

EUROMOD

COUNTRY REPORT



IRELAND (IE)

2017-2020

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EUROMOD version I3.0



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

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

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

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

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The results presented in this report are derived using EUROMOD version I3.0. EUROMOD is continually being improved and the results presented here may not match those that would be obtained with later versions of EUROMOD. For more information, see:

<https://www.euromod.ac.uk>

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1 BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The Irish tax-benefit system is a unified, national system. A small number of instruments, however, such as rent or mortgage supports and Local Property Tax, can vary locally.
- The fiscal year runs from 1 January to 31 December.
- The state pension age is 66, but this is to rise to 67 in 2022 and 68 in 2028.
- The minimum school leaving age is 16. Dependent children, legally referred to as ‘qualified children’, are defined as living with their parents or guardians and under 18. For long-term social welfare payments or short-term payments received for at least 156 days, the age limit extends to 22 if the child is in full-time education.
- Most personal income is liable for Income Tax but specific sources of personal income may be taxed separately, such as deposit interests. Income Tax on employee income is withheld by employers, in which case tax returns are not required; this is known as the pay-as-you-earn or PAYE system.
- Income Tax is individualised but married couples and civil partners may choose to be taxed jointly.
- There is no formal indexation regime.
- The means-tested benefit system assesses entitlement according to benefit unit income. The benefit unit is the nuclear family: a single adult or couple (cohabiting, married or in a civil partnership) and any dependent children. The assessment must reflect the income that may reasonably be expected in the coming year. Where this is not ascertainable, the income of the last 12 months should be taken as a guide.
- Unless otherwise stated, social insurance contributions and benefit parameters (rates and thresholds) are referred to in weekly terms. Tax instruments are based on annual income and referred to in annual terms.

1.2 Social welfare payments

There are three main types of social welfare supports: *universal* payments; non-contributory but means-tested *social assistance* payments; and *social insurance* payments, where eligibility and rates depend on the type and number of social insurance contributions paid. Social assistance and social insurance supports usually consist of a personal rate and increases for a qualified adult (spouse, civil partner or cohabiting partner) and qualified children. Recipients must be at least 18 years old (with exceptions) and most payments are replaced by a State pension at 66. While all income is in principle taxable, some payments (mostly universal and social assistance payments) are *de facto* not taxed.¹

¹ These payments are listed in section 2.6.5.

1.2.1 Universal payments

Child Benefit. Monthly payment to the parents or guardians of children under 16, or under 18 if they are in full-time education or training or have a disability and cannot support themselves. The same rate is paid for each child, with an increase for multiple births.

1.2.2 Social assistance payments

Back to Education Allowance. Can be claimed by recipients of certain social welfare payments who are unemployed, parenting alone or have a disability and are pursuing an approved course at second or third level. Recipients must be at least 21, or 24 for third-level postgraduate courses.

Back to Work Enterprise Allowance. Prolongs the period of receipt of a number of social welfare payments (up to two years), free of tax and social insurance contributions, for people with no or little income who start a business. Recipients can apply for the Enterprise Support Grant to help with the costs of setting up their businesses.

Blind Pension. For visually impaired people. Recipients get a Free Travel Pass and a Companion Free Travel Pass, and may qualify for the Blind Welfare Allowance, which is paid by the Health Service Executive (HSE).

Carer's Allowance. Available to people on low income looking after a person who needs support because of age, disability or physical or mental illness. May be received together with a number of other social welfare payments (such as a State Pension) on a half-rate basis. People who provide care to more than one person may get an increase of 50%. Recipients also get the Carer's Support Grant and may qualify for the Household Benefits Package and a Free Travel Pass.

Daily Expenses Allowance. Support for asylum seekers' day-to-day expenditures.

Deserted Wife's Allowance. Could be claimed by women under 66 without dependent children if they were deserted by their husbands and did not qualify for Deserted Wife's Benefit. Closed for new applications since January 1997.

