOD can differ from their observed counterparts in EU-SILC dataset.

⁸ In the previous Country Report, we used the 2020 dataset for the 2021 system year, and the 2021 dataset for the 2020, 2022, and 2023 system years. As explained in the CR, this decision was made due to the significant impact of COVID on income in the 2021 dataset, which would have distorted the results. Consequently, by using the 2020 dataset for the 2021 system year, we aimed to better replicate the decrease in the AROP rate in Portugal in 2021, as identified by ESTAT.

Table 4-1 Components of disposable income

	EUROMOD	EU-SILC 2021	Notes
Household disposable income	ils_dispy	hy020	
Employee cash or near cash income	yem	py010g	yem derived from py010g
Company car	-	py02g	
Cash benefits or losses from self-employment	yse	py050g	yse derived from py050g
Pension from individual private plans	ypp	-	ypp derived from py080g
Investment income	yiY	hy090g	yiY derived from hy090g
Income from rental of a property or land	yprrt	hy040g	yprrt derived from hy040g
Income received by people aged under 16	yot	hy110g	yot derived from hy110g
Regular inter-household cash transfer received	ypt	hy080g	ypt derived from hy080g
Regular inter-household cash transfer paid (-)	xmp	hy130g	xmp derived from hy130g
Old age benefits	poact_s	py100g	poact_s and poanc_s derived from the split of py100g into contributory and non-contributory old age pensions
	poanc_s	py102g py103g py104g	
Survivors benefits	bsu	py110g	bsu derived from py110g
Disability benefits	bdi	py130g	bdi derived from py130g
Unemployment benefits	bunct_s	py090g	bunct_s derived from py092g
	bunnc_s	py09g py092g	bunnc_s derived from py09g
Housing allowances	bho	hy070g	bho derived from hy070g
Family/children related allowances	bfa	hy050g	bfa derived from the difference between hy050 and hy053
	bch_s	hy053g	bch_s derived from hy053g
Education related allowances	bed	py140g	bed derived from py140g
Sickness benefits	bhl	py120g	bhl derived from py120g
Social exclusion not elsewhere classified	bsaot	hy060g	hy060g split into social integration income (bsa00_s), solidarity supplement for the elderly (bsaoa_s) and other social assistance benefits (bsaot)
	bsaoa_s		
	bsa00_s		
Tax on income and social contributions (-)	tin_s	hy140g	EUROMOD data includes three simulated components: tin_s (simulated income tax); tscee_s (simulated SIC employee) and tscse_s (simulated SIC self-employee).
	tscee_s		
	tscse_s		
Regular taxes on wealth (-)	tpr	hy120g	tpr derived from hy120g

Note: all “_s” variables are EUROMOD simulated benefits or taxes.

4.1.2 Validation of market incomes

In this section, we assess (non-simulated) market incomes in EUROMOD’s input dataset. As can be seen in Tables A3.1 and A3.2, there is no readily available public statistics on the number of recipients and annual amounts for the following income sources:

- Income from private pensions (ypp);
- Private transfers (ypt);

- Maintenance payments (xmp);
- Incomes from children under 16 (yot);
- [Covid-19] Wage Compensation (paid by firms) (yemmc_s).

That being said, our analysis focuses on the following types of incomes, as reported in input dataset:

- Income from employment (yem);
- Income from self-employment (yse);
- Income from property (ypr);
- Income from investments (yiy), amounts only;

As can be seen in Tables A3.1 and A3.2, public statistics on these sources of income are only available for 2021 to 2023.

Our analysis shows that:

- The **number of individuals** reporting **receiving incomes from employment** (yem) in EUROMOD's input dataset is very much in line with estimates from INE's Labour Force Survey (see Table A3.1). In fact, the accuracy of this estimate has improved between 2021 and 2023;
- The total **amount of income from employment** (yem) in EUROMOD's input dataset is very much in line with estimates from the Portuguese Tax Authority (see Table A3.2). The accuracy EUROMOD input dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022);
- The **number of individuals** reporting **receiving incomes from self-employment** (yse) in EUROMOD's input dataset is very much in line with estimates from INE's Labour Force Survey (see Table A3.1). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022);
- When compared with public statistics from the Portuguese Tax Authority (see Table A3.2) the total **amount of income from self-employment** (yse) in EUROMOD's input dataset is significantly overestimated – 48%, for the latest available year (2022). There are two possible explanations, for this. First, this could be the product of the wide range of exemptions for self-employed in income tax and social security contributions rules, which means that significant amounts of income from self-employment does not have to be reported, and therefore is not captured in official statistics. Second, given the significance of informal economy and tax evasion in Portugal (see CEAFGA, 2008) this might very well be related with significant levels of under-reporting of income from self-employment, for tax and social security purposes;
- When compared with public statistics from the Portuguese Tax Authority (see Table A3.1) the **number of individuals** reporting **receiving income from property** (ypr) in EUROMOD's input dataset is significantly underestimated – by 34%, for the latest available year (2022). This could, yet again, be a reflex of the size of informal economy and tax evasion in the Portuguese economy, and in particular in the housing sector – for which there is some evidence⁹;
- Despite the underestimation of the number of individuals receiving income from property, the total **amount of income from property** (ypr) in EUROMOD's input dataset does not significantly deviate from public statistics from the Portuguese Tax Authority (see Table A3.2);
- When compared with public statistics from the Portuguese Tax Authority (see Table A3.2) the total **amount of income from investments** (yiy) in EUROMOD's input dataset is significantly overestimated – 69%, for the latest available year (2022). This difference might be explained by two factors. First, EU-SILC is not best suited to measure the receipt of capital incomes. Second, the external source data is not strictly comparable to EU-SILC data.

⁹ For evidence of informal economy practices in the housing sector, see <https://www.publico.pt/2022/11/29/p3/noticia/metade-estudantes-mercado-arrendamento-estao-contrato-2029550>.

4.1.3 Validation of taxes and social insurance contributions

In this section, we assess EUROMOD's ability to simulate the taxes and social security contributions paid in Portugal. As can be seen in Tables A3.3 and A3.4, there is no readily available public statistics on the number of recipients and annual amounts for the following taxes and social security contributions:

- Property tax (tpr);
- Income tax on capital income (tin_{iy_s});
- Extraordinary solidarity contribution on pensions (txcpe_s).

Hence, our analysis will focus on the following types of taxes/social security contributions:

- Personal Income Tax (tin_s);
- Employee's Social Security Contributions (tscee_s);
- Employer's Social Security Contributions (tscer_s);
- Self-Employed Social Security Contributions (tscse_s).

As can be seen in Tables A3.3 and A3.4, public statistics on Personal Income Tax are only available for the period between 2021 and 2022. Public statistics on Social Security contributions are available for the period between 2021 and 2023.

Our analysis reveals that:

- The **number of individuals paying Personal Income Tax** (tin_s) simulated by EUROMOD is very much in line with public statistics from the Portuguese Tax Authority (see Table A3.3). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022);
- When compared with public statistics from the Portuguese Tax Authority (see Table A3.4) the total **amount paid in Personal Income Tax** (tin_s) simulated by EUROMOD is somewhat overestimated – by 15%, for the latest available year (2022). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022). This might be explained by the fact that EUROMOD does not simulate some of the full range of tax credits in the legislation – such as tax credits for expenditures on private retirement plans or investments in stocks, shares savings plans etc.
- The **number of individuals paying Employee's Social Security Contributions** (tscee_s) simulated by EUROMOD is very much in line with public statistics from the Social Security (see Table A3.3). Admittedly, the accuracy EUROMOD dataset estimates has decreased in the period for which there is external benchmark data (2021-2023), but not beyond of what can be considered as a significant deviation. Unsurprisingly, as it refers to the same data, the **number of individuals** for which **Employer's Social Security Contributions** (tscer_s) have been paid in EUROMOD's input dataset is also very in line with public statistics from the Social Security on this topic (see Table A3.3);
- When compared with public statistics from Social Security (see Table A3.4) the **amount paid in Employee's Social Security Contributions** (tscee_s) simulated by EUROMOD is overestimated – by 21%, for the latest available year (2023). This might be explained by the fact EUROMOD does not simulate the large range of reduced rates that apply to a number of occupations/sectors. Still, the accuracy EUROMOD dataset estimates in this domain has improved in the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.4) the **amount paid in Employer's Social Security Contributions** (tscer_s) simulated by EUROMOD is largely overestimated – by 38%, for the latest available year (2023). This might be explained by the

fact EUROMOD does not simulate the large range of reduced rates that apply to a number of occupations/sectors. Still, the accuracy EUROMOD dataset estimates in this domain has improved in the period for which there is external benchmark data (2021-2023).

- When compared with public statistics from Social Security (see Table A3.3) the **number of individuals paying Self-Employed Social Security Contributions** (*tscse_s*) simulated by EUROMOD is significantly underestimated – by 33%, for the latest available year (2023). Still, the accuracy EUROMOD dataset estimates has (slightly) improved during the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.3) the **amount of paid in Self-Employed Social Security Contributions** (*tscse_s*) simulated by EUROMOD is significantly overestimated – by 61%, for the latest available year (2023). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2023).

4.1.4 Validation of benefits

In this section, we assess the simulated benefits in EUROMOD's input dataset. In order to provide a more systematic assessment, our analysis will be structured in three stages:

- Validation of Pension Benefits;
- Validation of Non Means-Tested Benefits;
- Validation of Means-Tested Benefits,

4.1.4.1 Validation of Pension Benefits

As can be seen in Tables A3.5 and A3.6, there is no readily available public statistics on the number of recipients and annual amounts for the Social Pension (*poanc_s*), hence our analysis here covers the following pension benefits:

- Contributory Old-Age Pension (*poact_s*);
- Disability Pension (*pdi*);
- Survivor Pension (*psu*);

As can be seen in Tables A3.5 and A3.6, public statistics on pension benefits are only available for the period between 2021 and 2022.

Our analysis reveals that:

- The **number of individuals** receiving **Contributory Old-Age Pension** (poact_s) simulated by EUROMOD is very much in line with public statistics from Social Security (see Table A3.5). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022);
- When compared with public statistics from Social Security (see Table A3.6) the total **amount** of **Contributory Old-Age Pension** (poact_s) **payments** simulated by EUROMOD are slightly overestimated – by 13%, for the latest available year (2022). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022).
- The **number of individuals** receiving **Disability Pension** (pdi) in EUROMOD’s input dataset is broadly in line with public statistics from Social Security (see Table A3.5). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022);
- When compared with public statistics from Social Security (see Table A3.6) the total **amount** of **Disability Pension** (pdi) **payments** in EUROMOD’s input dataset significantly underestimated – by 58%, for the latest available year (2022). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022).
- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Survivor Pension** (psu) in EUROMOD’s input dataset is significantly underestimated – by 34%, for the latest available year (2023). The accuracy EUROMOD dataset estimates has (slightly) improved during the period for which there is external benchmark data (2021-2022).
- When compared with public statistics from Social Security (see Table A3.6) the total **amount** of **Survivor Pension** (psu) **payments** in EUROMOD’s input dataset is significantly underestimated – by 26%, for the latest available year (2022). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022).

4.1.4.2 Validation of Non Means-Tested Benefits

As can be seen in Tables A3.5 and A3.6, there is no readily available public statistics on the number of recipients and annual amounts for the following benefits:

- Parental Allowance (bplct_s)
- Family Benefits (other than Child Benefit) (bfa)
- Scholarships (bed);
- [Covid-19] Wage Compensation (bwkmcee_s)
- [Covid-19] Self-Employment Compensation (bwkmcse_s)

Hence, our analysis focuses on the following benefits:

- Unemployment Insurance (bunct_s);
- Sickness Benefit (bhl).

As can be seen in Tables A3.5 and A3.6, public statistics on these benefits only available for the period between 2021 and 2023.

Our analysis reveals that:

- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Unemployment Insurance** (bunct_s) simulated by EUROMOD is underestimated – by 24%, for the latest available year (2023). This may be explained by the fact that unemployment insurance benefits cannot be fully simulated in EUROMOD, as there is no information on the reason why people became unemployed (voluntary or compulsory), nor on the duration of the most recent jobs. Not only that, EUROMOD does not simulate the entitlement of (out of work) self-employed persons. Still, the accuracy EUROMOD dataset estimates in this domain has improved in the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.6) the total **amount of Unemployment Insurance** (bunct_s) **payments** simulated by EUROMOD is overestimated – by 19%, for the latest available year (2022). This contrasts, in a notable manner, with the previous period (2021), where the total **Unemployment Insurance** (bunct_s) **payments** were underestimated, by 10%.
- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Sickness Benefit** (bhl) in EUROMOD's input dataset is significantly underestimated – by 69%, for the latest available year (2023). One possible explanation is that external data is constructed using sickness episodes along the year and there is no information on the EU-SILC data about the number of individuals experiencing various episodes along the year (e.g., counting of a same individual experiencing various episodes along the year). Worryingly, the accuracy EUROMOD dataset estimates in this domain has worsened in the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.6) the total **amount of Sickness Benefit** (bhl) **payments** in EUROMOD's input dataset are underestimated – by 18%, for the latest available year (2022). To some degree, this might reflect the fact that EUROMOD is also underestimating the number individuals receiving Sickness Benefit. The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022).

4.1.4.3 Validation of Means-Tested Benefits

As can be seen in Tables A3.5 and A3.6, there is no readily available public statistics on the number of recipients and annual amounts for the following benefits:

- Housing Benefit (bho);
- COST-of-LIVING: Housing Benefit (bhotn_s)
- Prenatal Family Allowance (bmapr_s)
- Parental Social Allowance (bplnc_s)
- Other Social Assistance benefits (bsaot).
- Family Income Support (2022) (bfaxp_s)
- Extraordinary Supplement for Vulnerable Families (2023) (bfaxp01_s)

Therefore, our analysis focuses on the following types of simulated means-tested benefits:

- Child Benefit (bch_s)
- Unemployment Assistance Benefit (bunnc_s)
- Solidarity Supplement for Older Persons (bsaoa_s)
- Social Insertion Income (bsa00_s).

As can be seen in Tables A3.5 and A3.6, public statistics on these benefits are only available for the period between 2021 and 2022.

Our analysis reveals that:

- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Child Benefit** (bch_s) simulated by EUROMOD is significantly underestimated – by 46%, for the latest available year (2023). The accuracy EUROMOD dataset estimates has remained stable during the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.6) the simulated **Child Benefit** (bch_s) **total payments** simulated by EUROMOD are underestimated – by 18%, for the latest available year (2022). The accuracy EUROMOD dataset estimates is relatively constant in the period for which there is external benchmark data (2021-2022).
- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Unemployment Assistance** (bunct_s) simulated by EUROMOD is underestimated – by 13%, for the latest available year (2023). The accuracy EUROMOD dataset estimates has varied overtime during the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.6) the simulated **Unemployment Assistance** (bunct_s) **total payments** simulated by EUROMOD are significantly underestimated – by 55%, for the latest available year (2022). Sill, the accuracy EUROMOD dataset estimates has improved in the period for which there is external benchmark data (2021-2022).
- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving the **Solidarity Supplement for Older Persons** (bsaoa_s) simulated by EUROMOD is significantly overestimated – by 65%, for the latest available year (2023). The accuracy EUROMOD dataset estimates has varied significantly overtime during the period for which there is external benchmark data (2021-2023).
- The **total amounts paid** concerning **Solidarity Supplement for Older Persons** (bsaoa_s) simulated by EUROMOD is very much in line with public statistics from Social Security (see Table A3.6). In fact, the accuracy EUROMOD dataset estimates has significantly improved in the period for which there is external benchmark data (2021-2022).
- When compared with public statistics from Social Security (see Table A3.5) the **number of individuals** receiving **Social Insertion Income** (bsa00_s) simulated by EUROMOD is significantly underestimated – by 61%, for the latest available year (2023). The accuracy EUROMOD dataset estimates has remained relatively stable during the period for which there is external benchmark data (2021-2023).
- When compared with public statistics from Social Security (see Table A3.6) the total **amount of Social Insertion Income** (bsa00_s) **payments** simulated by EUROMOD is significantly underestimated – by 29%, for the latest available year (2022). The accuracy EUROMOD estimates has remained relatively stable during the period for which there is external benchmark data (2021-2022).

4.1.5 Validation of outputted (simulated) expenses

The validation of simulated expenditures used to model consumption taxes includes two types of comparisons:

1. Simulated household consumption expenditures compared to expenditures collected by National Accounts (NA) of that same year.
2. Simulated consumption taxes (based on NA-adjusted simulated expenditures) compared to administrative data on consumption tax revenues.