Disability Allowance. For people aged 16 to 65 with a disability. May be received together with certain other social welfare payments.

Farm Assist. For low-income farmers. Similar to Jobseeker's Allowance but has a more generous means test.

Fuel Allowance. Paid to households of recipients of long-term social welfare payments to help with heating costs in winter. Recipients who qualify for the Living Alone Increase automatically get the Telephone Support Allowance.

Guardian's Payment (Non-Contributory). Available to people taking care of an orphan. Being a legally appointed guardian is not necessary. Orphans aged between 18 and 22 who are attending full-time education and are not living with or in the care of a guardian can receive the payment directly. The means test is based on the orphan's resources.

Jobseeker's Allowance. Can be claimed by people who are unemployed for at least four days per week, available for full-time work and seeking work, and do not qualify for Jobseeker's Benefit or have exhausted their entitlement to that benefit. Reduced rates for people aged 18 to 25, except in the presence of dependent children.

Jobseeker's Transitional Payment. For lone parents with a child aged between 7 and 13, as they no longer qualify for One-Parent Family Payment. Paid as Jobseeker's Allowance.

One-Parent Family Payment. Available to lone parents with a child aged under 7 (extensions of the age limit exist for recipients of certain social welfare payments).

Part-Time Job Incentive Scheme. Allows some recipients of Jobseeker's Allowance to work on a part-time basis (up to 24 hours per week) and get a flat rate independently of their income, in contrast to Jobseeker's Allowance, which is means-tested. Recipients must still be available for and seeking full-time work.

Pre-Retirement Allowance. Could be claimed by early retirees from the age of 55. Closed for new applications since July 2007.

Supplementary Welfare Allowance Scheme. For people who cannot meet their needs and those of their families; also works as a safety net for claimants of a social welfare payment or pension that has not yet been paid. Consists of a primary payment and secondary payments or schemes, described below.

- *Back to School Clothing and Footwear Allowance.* Aimed to provide for children's school uniforms and footwear at the beginning of the school year.
- *Dietary and Heating Supplements.* Paid to people who have insufficient means to provide for their special dietary or heating needs. Dietary Supplement is closed for new applications since February 2014.
- *Exceptional Needs Payment.* Single payment to help with unmet essential expenditure (e.g. fuel bills, funeral costs).
- *Humanitarian Assistance Scheme.* Emergency financial assistance scheme activated in case of large-scale flooding.
- *Mortgage Interest Supplement.* For people experiencing difficulties with mortgage interest payments. Closed for new applications in January 2014 and terminated in December 2017 except for recipients who were still eligible at that time.
- *Rent Supplement.* Intended to help, under certain conditions, people renting in the private market who cannot provide for the cost of their accommodation from their own means. To be replaced by Housing Assistance Payment.
- *School Meals Scheme.* Provides funding towards food services for disadvantaged children in schools.
- *Urgent Needs Payment.* Assistance for immediate needs such as food and clothing after a fire or flood. Recipients may have to pay back all or part of what they have been paid.

State Pension (Non-Contributory). Paid to people over retirement age who do not qualify for the contributory payment.

Widowed or Surviving Civil Partner Grant. Single payment for widows, widowers and surviving civil partners with dependent children at, or whose children are born within 10 months of, the time of death. There is no means test but claimants must qualify for Death Benefit, One-Parent Family Payment, State Pension (Non-Contributory) or else Widow's, Widower's or Surviving Civil Partner's (Contributory) Pension.

Widow's, Widower's or Surviving Civil Partner's (Non-Contributory) Pension. Can be claimed by widows, widowers and surviving civil partners without dependent children if they do not qualify for the contributory payment. Those with dependent children may apply for One-Parent Family Payment or State Pension (Non-Contributory).

Working Family Payment. In-work payment for low-pay employees with dependent children (formerly known as Family Income Supplement).

1.2.3 Social insurance payments

Adoptive Benefit. Maternity and Paternity Benefits' counterpart for adopting women and single men. Paid for 24 weeks and available to both employees and self-employed individuals.