Table A3.9 and A3.10 show the validation of consumption taxes related amounts. The top part of table A3.9 compares expenditures aggregated amount from EUROMOD simulations with National Account (NA) external statistics as reported by EUROSTAT. As discussed in session 3.5, the original HBS data are generally underestimating consumption figures over National accounts for Portugal, except “04 – housing, water and fuel” and “08 – Communications”. Hence it is not surprising that the aggregated simulated values are also under-simulated w.r.t. NA. Similar to the input data, spending on “Housing, water and fuel” and “Communication” are overstimulated. Similar to the input data, spending on “Housing, water and fuel” and “Communication” are oversimulated. However, the simulation seems to exacerbate the overestimation. The second part of Table A3.9 compares aggregate revenues from consumption taxes (i.e. VAT and excises) to external statistics from EUROSTAT. The bottom part of the table shows simulated aggregate revenue for some category of interest such as alcoholic drinks, tobacco and energy products. In Portugal, both revenue from VAT and excises are undersimulated. The simulation captures about half and 96% of the revenue from VAT and Excises respectively. When looking at consumption taxes on specific items, the simulation significantly underestimates the government revenue on these products. The exceptions are Energy (coicop 045) for which simulated revenue is almost eleven times bigger than official statistics and Natural gas (coicop 04521) currently overestimated by almost four times. These discrepancies are partly due to the fact that the survey data underpinning the CT simulation are based on consumers declared consumption that may differ from the actual consumption (e.g. people misreport about how much they smoke and drink). To correct for this problem, EUROMOD provides also adjusted consumption aggregates, where the calibration/correcting factor is the ratio between NA aggregated expenditures and EM aggregated simulated expenditures level 1 at baseline.

Effectively NA adjustment scales-up (or down) consumption and tax liabilities of all individuals. Table A3.10 compares annual Government revenue from consumption taxes after applying calibration to NA. In the top part of table 3.10 we show that consumption tax revenues simulated in Portugal for private households sum up to 19,186 million euros for VAT and 3,818 million euros for excises. As a result about 76% of aggregate VAT revenues are simulated in EUROMOD. There might be various reasons for these discrepancies. The major one being that several groups that pay significant amounts of VAT are not covered in HBS. Among these groups are government and third sector, hospitals and business enterprises such as financial companies that are themselves exempt from VAT but have to pay the input VAT from all previous production stages and private households explicitly not covered by the HBS, such as people in dormitories, jails, or retirement homes (although the latter are not such big spenders). When looking at specific items at lower coicop details, the calibration also improves the estimation of government revenue although some differences w.r.t. official statistics remain higher than 50%.

4.2 Income distribution

In this section we assess the accuracy of EUROMOD estimates concerning how disposable income is distributed in Portuguese society. Our analysis focuses on two types of indicators:

- Estimates on the level of inequality in the distribution of income;
- Estimates on the level of poverty.

It should be noticed that the equivalised disposable income simulated in EUROMOD is slightly different from the original EU-SILC data, namely with regards:

- i) The inclusion of different sources of income in the definition of household income as mentioned earlier. For example, the EU-SILC includes in disposable income (variable hy020) the company car (py021), which is not included in EUROMOD; and EUROMOD includes pensions received from individual private plans (py080) and repayments/receipts for tax adjustment, not included EU-SILC;
- ii) Changes in the sample and weighting of the observations;
- iii) Changes in the amounts of some income sources due to their simulation in EUROMOD:
 - a. In general, simulated social benefits rely on full take up, which should generate significant differences in disposable income when compared to EU-SILC;
 - b. The social supplement for the elderly constitutes an exception, as it is adjusted so that simulated take up is coherent with actual take up. But as EU-SILC underestimates the total amount received, there are again differences between simulated and actual disposable income.

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 is 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 individuals aged 14+ = 0.5; additional individuals aged under 14 = 0.3.

External benchmarks are based on income distribution statistics produced by EUROSTAT, which are also based on EU-SILC. This means that the ‘income reference period, i.e. the year for which data on incomes is collected, lags by one year the ‘period of collection of data’. Given that the latest available EU-SILC data refer to the 2023 round, this means that we only have external benchmarks for 2021 and 2022 (see Tables A3.7 and A3.8).

4.2.1 Income inequality

In this section we assess the accuracy of a set of estimates (produced by EUROMOD) concerning the inequality in the distribution of income in Portuguese society, namely:

- Mean equivalised disposable income;
- Median equivalised disposable income;
- Share of national equivalised income, by decile;
- Income quintile share ratio (S80/S20) for disposable income;
- GINI coefficient of equivalised disposable income;

Our analysis shows that:

- The estimates of **mean and median equivalised disposable income** produced by EUROMOD are very much in line with external benchmarks produced by EUROSTAT. The accuracy EUROMOD's estimates has remained relatively stable during the period for which there is external benchmark data (2021-2022).
- As can be seen in Table A3.7, with the exceptions of the first and second income deciles, EUROMOD's estimates of how the **shares of national equivalised income** are distributed across income deciles are very much in line with EUROSTAT estimates. The only exception concerns the share of national equivalised income of individuals in the first income decile, which EUROMOD seems to overestimate - by 24%, for the latest available year (2022);
- This pattern is reflected in the accuracy of the measures of income distribution produced by EUROMOD.
 - Reflecting the fact that it is more sensitive to what happens at the extremes of the distribution of income, we observe that EUROMOD's estimates of **income quintile share ratio (S80/S20)** are underestimated - by 15%, for the latest available year (2022). The accuracy EUROMOD's estimates has remained relatively stable during the period for which there is external benchmark data (2021-2022);
 - Reflecting the fact that it is less sensitive to what happens at the extremes of the distribution of income, we observe that the **GINI coefficient** estimate generated by EUROMOD is very much in line with external benchmarks produced by EUROSTAT. Still, the accuracy EUROMOD dataset estimates has worsened in the period for which there is external benchmark data (2021-2022).

4.2.2 Poverty rates

In this section we assess the accuracy of EUROMOD-based estimates of income poverty in Portuguese society. We start by looking at a head-count index which measures the percentage of individuals with incomes below 60% of the median equivalent disposable income. With the aim of further assessing EUROMOD's ability to produce accurate estimates on the level and nature of income poverty, we complement this assessment by looking at (see Table A3.8):

- Poverty rate, 60% of the median disposable income, by gender;
- Poverty rate, 60% of the median disposable income, by age group;
- Poverty rate, using different poverty thresholds:
 - 70% of the median disposable income;
 - 50% of the median disposable income;
 - 40% of the median disposable income.

Our analysis shows that:

- The **poverty rate, at 60% of the median disposable income**, estimate produced by EUROMOD is very much in line with external benchmarks produced by the EUROSTAT. The accuracy EUROMOD's estimates has remained relatively stable during the period for which there is external benchmark data (2021-2022).
- EUROMOD-based **poverty rates, at 60% of the median disposable income, by gender** are also very much in line with external benchmarks produced by the EUROSTAT. Again, the accuracy of EUROMOD's estimates has remained relatively stable during the period for which there is external benchmark data (2021-2022).
- EUROMOD seems to underestimate the **percentage of young persons at risk of income poverty (at 60% of the median disposable income)** - by 17%, in the case of children up to 15 years; and, by 14% for persons between 16 and 25. The accuracy of EUROMOD estimates has worsened in the period for which there is external benchmark data (2021-2022).

- For the **remainder age-groups**, we can see that EUROMOD estimates are very much in line with external benchmarks produced by the EUROSTAT, and remain relatively stable during the period for which there is external benchmark data (2021-2022). However, it should be noticed that, in contrast with other age-groups (see Table A3.8), EUROMOD tends to overestimate the percentage of individuals aged 65 and over, at risk of poverty.
- The accuracy EUROMOD poverty-related estimates decreases when more strict poverty thresholds (in the sense that they capture a smaller universe of people at risk of poverty) are used. Thus, EUROMOD seems to underestimate the **percentage of people at risk of income poverty, at 50% of the median disposable income** - by 15%, for the latest available year (2022). The **percentage of people at risk of income poverty, at 40% of the median disposable income** is also underestimated - by 19%, for the latest available year (2022). In both cases, the accuracy EUROMOD dataset estimates has worsened in the period for which there is external benchmark data (2021-2022).
- On the other hand, the **poverty rate, at 70% of the median disposable income**, estimate produced by EUROMOD is very much in line with external benchmarks produced by the EUROSTAT. The accuracy EUROMOD's estimates has slightly worsened during the period for which there is external benchmark data (2021-2022).

4.3 Health warnings

This final section summarises the main findings in terms of particular aspects of the Portuguese part of EUROMOD or its database that should be considered while using the model and interpreting its results.

- Care should be taken in interpreting results for small sub-groups due to small sample sizes.
- The weights do not control for the variations of unemployment in Portugal over the period under consideration.
- No adjustments are made for structural changes in the characteristics of the population between the data income collection year (2020) and the simulation years.
- The Portuguese version of the EU-SILC clearly underestimates some social benefits, and this is not corrected by EUROMOD unless these benefits are simulated.
- The simulation of some benefits in EUROMOD is conditioned by the difficulty of splitting some income variables from the EU-SILC user database and by the difficulty some of the recipients have in clearly identifying the source of their incomes.
- Non-take-up of benefits is not modelled in most policies (the exception being the Social Supplement for the Elderly). This has the effect of inflating the simulated incomes of households who do not actually take up these benefits. This is particularly relevant in the simulation of child benefits and social integration income. And although the Social Supplement for the Elderly simulation adjusts the number of recipients to match the actual benefit's take-up, as EU-SILC underestimates the same number (and amounts), this has an impact on the comparison between EUROMOD results and other indicators based on disposable income obtained from EU-SILC (poverty rate, inequality indices, etc.).
- Comparisons between EUROMOD and administrative figures on personal income tax must take into consideration the existence of tax evasion, as well as the lack of adequate information for the simulation of several tax allowances and deductions.
- Parental leave benefits are only simulated from 2015 to 2023 in EUROMOD I4.0. They are defined in an extension (Parental Benefits Extension) that is switched off in the baselines, i.e., the non-simulated component (*bfa*) is being used. When the extension is switched on, the non-simulated component is reduced by subtracting the value of the simulated components (*bmapr_s*, *bplct_s*, *bplnc_s*). The simulated numbers might differ significantly from external statistics as some policy rules cannot be simulated accurately due to lack of information in the underlying data.

- The simulation of monetary compensation schemes (*yemcomp_pt* & *ysecomp_pt*) is triggered by the simulation of labour market transitions defined in policy *TransLMA_pt*. This policy becomes operational if the model is run in conjunction with the LMA add-on. The nature of these simulations is still experimental and only partially validated. Users are encouraged to refer to the “Simulating labour market transitions in EUROMOD” document prior to their use.
- The simulation of consumption taxes sensitively depends on the quality of the match of the extended EUROMOD files, as well as on the frequency of this data and the gaps between the input data files and the policy systems. At this point, the most recent HBS data available for all countries (EU-HBS) is 2015.
- When the user runs a policy system year (e.g., 2024) that does not coincide with the incomes reported in the SILC-data used (e.g., 2022, with reported incomes from 2021), expenditures in EUROMOD are simulated under the constant income shares assumption (by default). This is because the income shares of expenditure included in the extended input files are not updated and remain constant regardless of the policy system that is used for the simulation. This means that a household that spends 10% of its income in food (e.g. the sum of all the *xs_1** variables, i.e. *xs01111*, *xs01112*, and so on and so forth, is 0.10) will still spend 10% of their income in 2024, regardless of the change in incomes driven by the uprating factors and tax-benefit changes. This implicitly assumes an income elasticity of one.
- Labour market transitions are switched OFF in EUROMOD baselines. As a consequence, the simulation of monetary compensation schemes does not produce any effect in baseline simulations. Since all policies not linked to labour market transitions are fully functional, it is possible for disposable income in 2023 to be higher than disposable income in previous years.

5. REFERENCES

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- ***Sources for tax-benefit descriptions/rules***

Portuguese Fiscal System (in Portuguese):

https://info.portaldasfinancas.gov.pt/pt/apoio_contribuinte/Folhetos_informativos/Pages/default.aspx

Social benefits descriptions and rules (in Portuguese): www.seg-social.pt

Online legislation (in Portuguese): www.dre.pt

Variable		2021	2022	2023	2024	Source/comments
Employment income						
EUROMOD Country Report – PORTUGAL						
<i>Dependent employment income</i>						
Civil servants	yem	115.87	118.19	118.73	125.26	Statistics Portugal Estatísticas do Emprego
Private sector employees		141.90	148.43	149.19	156.80	Statistics Portugal Estatísticas do Emprego
Self-employed income	yse	141.90	148.43	149.19	156.80	In line with private wages
Pensions						
Main old age pension, survivors pension, disability pension	poact, psu, pdi	*	*	*	*	PT Law on pensions updating (pensions updated according to every year updating schedule)
Social pension	poanc	211.79	213.91	224.24	245.79	Base amount of the social pension
Private pension	ypp	119.75	129.09	129.83	132.11	Statistics Portugal Índice de Preços no Consumidor – Inflation "without deflation" (inflation as 0 on years with deflation) (2024 forecast)
Unemployment benefits						
Insurance and assistance	bun, bunnc	135.92	141.90	148.43	149.19	In line w/private wages, but lagged one year
Sickness benefits						
Sickness benefit (for civil servants)		115.87	118.19	118.73	125.26	In line with civil servant wages
Sickness benefit (for private sector employees)	bhl	141.90	148.43	149.19	156.80	In line with private wages
Family and child benefits						
Family benefits (for civil servants)		115.87	118.19	118.73	125.26	Essentially, parental leave benefits (updated in line w/civil servant wages)
Family benefits (for private sector)	bfa	141.90	148.43	149.19	156.80	Essentially, parental leave benefits (updated in line w/private wages)
Child benefit	bch	438.81	443.20	480.43	509.26	In line with Social Support Index
Social assistance						
Social assistance and social assistance (other)	bsa, bsaot	438.81	443.20	480.43	509.26	In line with Social Support Index
Social integration income	bsa00	189.66	189.66	209.11	237.25	PT law on social integration income's threshold update
Social supplement for the elderly	bsaoa	5,258.63	5,258.63	5,858.63	7208.04	PT law on social supplement for the elderly's threshold update
Other benefits						
Education benefits	bed	438.81	443.20	480.43	509.26	In line with Social Support Index
Housing benefits	bho	438.81	443.20	480.43	509.26	In line with Social Support Index
Imputed benefit in kind	kfbbc	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Investment/property income						
Investment income	yyi	199.33	212.68	213.06		Statistics Portugal GDP current prices (2024 forecast)
Property income (rent)	ypr	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Other income						
Private transfers	ypt	141.90	148.43	149.19	156.80	In line w/private wages

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Non-cash income	kfb	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Income received by <16	yot	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Assets						
Financial capital	afc	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Expenditure items						
Rent paid; housing costs (other); maintenance payment	xhert, xheot, xmp	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Interest on mortgage payment	xhcmomi	237.00	268.00	271.48		Statistics Portugal Taxas de Juro Implícitas no Crédito à Habitação (mortgage + interests)
Expenditure on private pensions	xpp	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Tax and SICs						
Property tax	tpr	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Income tax; Income tax repayments/receipts	tin, tad	141.90	148.43	149.19	156.80	In line w/private wages
SIC employee, SIC self-employed; SIC employer	tscee, tscse, tscer	141.90	148.43	149.19	156.80	In line w/private wages
Income tax and SICs	tis	141.90	148.43	149.19	156.80	In line w/private wages
Other						
Disposable income	yds	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)
Imputed house rent	kivho	118.43	127.67	128.39	132.11	Statistics Portugal Índice de Preços no Consumidor (2024 forecast)

ANNEX 1. UPDATING FACTORS

Table I.1 Monetary updating raw indices (in relation to 2006)

ANNEX 2. POLICY EFFECTS IN 2023-2024

Table A2 and figure A2 show the effect that 2024 policies have on disposable income by income component and income decile group. The effect is estimated as the difference between simulated household income under 2024 tax-benefit policies (deflating monetary parameters by Eurostat’s Harmonized Index of Consumer Prices, HICP) and net incomes simulated under the year 2023 policies, as a percentage of mean equivalised household disposable income in 2023.

It’s important to note that the results presented here are in real terms, which already incorporates how inflation eroded the real value of the increases in social benefits and pensions between 2023 and 2024. The HCPI growth was milder in 2024 regarding the previous years, and, in this way, the policy changes occurring in 2024 more than compensated the inflation income erosion impact, leading to an increase of 2.87% of households’ disposable income, with the bottom income deciles recording the greatest increases (of 5.22% in the first decile).