Carer's Benefit. Available to people who leave the workforce to care for one or more persons in need of full-time care for a duration of 104 weeks per person under care. Recipients also receive the Carer's Support Grant.

Deserted Wife's Benefit. Deserted Wife's Allowance's contributory counterpart, calculated from the number of social insurance contributions paid by the recipient or her deserting husband.

Guardian's Payment (Contributory). See Guardian's Payment (Non-Contributory). Based on the number of social insurance contributions paid by the orphan's parents or step-parent.

Health and Safety Benefit. Available to employed women who are pregnant or breastfeeding and granted Health and Safety Leave by their employers.

Illness Benefit. Can be claimed for up to one or two years (depending on work history) by people who are unfit for work due to illness.

Insolvency Payments Scheme. Provides for statutory pay-related entitlements of employees whose employer has become insolvent, up to limits set out in the scheme.

Invalidity Pension. Available to former employees and self-employed individuals who are unable to work because of a long-term illness or disability. At age 66, recipients transfer to State Pension (Contributory) *at the full rate*.

Jobseeker's Benefit. Jobseeker's Allowance's contributory counterpart, paid for up to six or nine months, depending on work history. Recipients who want to start their own businesses can apply for the Short-Term Enterprise Allowance instead, and the Enterprise Support Grant.

Maternity and Paternity Benefits. Paid to employed or self-employed women and men who are on maternity or paternity leave, for a period of 26 weeks for women and two weeks for men.

Occupational Injuries Scheme. Consists of benefits for insured people who have been injured or incapacitated at work or while travelling to or from work. Also covers people who have contracted a disease as a result of the type of work they do.

- *Death Benefit.* For the surviving spouse, civil partner or dependent child of an insured person who has died following an occupational injury or disease, or if the deceased was getting Disablement Pension assessed at 50% or more regardless of the cause of death. A tax-free Funeral Grant may be paid to help with the funeral costs.
- *Disablement Benefit.* Available to people who have suffered a loss of physical or mental faculty as a result of an occupational injury or disease. Paid as a lump sum ('gratuity') for low levels of disablement. Recipients who are unfit for work (which they need not be) may get Incapacity Supplement or Constant Attendance Allowance.
- *Injury Benefit.* Can be claimed for up to 26 weeks by people who are unfit for work due to an occupational accident or disease.

- *Medical Care Scheme*. Refunds medical expenses in relation to an occupational injury or disease that are not covered by the HSE or the Treatment Benefit Scheme.

Partial Capacity Benefit. Extends Illness Benefit and Invalidity Pension recipients' entitlements if they wish to return to work but are partially incapacitated by their condition. Entitlements may be reduced depending on the level of incapacitation.

State Pension (Contributory). See State Pension (Non-Contributory).

Treatment Benefit Scheme. Provides for dental, optical and aural health services for employees, self-employed individuals and retired people with enough social insurance contributions.

Widow's, Widower's or Surviving Civil Partner's (Contributory) Pension. See Widow's, Widower's or Surviving Civil Partner's (Non-Contributory) Pension. Calculated from the number of social insurance contributions paid by the recipient or her or his deceased partner.

1.2.4 Other payments

Back to Work Family Dividend. Allows people with dependent children who are in or move into work, and as a result stop claiming Jobseeker's Benefit, Jobseeker's Allowance, Jobseeker's Transitional Payment or One-Parent Family Payment, to keep receiving any increase for a qualified child for a year, and half of it for another year, free of tax. Can be paid together with Working Family Payment and a number of secondary payments.

Domiciliary Care Allowance. Monthly non-means-tested payment in respect of children under 16 with a severe disability.

Household Benefits Package. Free Television Licence and an energy allowance (electricity or gas, paid in cash or as credit to the energy provider). Available to everyone aged 70 or over and people under 70 in certain circumstances.

Living Alone Increase. Paid to recipients of some social welfare payments who are 66 or over and live alone. Recipients automatically get Telephone Support Allowance if they also qualify for Fuel Allowance.