These impacts are consistent with the kind of policy changes implemented and simulated in 2023 and under the current figures of inflation. Benefits such as the solidarity supplement for the elderly and the SII were reinforced and the rent support benefit was maintained and its amount increased, which allowed an increase in the disposable income, especially important for the poorest deciles. However, this positive impact was dampened by the withdrawal of the temporary measure consisting on the support to vulnerable households.

Overall, these counteracting effects resulted in a slight negative average effect of -0.2% on the disposable income of the total of the population. In the first decile, however, the reinforcement of the minimum benefits overcompensated the negative impact of the withdrawal of the extraordinary support measure, allowing an increase of disposable income by 2.33%. Direct taxes have contributed positively to disposable income changes, with an overall effect of 1.84%, reaching its maximum impact in the ninth decile. This is also coherent with the type of PIT tax break occurring in 2024, consisting in the update of the tax brackets, the reduction of the tax rates (except for the very top ones) and the update of the minimum of existence.

Table A2 Policy effects in Portugal in 2023-2024, using the CPI-indexation (CPI = 1.023), %¹⁰

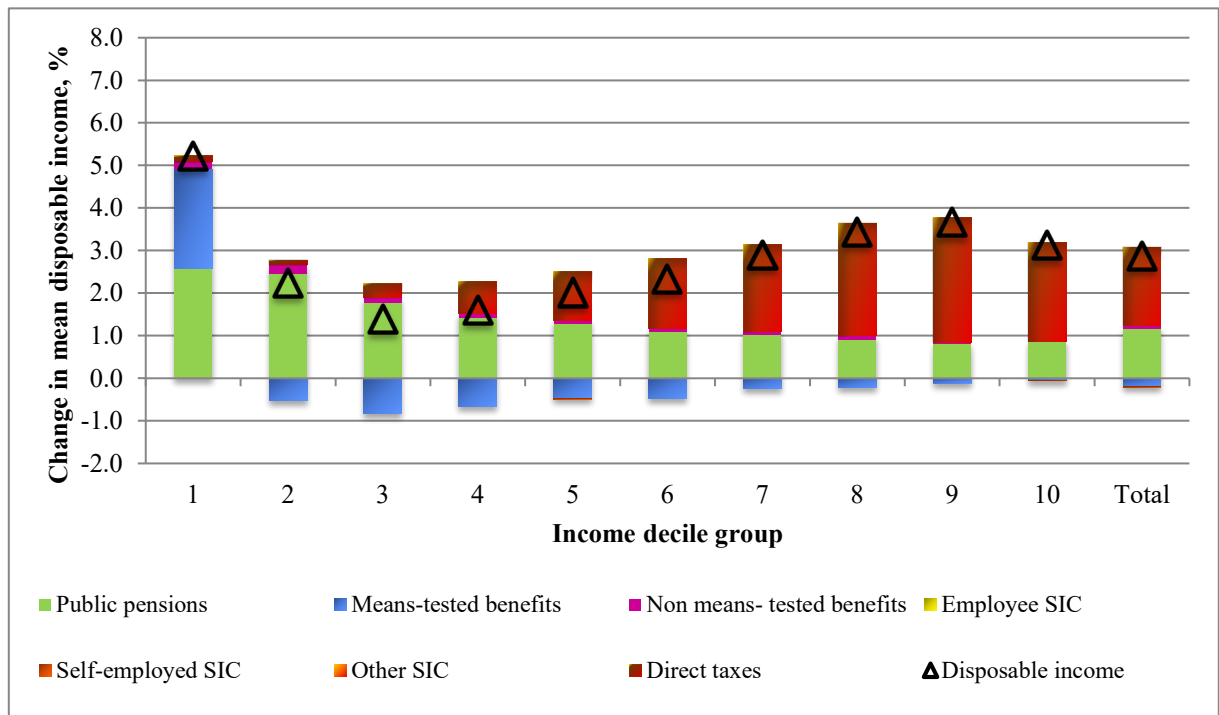
Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	2.58	2.33	0.17	0.00	0.00	0.00	0.14	5.22
2	0.00	2.46	-0.53	0.21	0.00	0.00	0.00	0.11	2.25
3	0.00	1.77	-0.84	0.12	0.00	0.00	0.00	0.33	1.39
4	0.00	1.42	-0.67	0.10	0.00	0.00	0.00	0.74	1.60
5	0.00	1.27	-0.48	0.09	0.00	-0.01	0.00	1.14	2.02
6	0.00	1.10	-0.47	0.07	0.00	0.00	0.00	1.64	2.33
7	0.00	1.02	-0.24	0.07	0.00	0.00	0.00	2.05	2.89
8	0.00	0.92	-0.21	0.08	0.00	0.00	0.00	2.65	3.43
9	0.00	0.80	-0.11	0.04	0.00	0.00	0.00	2.93	3.66
10	0.00	0.85	-0.05	0.02	0.00	-0.01	0.00	2.31	3.12
Total	0.00	1.16	-0.20	0.07	0.00	0.00	0.00	1.84	2.87

¹⁰ Consistent with the underlying methodology outlined in Bargain & Callan (2010) and applied to other EUROMOD countries, our analysis excludes simulations affecting public sector pay. Specifically, in the Portuguese context, this means that the wage growth for Public Servants in 2023 and 2024 is not factored into our results. To achieve this, the Uprate_yempb_pt policy was set to off in order to produce the PET results.

Note: 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 2022, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2023 policies by Eurostat’s Harmonized Index of Consumer Prices (HICP).

When looking at the changes in income broke down by decile, results also reflect the impacts described before: tax changes induced increasing effects across the income distribution (up to the ninth decile, as mentioned before). Like what was previously observed in the last couple of years, in 2024 social insurance contributions (SICs) – both paid by employees and self-employed – had no effect on the disposable income distribution, as no changes occurred.

Figure A2 Policy effects in Portugal in 2023-2024, using the CPI-indexation (CPI = 1.023), %



ANNEX 3. VALIDATION TABLES

Table A3.1. Original income in EUROMOD - Number of recipients (thousands)

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earns)													
employment income (rendimento monetário ou similar do trabalho por conta de outrem) (yem)	N	4,411	4,411	4,411	4,411	4,039	4,145	4,254	NaN	1.09	1.06	1.04	NaN
self-employment income (rendimento monetário do trabalho por conta própria) (yse)	N	646	646	646	646	695	704	699	NaN	0.93	0.92	0.92	NaN
[Covid-19] wage compensation paid by the firm (yemmc_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other original income (ils_origy - ils_earns)													
investment income (rendimentos de capital) (yiy)	N	923	923	923	923	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income of children under 16 (Rendimentos obtidos por menores de 16 anos) (yot)	N	5	5	5	5	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income from property (rendimentos de propriedades) (ypr)	N	522	522	522	522	774	788	NaN	NaN	0.67	0.66	NaN	NaN
private pension (rendimento monetário de planos privados de pensões) (ypp)	N	61	61	61	61	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
private transfers (transferências monetárias regulares entre agregados - recebidas) (ypt)	N	214	214	214	214	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maintenance payment (Transferências monetárias regulares entre agregados - pagas) (xmp)	N	273	273	273	273	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

Source	Comments
Earnings (ils_earns)	
employment income (rendimento monetário ou similar do trabalho por conta de outrem) (yem)	https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaquas&DESTAQUESdest_boui=633377797 Statistics Portugal, Labour force survey for the number & Tax authority, PIT model 3 declarations statistics - fiscal years 2018 to

Continued...

	Source	Comments
self-employment income (rendimento monetário do trabalho por conta própria) (yse)	https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaquas&DESTAQUESdest_boui=633377797&DESTAQUESmodo=2	Statistics Portugal, Labour force survey for the number & Tax authority, PIT model 3 declarations statistics - fiscal years 2018 to 2020
[Covid-19] wage compensation paid by the firm (yemmc_s)	-	-
Other original income (ils_origy - ils_earns)		
investment income (rendimentos de capital) (yiy)	https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRS.aspx	Tax authority, PIT model 3 declarations statistics - fiscal years 2018 to 2020
income of children under 16 (Rendimentos obtidos por menores de 16 anos) (yot)	-	-
income from property (rendimentos de propriedades) (ypr)	https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas_ir/Pages/Estatisticas_IRS.aspx	Tax authority, PIT model 3 declarations statistics - fiscal years 2018 to 2020 ('Estatísticas das declarações modelo 3 -
private pension (rendimento monetário de planos privados de pensões) (ypp)	-	-
private transfers (transferências monetárias regulares entre agregados - recebidas) (ypt)	-	-
maintenance payment (Transferências monetárias regulares entre agregados - pagas) (xmp)	-	-

Table A3.2. Original income in EUROMOD - Annual amounts (millions)

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earns)													
employment income (rendimento monetário ou similar do trabalho por conta de outrem) (yem)	N	76,963	81,368	87,456	90,889	69,897	76,263	NaN	NaN	1.10	1.07	NaN	NaN
self-employment income (rendimento monetário do trabalho por conta própria) (yse)	N	8,467	8,952	9,677	9,994	5,249	6,055	NaN	NaN	1.61	1.48	NaN	NaN
[Covid-19] wage compensation paid by the firm (yemmc_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other original income (ils_origy - ils_earns)													
investment income (rendimentos de capital) (yiy)	N	751	806	809	821	371	477	NaN	NaN	2.03	1.69	NaN	NaN
income of children under 16 (Rendimentos obtidos por menores de 16 anos) (yot)	N	7	7	7	7	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income from property (rendimentos de propriedades) (ypr)	N	2,514	2,514	2,514	2,514	2,343	2,596	NaN	NaN	1.07	0.97	NaN	NaN
private pension (rendimento monetário de planos privados de pensões) (ypp)	N	244	244	244	244	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
private transfers (transferências monetárias regulares entre agregados - recebidas) (ypt)	N	838	886	957	989	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maintenance payment (Transferências monetárias regulares entre agregados - pagas) (xmp)	N	678	705	735	756	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Table A3.3. Direct taxes and SIC - Number of payers (thousands)

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
personal income tax (tin_s)	Y	3,385	3,473	2,780	2,703	0	0	0	0	0.00	0.00	0.00	0.00	3,256	3,345	NaN	NaN	1.04	1.04	NaN	NaN
income tax on capital income (tiniy_s)	Y	923	923	923	923	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property tax (tpr)	N	2,742	2,742	2,742	2,742	2,742	2,742	2,742	2,742	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
employees' SIC (tscee_s)	Y	4,411	4,411	4,411	4,411	4,411	4,411	4,411	4,411	1.00	1.00	1.00	1.00	4,283	4,595	4,795	NaN	1.03	0.96	0.92	NaN
Self-employed Social Insurance Contributions (ils_sicse)																					
self-employed SIC (tscse_s)	Y	380	378	377	379	544	544	544	544	0.70	0.69	0.69	0.70	517	525	567	NaN	0.73	0.72	0.67	NaN
Employer Social Insurance Contributions (ils_sicer)																					
employers' SIC (tscer_s)	Y	4,411	4,411	4,411	4,411	4,411	4,411	4,411	4,411	1.00	1.00	1.00	1.00	4,283	4,595	4,795	NaN	1.03	0.96	0.92	NaN
Credited Contributions (ils_sicct)																					
Other Contributions (ils_sicot)																					
extraordinary solidarity contribution on pensions (txcpe_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Direct taxes (ils_tax)		
personal income tax (tin_s)	https://info.portaldasfinancas.gov.pt/pt/dgci/divulgacao/estatisticas/estatisticas	Tax authority, PIT model 3 declarations statistics - fiscal years 2018 to 2020
income tax on capital income (tiniy_s)	-	-
property tax (tpr)	-	-
Employee Social Insurance Contributions (ils_sicee)		
employees' SIC (tscee_s)	https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaquas&DESTAQUES	Statistics Portugal, Tax Revenue Statistics ('INE, Estatísticas das Receitas Fiscais 1995-
Self-employed Social Insurance Contributions (ils_sicse)		
self-employed SIC (tscse_s)	-	Social Security Statistics (Gestão de Remunerações, Q5). Social Security Statistics
Employer Social Insurance Contributions (ils_sicer)		
employers' SIC (tscer_s)	-	Social Security Statistics (Gestão de Remunerações, Q3) Refers to worker's share
Credited Contributions (ils_sicct)		

Continued...

Source	Comments
Other Contributions (ils_sicot)	
extraordinary solidarity contribution on pensions (txcpe_s)	-

Table A3.4. Direct taxes and SIC - Annual amounts (millions)

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
personal income tax (tin_s)	Y	17,337	18,728	19,026	17,874	0	0	0	0	0.00	0.00	0.00	0.00	14,650	16,292	NaN	NaN	1.18	1.15	NaN	NaN
income tax on capital income (tin_y_s)	Y	210	226	226	230	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property tax (tpr)	N	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1.00	1.00	1.00	1.00	1,602	1,615	NaN	NaN	0.67	0.67	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
employees' SIC (tscee_s)	Y	8,466	8,950	9,620	9,998	8,466	8,466	8,466	8,466	1.00	1.06	1.14	1.18	6,327	7,108	7,968	NaN	1.34	1.26	1.21	NaN
Self-employed Social Insurance Contributions (ils_sicse)																					
self-employed SIC (tscse_s)	Y	816	858	927	961	1,106	1,106	1,106	1,106	0.74	0.78	0.84	0.87	494	550	576	NaN	1.65	1.56	1.61	NaN
Employer Social Insurance Contributions (ils_sicer)																					
employers' SIC (tscer_s)	Y	18,279	19,325	20,771	21,586	18,279	18,279	18,279	18,279	1.00	1.06	1.14	1.18	13,261	14,897	16,700	NaN	1.38	1.30	1.24	NaN
Credited Contributions (ils_sicct)																					
Other Contributions (ils_sicot)																					
extraordinary solidarity contribution on pensions (txcpe_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Table A3.5. Benefits - Number of recipients (thousands)

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
contributory old-age pension (poact_s)	Y	2,344	2,344	2,344	2,720	2,344	2,344	2,344	2,344	1.00	1.00	1.00	1.16	2,313	2,323	NaN	NaN	1.01	1.01	NaN	NaN
disability pension (pensão de invalidez) (pdi)	N	217	217	217	217	217	217	217	217	1.00	1.00	1.00	1.00	240	235	NaN	NaN	0.91	0.93	NaN	NaN
survivor pension (pensão de sobrevivência) (psu)	N	570	570	570	570	570	570	570	570	1.00	1.00	1.00	1.00	859	861	NaN	NaN	0.66	0.66	NaN	NaN
social pension (pensão social de velhice) (poanc_s)	Y	42	40	42	43	19	19	19	19	2.20	2.07	2.21	2.24	36	35	NaN	NaN	1.17	1.13	NaN	NaN
Means-tested benefits (ils_benmt)																					
housing benefit (apoio monetário estatal à habitação) (bho)	N	401	401	401	401	401	401	401	401	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
unemployment assistance benefit (bunnc_s)	Y	20	20	20	20	20	20	20	20	1.00	1.00	1.00	1.00	22	19	23	NaN	0.90	1.06	0.86	NaN
child benefit (bch_s)	Y	611	648	655	664	511	511	511	511	1.20	1.27	1.28	1.30	1,180	1,230	1,203	NaN	0.52	0.53	0.54	NaN
solidarity supplement for older persons (bsaoa_s)	Y	250	199	279	423	60	60	60	60	4.15	3.31	4.64	7.03	167	163	169	169	1.49	1.22	1.65	2.50
social insertion income (bsa00_s)	Y	98	89	94	104	59	59	59	59	1.65	1.50	1.58	1.76	262	262	241	241	0.37	0.34	0.39	0.43
other social assistance benefits (bsaot)	N	38	38	38	38	38	38	38	38	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Prenatal family allowance (PARBEN) (bmapr_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Parental social allowance (PARBEN) (bplnc_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Family income support 2022 (bfxap_s)	Y	0	7,210	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Rent support (Apoio extraordinário à renda) (bhotn_s)	Y	0	0	49	43	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Extraordinary Supplement for Vulnerable Families 2023 (bfxap01_s)	Y	0	0	969	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Non-means-tested benefits (ils_bennt)																					
scholarships (prestações sociais monetárias relacionadas com a educação) (bed)	N	119	119	119	119	119	119	119	119	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
sickness benefit (subsídio de doença) (bhl)	N	242	242	242	242	242	242	242	242	1.00	1.00	1.00	1.00	629	761	783	NaN	0.38	0.32	0.31	NaN
Parental allowance (PARBEN) (bplct_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	148	154	162	NaN	0.00	0.00	0.00	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
family benefits (other than child benefit) (bfa)	N	108	108	108	108	108	108	108	108	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
unemployment insurance benefit (bunc_s)	Y	225	225	225	225	239	239	239	239	0.94	0.94	0.94	0.94	360	288	296	NaN	0.63	0.78	0.76	NaN
[Covid-19] wage compensation paid by the state (bwmcee_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
[Covid-19] self-employment compensation paid by the state (bwmcse_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