Rural Social Scheme. Tops up certain social welfare payments (mainly non-contributory) for low-income farmers, fishermen and fisherwomen, in return for community work.

1.2.5 Miscellaneous

Community Employment Programme and Tús. Community work placements for the long-term unemployed. Participants get a top-up of their current social welfare payments.

Early Childhood Care and Education Scheme (ECCE). Free childcare and early education for children of pre-school age.

Housing Assistance Payment. Housing subsidy for people who qualify for social housing support, paid directly to landlords. A rent contribution is required but depend on ability to pay. Rolled out on a phased basis and available throughout the State since 1 March 2017.

JobsPlus. Financial incentive for employers to hire long-term jobseekers.

Medical Cards. Offer free access to a range of health services to people on low incomes. Those who do not pass the means test may get a GP Visit Card for free GP visits (children under 6 and adults aged 70 or over automatically get one). Administered by the HSE.

National Childcare Scheme. Single subsidy framework which will replace all existing targeted childcare support programmes and the current universal childcare subsidy by 2021. It gives financial support towards the cost of childcare for the hours spent outside of pre-school or school. It replaced all childcare schemes other than ECCE² in October 2019. The National Childcare Scheme provides 2 types of childcare subsidy for children over 6 months of age - a universal subsidy for children under 3 which is not means tested and an income assessed subsidy for children up to 15 which is means-tested.

National Minimum Wage. Introduced in 2000 and currently set at €10.10 per hour, with reduced rates (70%, 80% and 90%) for younger workers (under 18, 18, and 19, respectively).

1.3 Social insurance contributions

The social welfare system is primarily funded by the Social Insurance Fund, which is financed by Pay-Related Social Insurance (PRSI) contributions made by employers and employed persons. Different contributions apply to different types of employment and determine what supports an insured person is entitled to. The two main categories are Class A (most employees) and Class S (self-employed individuals). Under certain conditions, people no longer paying compulsory PRSI can make voluntary contributions for the following benefits: State Pension; Widow's, Widower's or Surviving Civil Partner's Pension; and Guardian's Payment.

Most employees earning below €352 are exempt from paying PRSI but remain insured. Past that threshold, all labour income is liable for PRSI. A tapered credit was introduced in 2016 for Class A employees earning between €352.01 and €424.

1.4 Taxes and other deductions

Additional Superannuation Contribution (ACS). Deduction from the pensionable pay of public servants who are members of a public service pension scheme (most of them). Replaced the PRD (see below) on 1 January 2019.

Capital Acquisition Tax (CAT). Gifts and inheritances are subject to CAT at a rate of 33%. Some gifts and inheritances are partly or fully exempt depending on their values and the relationship between the donor and the recipient (for example, gifts and inheritances between spouses are exempt).

Capital Gains Tax (CGT). Charged on gains arising from the disposal of assets at a standard rate of 33%. Any kind of property (other than Irish currency), including an interest in property (e.g., a lease) is an asset for CGT purposes.

Corporation Tax (CT). Charged on the worldwide profits of resident companies and Irish branches of non-resident companies, except charities. The rates are 12.5% for trading income, 25% for non-trading income (e.g., rents, royalties) and 33% for capital gains. Shipping companies can elect to pay Tonnage Tax instead, which is based on ship tonnage rather than profits.

Deposit Interest Retention Tax (DIRT). Deducted by financial institutions from deposit interest paid to Irish residents. Does not apply to non-residents, companies subject to CT, charities or approved pension schemes.

² The After-School Childcare Scheme, Childcare Education and Training Support Scheme, Community Childcare Subvention Programme and Community Employment Childcare Programme.

Dividend Withholding Tax (DWT). With some exceptions, dividends and other distributions made by a resident company, and where provided for by a double taxation treaty, foreign dividends paid through an Irish intermediary are charged at the standard rate of Income Tax (20%).