Source		Comments
Pensions (ils_pen)		
contributory old-age pension (poact_s)	-	Social Security Accounts 2020 table 13 for the number & table 24 for the amount
disability pension (pensão de invalidez) (pdi)	https://www.seg-social.pt/estatisticas-detalle/-/asset_publisher/GzVlhCL9jqf9/content/pensoes-de-velhice	Social Security statistics ('Prestações de Velhice'; 'Invalidez'), sheet Q1 for the number & Social Security Accounts 2020 table 22 for the amount
survivor pension (pensão de sobrevivência) (psu)	https://www.seg-social.pt/estatisticas-detalle/-/asset_publisher/GzVlhCL9jqf9/content/pensoes-de-velhice	Social Security statistics ('Prestações de Velhice'; 'Sobrevivência'), sheet Q3 + CGA Report and Accounts 2020 table 19 'pensionistas' for the number & Social Security Accounts 2020
social pension (pensão social de velhice) (poanc_s)	-	Social Security Accounts 2020 table 13 for the number & table 24 for the amount
Means-tested benefits (ils_benmt)		
housing benefit (apoio monetário estatal à habitação) (bho)	-	-
unemployment assistance benefit (bunnc_s)	https://www.seg-social.pt/estatisticas-detalle/-/asset_publisher/GzVlhCL9jqf9/content/prestacoes-de-desemprego	Social Security statistics ('Prestações de desemprego'), sheet Q2 sum of the other 4 benefits for the number & Social Security Accounts 2020 table 26 for the amount
child benefit (bch_s)	https://www.seg-	Social Security statistics ('Prestações familiares'), sheet Q1 for the number & Social
solidarity supplement for older persons (bsaoa_s)	https://www.seg-social.pt/estatisticas-detalle/-/asset_publisher/GzVlhCL9jqf9/content/csi	Social Security statistics ('Complemento Solidário para Idosos'), sheet Q1 for the number & Social Security Accounts 2020 table 111 for the amount
social insertion income (bsa00_s)	https://www.seg-social.pt/estatisticas-detalle/-	Social Security statistics ('Rendimento Social de Inserção'), sheet Q1 for the number &
other social assistance benefits (bsaot)	-	-
Prenatal family allowance (PARBEN) (bmapr_s)	-	-
Parental social allowance (PARBEN) (bplnc_s)	-	-
Family income support 2022 (bfxp_s)	-	-
Rent support (Apoio extraordinário à renda) (bhotn_s)	-	-
Extraordinary Supplement for Vulnerable Families 2023 (bfxp01_s)	-	-

Continued...

	Source	Comments
Non-means-tested benefits (ils_bennt)		
scholarships (prestações sociais monetárias relacionadas com a educação) (bed)	-	-
sickness benefit (subsídio de doença) (bhl)	https://www.seg-social.pt/documents/10152/29804636/2+DESPESAS_SS+%281977-	Social Security
Parental allowance (PARBEN) (bplct_s)	https://www.seg-	Social Security - Social Security statistics ('Prestações por doença'), sheet Q3 for the
family benefits (other than child benefit) (bfa)	-	-
unemployment insurance benefit (bunct_s)	https://www.seg-social.pt/documents/10152/29804636/2+DESPESAS_SS+%281977-	Social Security - Social Security statistics ('Prestações por doença'), sheet Q3 for the number
[Covid-19] wage compensation paid by the state (bwkmcee_s)	-	-
[Covid-19] self-employment compensation paid by the state (bwkmcse_s)	-	-

Table A3.6. Benefits - Annual amounts (million)

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
contributory old-age pension (poact_s)	Y	27,230	28,635	29,038	30,985	27,230	27,230	27,230	27,230	1.00	1.05	1.07	1.14	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
disability pension (pensão de invalidez) (pdi)	N	1,193	1,270	1,283	1,359	1,193	1,193	1,193	1,193	1.00	1.06	1.07	1.14	2,891	2,996	NaN	NaN	0.41	0.42	NaN	NaN
survivor pension (pensão de sobrevivência) (psu)	N	2,917	3,109	3,135	3,321	2,917	2,917	2,917	2,917	1.00	1.07	1.07	1.14	3,944	4,197	NaN	NaN	0.74	0.74	NaN	NaN
social pension (pensão social de velhice) (poanc_s)	Y	143	135	154	168	70	70	70	70	2.03	1.92	2.19	2.39	113	NaN	NaN	NaN	1.26	NaN	NaN	NaN
Means-tested benefits (ils_benmt)																					
housing benefit (apoio monetário estatal à habitação) (bho)	N	34	35	38	40	34	34	34	34	1.00	1.01	1.09	1.16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
unemployment assistance benefit (bunnc_s)	Y	70	73	78	84	57	57	57	57	1.22	1.27	1.36	1.46	133	164	NaN	NaN	0.53	0.45	NaN	NaN
child benefit (bch_s)	Y	620	671	805	1,217	495	495	495	495	1.25	1.36	1.63	2.46	887	786	817	NaN	0.70	0.85	0.99	NaN
solidarity supplement for older persons (bsaoa_s)	Y	265	209	333	543	81	81	81	81	3.28	2.59	4.13	6.73	204	199	199	NaN	1.30	1.05	1.67	NaN
social insertion income (bsa00_s)	Y	254	243	274	335	204	204	204	204	1.25	1.19	1.34	1.64	356	339	339	NaN	0.71	0.72	0.81	NaN
other social assistance benefits (bsaot)	N	31	32	34	36	31	31	31	31	1.00	1.01	1.09	1.16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Prenatal family allowance (PARBEN) (bmapr_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Parental social allowance (PARBEN) (bplnc_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Family income support 2022 (bfaxp_s)	Y	NaN	732	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Rent support (Apoio extraordinário à renda) (bhotn_s)	Y	NaN	NaN	86	81	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Extraordinary Supplement for Vulnerable Families 2023 (bfaxp01_s)	Y	NaN	NaN	829	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Non-means-tested benefits (ils_bennt)																					
scholarships (prestações sociais monetárias relacionadas com a educação) (bed)	N	150	151	164	174	150	150	150	150	1.00	1.01	1.09	1.16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
sickness benefit (subsídio de doença) (bhl)	N	625	661	715	738	625	625	625	625	1.00	1.06	1.14	1.18	754	809	NaN	NaN	0.83	0.82	NaN	NaN
Parental allowance (PARBEN) (bplct_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1,296	NaN	NaN	NaN	0.00	NaN	NaN	NaN
family benefits (other than child benefit) (bfa)	N	256	270	292	302	256	256	256	256	1.00	1.06	1.14	1.18	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
unemployment insurance benefit (bunct_s)	Y	1,128	1,163	1,245	1,333	1,535	1,535	1,535	1,535	0.74	0.76	0.81	0.87	1,254	977	NaN	NaN	0.90	1.19	NaN	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
[Covid-19] wage compensation paid by the state (bwkmcee_s)	Y	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
[Covid-19] self-employment compensation paid by the state (bwkmcse_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Table A3.7. Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Decile 1	3.34	3.36	3.57	3.51	3.00	2.70	NaN	NaN	1.11	1.24	NaN	NaN
Decile 2	4.93	4.98	4.98	5.02	4.90	4.70	NaN	NaN	1.01	1.06	NaN	NaN
Decile 3	6.00	6.10	6.13	6.08	6.00	5.70	NaN	NaN	1.00	1.07	NaN	NaN
Decile 4	6.97	7.03	7.16	7.07	7.00	6.70	NaN	NaN	1.00	1.05	NaN	NaN
Decile 5	7.92	7.96	8.07	7.97	7.90	7.60	NaN	NaN	1.00	1.05	NaN	NaN
Decile 6	8.92	8.99	9.07	9.01	8.90	8.90	NaN	NaN	1.00	1.01	NaN	NaN
Decile 7	10.18	10.16	10.18	10.20	10.10	10.10	NaN	NaN	1.01	1.01	NaN	NaN
Decile 8	11.90	11.86	11.78	11.92	11.80	11.90	NaN	NaN	1.01	1.00	NaN	NaN
Decile 9	14.92	14.89	14.72	14.79	14.90	14.90	NaN	NaN	1.00	1.00	NaN	NaN
Decile 10	24.91	24.67	24.33	24.43	25.60	26.70	NaN	NaN	0.97	0.92	NaN	NaN
Median	11,474	12,216	13,200	13,902	11,014	11,824	NaN	NaN	1.04	1.03	NaN	NaN
Mean	13,964	14,744	15,702	16,709	13,148	14,368	NaN	NaN	1.06	1.03	NaN	NaN
Gini	31.11	30.73	30.02	30.32	32.00	33.70	NaN	NaN	0.97	0.91	NaN	NaN
S80/20	4.81	4.74	4.56	4.60	5.13	5.60	NaN	NaN	0.94	0.85	NaN	NaN