Environmental Levy. Levy of 22 cent per plastic bag charged by retailers at the point of sale.

Excises and licences. Excises are regulated by a common set of rules agreed on by EU countries. Excises apply to tobacco, alcohol, energy, bets and sugar drinks. A carbon tax was introduced in 2010 for gas, liquid fuel and solid fuel. Licences are charged on premises for certain activities rather than sales.

Income Tax (IT). Charged on employee and self-employed income, unearned income (e.g., rents) and certain social welfare payments. Sales of personal artistic work are not liable for IT, while low-income elderly people are exempt altogether. Deposit interests are taxed separately but count for assessment purposes. Social insurance contributions are not deductible. IT is individualised but married couples and civil partners may choose to be taxed jointly. It has a standard rate of 20% and a higher rate of 40%, delimited by thresholds that are specific to tax units' type (single persons, married couples, etc.). It is collected at source for most employees but otherwise self-assessed.

Local Property Tax (LPT). Charged to residential property owners or long-term tenants based on the property's estimated market value on 1 May 2013. The rates are 0.18% for the first €1 million and 0.25% thereafter, but local authorities can increase or decrease LPT by up to 15%.

Pension-Related Deduction (PRD). Temporary deduction from pensionable public servants' pay introduced in 2009. Replaced by the ACS in 2019.

Professional Services Withholding Tax (PSWT). Applies to payments (excluding VAT) made by state and semi-state bodies, as well as health insurers, for certain professional services, at 20%.

Relevant Contracts Tax (RCT). A withholding tax in respect of certain payments by principal contractors to sub-contractors in the construction, forestry and meat processing industries.

Stamp Duty. Charge on certain documents executed in Ireland or related to Irish property, such as property transfers and leases. Also covers financial assets transferred electronically, financial cards (debit and credit cards), insurance policies and pension accounts.

Universal Social Charge (USC). All personal income is subject to USC on top of IT. Two notable exemptions are payments from the Department of Employment Affairs and Social Protection, and if total income for the year is less than €13,000. USC has five rates, only the first two of which apply to people with aggregate income (excluding social welfare payments) of €60,000 or less if they are 70 or over or hold a medical card.

Value-Added Tax (VAT). *Ad-valorem* levy on the consumption of goods and services, collected by suppliers, or Customs in the case of non-EU imports. VAT has four rates, plus an exempt category. Suppliers of non-exempt goods or services can reclaim the amount of VAT incurred on inputs used for the supply of these goods or services.

Vehicle Registration Tax (VRT). Must be paid at the time of registration of a motor vehicle.

1.5 COVID-19 pandemic: new policies and policy changes

Pandemic Unemployment Payment (PUP). The COVID-19 Pandemic Unemployment Payment was made available to all employees and the self-employed who lost their jobs on or after 13 March 2020. It is paid at a flat rate of €203 or €350 per week depending on previous earnings.

Temporary Wage Subsidy Scheme (TWSS). Will subsidise up to 85% of the net wages of employees whose employers are severely affected by the pandemic, up to a maximum of €410 per week. The employer can make an additional payment to employees (up to a maximum) that is subject to a reduced rate of employer PRSI. For employees in the childcare sector, the Department of Children and Youth Affairs announced that it would subsidise the remaining 30% of the wage bill up to a maximum of €350 per week.

Extension to Fuel Allowance. The 2019-2020 Fuel Allowance season started on 30 September 2019. The season was extended by 4 weeks due to the COVID-19 pandemic. This means that the fuel season will now end on Friday, 8 May 2020.

Illness Benefit. During the period of pandemic, the waiting period for this benefit was abolished for those who contract the virus and/or are required to self-isolate and the rate of this benefit increased to match the top rate of the pandemic unemployment payment at €350 per week.

2 SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

This chapter explains how the Irish tax-benefit system is simulated in EUROMOD and describes the simulated instruments in more detail. Not all taxes and benefits are simulated; some are taken from the data because of insufficient information to model them accurately. Others, like indirect taxes or corporation tax, are not in the data and therefore excluded.

Table 1 and Table 2 classify the instruments listed earlier into one of four categories: simulated (S); partially simulated (PS); included from the data on its own (I); and included from the data in an aggregate variable (IA). Excluded instruments are not listed.

Note that certain non-simulated instruments may be included in an aggregate variable that is used for a simulated one. For instance, `bunnc` contains Jobseeker’s Allowance (simulated and stored in `bunnc_s`) and, e.g., Back to Education Allowance, which is not simulated. To avoid counting the simulated instrument twice, the data variable (here, `bunnc`) is not retained in the final income lists. Users are advised to familiarise themselves with these income lists (see `ilsdef_ie`).³

Table 1. Simulation of benefits in EUROMOD

Instrument	Treatment in EUROMOD	Variable(s)	Comments
Adoptive Benefit	IA	Bfaot	
Back to Education Allowance	IA	Bunnc	
Back to Work Enterprise Allowance	IA	Bunnc	
Back to Work Family Dividend	IA	Bunnc	
Blind Pension	IA	Bdinc	
Carer’s Allowance	IA	Bfaot	Eligibility taken from the data

³ Naturally, users may wish to switch off the simulation of a particular benefit and substitute the simulated variable for the data variable in the income lists of interest.

Carer's Benefit	IA	Bfaot	
Child Benefit	S	bch_s	
Deserted Wife's Allowance	IA	Bfaot	
Deserted Wife's Benefit	IA	Bfaot	
Disability Allowance	PS	Bdinc	Eligibility taken from the data
Farm Assist	IA	Bunnc	
Fuel Allowance	S	Bfua_s	Eligibility taken from the data
Guardian's Payment (Contributory)	IA	Bfaot	
Guardian's Payment (Non- Contributory)	IA	Bfaot	
Health and Safety Benefit	IA	Bfaot	
Household Benefits Package	I	Bhout	
Illness Benefit	PS	bdict_s	Eligibility taken from the data
Insolvency Payments Scheme	IA	Bunct & poact	Poact for people aged 65 or over
Invalidity Pension	PS	pdi_s	Eligibility taken from the data
Jobseeker's Allowance	PS	bunnc_s	Eligibility taken from the data
Jobseeker's Benefit	PS	bunct_s	Eligibility taken from the data
Jobseeker's Transitional Payment	S	bfalpt_s	
Living Alone Increase	S		Applies to a number of benefits
Maternity Benefit	S	bma_s	
Paternity Benefit	IA	Bfaot	
Death Benefit	IA	Bhl	
Injury Benefit	PS	bhl_s	Eligibility taken from the data
One-Parent Family Payment	S		
Pandemic Unemployment Payment	S	bunctec	
Part-Time Job Incentive Scheme	IA	Bunct	Although it should be a component of PY093G, this benefit is a component of PY092G and hence in bunct
Pre-Retirement Allowance	IA	Bunnc	
Rent supplement	S	Bhors_s	
State Pension (Contributory)	PS		Eligibility taken from the data
State Pension (Non- Contributory)	PS		

Temporary Wage Subsidy Scheme	S	Bwkmcee_s	
Basic Supplementary Welfare Allowance	PS		Eligibility taken from the data
Dietary Supplement	IA	Bfaot	
Exceptional Needs Payment	IA	Bfaot & bhoht	Housing-related payments in bhoht, others in bfaot
Treatment Benefit Scheme	IA	Bsaot	Dental benefit only
Widow's, Widower's or Surviving Civil Partner's (Contributory) Pension	PS	psudwct_s	Eligibility taken from the data
Widow's, Widower's or Surviving Civil Partner's (Non-Contributory) Pension	S	psudwnc_s	
Working Family Payment	S	bwkmt_s	