Table A3.8. At-risk-of-poverty rates (%) by sex and age

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
40% median HDI by sex												
Total	4.91	4.86	3.70	3.79	5.80	6.80	NaN	NaN	0.85	0.71	NaN	NaN
Males	4.85	4.80	3.79	3.92	5.70	6.70	NaN	NaN	0.85	0.72	NaN	NaN
Females	4.97	4.91	3.63	3.66	6.00	6.80	NaN	NaN	0.83	0.72	NaN	NaN
50% median HDI by sex												
Total	8.87	8.92	8.81	8.26	10.00	10.50	NaN	NaN	0.89	0.85	NaN	NaN
Males	8.47	8.50	8.22	8.16	10.00	10.00	NaN	NaN	0.85	0.85	NaN	NaN
Females	9.24	9.29	9.34	8.35	10.10	10.90	NaN	NaN	0.91	0.85	NaN	NaN
60% median HDI by sex												
Total	15.98	15.76	15.75	16.02	16.40	17.00	NaN	NaN	0.97	0.93	NaN	NaN
Males	15.21	15.03	14.82	15.13	15.90	16.20	NaN	NaN	0.96	0.93	NaN	NaN
Females	16.68	16.41	16.59	16.82	16.80	17.70	NaN	NaN	0.99	0.93	NaN	NaN
70% median HDI by sex												
Total	23.85	23.43	23.51	23.93	23.70	25.30	NaN	NaN	1.01	0.93	NaN	NaN
Males	23.11	22.72	22.80	23.13	23.20	24.20	NaN	NaN	1.00	0.94	NaN	NaN
Females	24.53	24.07	24.17	24.67	24.30	26.30	NaN	NaN	1.01	0.92	NaN	NaN
60% median HDI by age group												
0-15 years	16.85	16.65	14.77	16.19	18.60	20.00	NaN	NaN	0.91	0.83	NaN	NaN
16-24 years	19.12	18.92	16.91	18.25	20.10	22.80	NaN	NaN	0.95	0.83	NaN	NaN
25-49 years	13.02	12.81	11.92	12.71	14.40	14.30	NaN	NaN	0.90	0.90	NaN	NaN
50-64 years	15.57	15.40	15.14	15.48	15.70	16.80	NaN	NaN	0.99	0.92	NaN	NaN
65+ years	18.60	18.26	21.50	19.94	17.00	17.10	NaN	NaN	1.09	1.07	NaN	NaN

Table A3.9. Consumption taxes (non-calibrated) - Annual amounts (millions)

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics non-calibrated (ils_extstat_ittncal)													
Aggregate expenditures non-calibrated (ils_extstat_ittncal_il_itt_expnc)													
01 Food and non-alcoholic beverages (il_x01)	Y	16,077	17,042	18,349	19,466	25,243	28,916	28,916	28,916	0.64	0.59	0.63	0.67
02 Alcoholic beverages, tobacco, etc. (il_x02)	Y	1,905	2,021	2,186	2,312	4,479	4,963	4,963	4,963	0.43	0.41	0.44	0.47
03 Clothing and footwear (il_x03)	Y	3,465	3,672	3,950	4,184	7,723	8,687	8,687	8,687	0.45	0.42	0.45	0.48
04 Housing, water and fuel (exc. imputed rent) (il_x04)	Y	13,222	14,021	15,107	16,024	10,588	12,023	12,023	12,023	1.25	1.17	1.26	1.33
05 Furnishings, household equipment, etc. (il_x05)	Y	4,048	4,278	4,571	4,853	7,180	8,436	8,436	8,436	0.56	0.51	0.54	0.58
06 Health (il_x06)	Y	6,547	6,927	7,397	7,882	8,400	9,407	9,407	9,407	0.78	0.74	0.79	0.84
07 Transport (il_x07)	Y	14,425	15,290	16,459	17,411	16,683	20,182	20,182	20,182	0.86	0.76	0.82	0.86
08 Communications (il_x08)	Y	3,738	3,964	4,274	4,525	3,410	3,836	3,836	3,836	1.10	1.03	1.11	1.18
09 Recreation and culture (il_x09)	Y	3,790	4,013	4,314	4,567	7,138	8,370	8,370	8,370	0.53	0.48	0.52	0.55
10 Education (il_x10)	Y	1,979	2,098	2,268	2,395	2,146	2,497	2,497	2,497	0.92	0.84	0.91	0.96
11 Hotels and restaurants (il_x11)	Y	8,861	9,385	10,128	10,719	15,686	25,128	25,128	25,128	0.56	0.37	0.40	0.43
12 Miscellaneous good and services (il_x12)	Y	7,377	7,813	8,390	8,897	14,003	16,550	16,550	16,550	0.53	0.47	0.51	0.54
Revenue from indirect taxes (non calibrated) (ils_extstat_ittncal_il_itt_revnc)													
VAT Total Revenue (il_tva)	Y	10,040	10,638	11,171	12,142	19,186	22,711	22,711	22,711	0.52	0.47	0.49	0.53
Excises Total Revenue (il_tx)	Y	3,663	3,356	2,927	4,156	3,818	NaN	NaN	NaN	0.96	NaN	NaN	NaN
Total excises (non calibrated) (ils_extstat_ittncal_il_itt_excnc)													
Revenues Excises 0211 - Spirits (il_tx0211)	Y	15	15	15	17	110	NaN	NaN	NaN	0.13	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121)	Y	0	0	0	0	2	NaN	NaN	NaN	0.00	NaN	NaN	NaN

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Revenues Excises 02122 - Sparkling Wine (il_tx02122)	Y	0	0	0	0	2	NaN	NaN	NaN	0.00	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213)	Y	15	16	17	20	83	NaN	NaN	NaN	0.19	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022)	Y	640	672	759	964	1,418	NaN	NaN	NaN	0.45	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045)	Y	434	382	179	357	39	NaN	NaN	NaN	11.24	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451)	Y	18	19	21	20	30	NaN	NaN	NaN	0.62	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521)	Y	35	28	21	58	9	NaN	NaN	NaN	3.91	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072)	Y	2,994	2,653	2,136	3,155	2,208	NaN	NaN	NaN	1.36	NaN	NaN	NaN

Table A3.10. Consumption taxes (calibrated) - Annual amounts (millions)

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics calibrated (ils_extstat_ittcal)													
Revenue from indirect taxes (calibrated) (il_itt_revc)													
VAT Total Revenue (il_tva_na)	Y	14,596	17,728	18,432	19,383	19,186	22,711	22,711	22,711	0.76	0.78	0.81	0.85
Excises Total Revenue (il_tx_na)	Y	4,882	5,051	4,566	6,095	3,818	NaN	NaN	NaN	1.28	NaN	NaN	NaN
Total excises (calibrated) (il_itt_excc)													
Revenues Excises 0211 - Spirits (il_tx0211_na)	Y	34	37	37	40	110	NaN	NaN	NaN	0.31	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121_na)	Y	0	0	0	0	2	NaN	NaN	NaN	0.00	NaN	NaN	NaN
Revenues Excises 02122 - Sparkling Wine (il_tx02122_na)	Y	0	0	0	0	2	NaN	NaN	NaN	0.00	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213_na)	Y	36	38	40	45	83	NaN	NaN	NaN	0.44	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022_na)	Y	1,504	1,651	1,814	2,229	1,418	NaN	NaN	NaN	1.06	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045_na)	Y	347	328	150	289	39	NaN	NaN	NaN	9.00	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451_na)	Y	15	16	17	16	30	NaN	NaN	NaN	0.50	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521_na)	Y	28	24	18	47	9	NaN	NaN	NaN	3.13	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072_na)	Y	3,308	3,326	2,675	3,781	2,208	NaN	NaN	NaN	1.50	NaN	NaN	NaN

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