Table 2. Simulation of taxes and other deductions in EUROMOD

Instrument	Treatment in EUROMOD	Variable(s)	Comments
ASC (formerly PRD)	PS	tscepb_s	Imperfect public sector proxy and simplifying assumptions on income liable for deduction
DIRT	IA	tis	
IT	PS	tin_s	Some tax credits or reliefs not modelled because minor or due to data limitations
LPT	PS	tprhm00_s	Local adjustments not modelled
PRSI	PS	tscee_s, tscer_s, tscse_s	Classes A, J and S only (all employees assumed Class A or J).
USC	PS	txcin_s	Medical Card not modelled for reduced rates

2.2 Structural policy changes

2.2.1 Budget 2017

- IT rebate for first-time buyers of new homes to help fund the minimum deposit required under the Central Bank macro-prudential rules. Paid as a refund of IT paid in the previous four years up to the lowest of 5% of the price and €20,000. No relief paid for homes over €600,000. To run until the end of 2019. Not modelled.
- Amendments to the Living City Initiative to increase take-up. Not modelled.

- Fishers Tax Credit of €1,270 per year for fishers who have fished for wild fish or shellfish for at least 80 days in the tax year. Not modelled.
- Amendments to the Income Averaging Regime for farmers, introducing an ‘opt out’ in a single year of unexpectedly low income. Not modelled.
- New Cost of Education Allowance of €500 per year for Back to Education Allowance recipients with children, paid in September. Not currently modelled.
- Reduction of the personal rent contribution for recipients of Rent Supplement who are also in receipt of an age-related reduced rate of Jobseeker’s Allowance, Back to Education Allowance, or a Further Education and Training (FET) or Youthreach allowance. Rent Supplement not modelled.
- Carer’s Allowance to be paid for a further 12 weeks after the person under care moves permanently into residential care. Cannot be modelled until reflected in the data.
- Treatment Benefit Scheme and Invalidity Pension extended to self-employed people, with effect from March and December 2017, respectively. Cannot be modelled until reflected in the data.
- Additional Farm Assist disregard of €254 for each of the first two children and €381 for each of the subsequent children, and reduction of the means-test base from 100% of farm and other self-employment income to 70% (technically a parameter change).
- Treatment Benefit Scheme expanded but outside the scope of the model.
- Affordable Childcare Scheme to start in September 2017, but not fully operational by that time.
- Medical Cards to be provided to all children in receipt of Domiciliary Care Allowance. Medical Cards not modelled yet and too few recipients of Domiciliary Care Allowance in the data.

2.2.2 Budget 2018

- Mortgage Interest Relief extended and tapered for remaining recipients: 75% in 2018, 50% in 2019 and 25% in 2020.
- New excise on sugar-sweetened drinks, with effect from April 2018. Indirect taxes not modelled.
- Temporary 0% benefit-in-kind rate for electric vehicles for 2018 alone but later extended for three years in Budget 2019, with a price cap of €50,000. Not modelled.
- New Telephone Support Allowance of €2.50 per week for recipients of the Living Alone Increase who are also eligible for Fuel Allowance. Not currently modelled.
- New Youth Employment Support Scheme for young long-term unemployed adults from October 2018. Cannot be modelled until reflected in the data.
- Suppression of the Rent Tax Relief (announced in Budget 2011).
- New scheme to refund Stamp Duty for housing developers. Stamp Duty not modelled.
- Minimum period for full CGT relief reduced from seven to four years. CGT not modelled.

- New temporary tax deduction for pre-letting expenses on properties that have been vacant for at least 12 months, of up to €5,000 per property and for expenses incurred up to the end of 2021. Not modelled.
- New Key Employee Engagement Programme to allow small and medium enterprises to offer shared-based remuneration to certain employees, who will be liable to CGT on the disposal of their shares instead of IT, USC and PRSI. In effect from January 2018 until the end of 2023, with later amendments in Budget 2019. CGT not modelled.
- End of January and April entry points for ECCE (single entry point in September). ECCE not currently modelled.

2.2.3 Budget 2019

- Higher qualified child increase for children aged 12 or over.
- New Parental Benefit for insured employees and self-employed people, at the same rate as Maternity and Paternity Benefits and paid for two weeks. Effective November 2019.
- Jobseeker's Benefit extended to self-employed people. Effective November 2019.
- New Working Family Payment disregard of €95.23 per week for housing costs, with the remainder being assessed at 50%.
- Domiciliary Care Allowance extended for a further three months when the child under care has died. Effective January 2019. Cannot be modelled until reflected in the data.
- New VRT surcharge of 1% for diesel vehicles. VRT not modelled.

2.2.4 Budget 2020

- Jobseeker's Allowance for people aged 25 will increase to the maximum rate, from €157.80 to €203. For people aged under 25, it will increase to the maximum rate, from €112.70 to €203, if they are living independently and getting a state housing support such as Rent Supplement, RAS or HAP (not modelled).
- Qualifying criteria for the Household Benefits Package will be broadened for people aged under 70 to allow another adult to live in the home
- The Blind Welfare Allowance paid by the Health Service Executive (HSE) will not be taken into account in the means test for a social welfare payment.

The number of hours that a carer can work or study every week outside the home and still get Carer's Benefit or Carer's Allowance will increase from 15 hours to 18.5 hours.

2.3 Order of simulation

The order in which Irish policies are simulated in EUROMOD is shown in Table 3.

Table 3. EUROMOD spine: order of simulation

Policy	IE_2017	IE_2018	IE_2019	IE_2020	Comment
setdefault_ie	on	on	on	on	DEF: Set default

uprate_ie	on	on	on	on	DEF: Uprating factors
ConstDef_ie	on	on	on	on	DEF: Constants
InitVars_ie	on	on	on	on	DEF: Initialise variables
Random_c_ie				on	DEF: Random variables
TransLMA_ie				off	DEF: Select individuals that transit to unemployment and MC schemes (lma transitions)
ilsdef_ie	on	on	on	on	DEF: Standard income concepts
ilsUDBdef_ie	on	on	on	on	DEF: Standard income concepts (UDB)
ildef_ie	on	on	on	on	DEF: Non-standard income concepts
tundef_ie	on	on	on	on	DEF: Assessment units
famtype_ie	off	off	off	on	DEF: Assessment unit types
BTA_ie	switch	switch	switch	switch	SWITCH: Benefit take-up adjustment
yem_ie	off	off	off	off	DEF: National Minimum Wage
neg_ie	on	on	on	on	DEF: Recode negative incomes (e.g. self-employment income) to zero
AMtesting_ie	on	on	on	on	DEF: Common means-test definitions
yemcomp_ie	off	off	off	on	BEN: Amount received in wage compensation scheme
tsceepb_ie	on	on	on	on	SIC: Pension-Related Deduction (2009-2018); Additional Superannuation Contribution (since 2019)
tscee_ie	on	on	on	on	SIC: Employee PRSI and pension contributions
tscer_ie	on	on	on	on	SIC: Employer PRSI
tsce_ie	on	on	on	on	SIC: Self-employed PRSI
tschl_ie	n/a	n/a	n/a	n/a	SIC: Health Levy (until 2010)
txc_ie	n/a	n/a	n/a	n/a	TAX: Income Levy (2009-2010)
txcin_ie	on	on	on	on	TAX: Universal Social Charge (since 2011)

tprhm00_ie	on	on	on	on	TAX: Household Charge (2012); Local Property Tax (since 2013)
tinwhOn_ie	on	on	on	on	TAX: PAYE on
tin_ie	on	on	on	on	TAX: Income Tax
tinwhOff_ie	on	on	on	on	TAX: PAYE off
psuwdct_ie	on	on	on	on	BEN: Widow's, Widower's or Surviving Civil Partner's Pension (Contributory)
bma_ie	on	on	on	on	BEN: Maternity Benefit
pdi_ie	on	on	on	on	BEN: Invalidity Pension
poact_ie	on	on	on	on	BEN: State Pension (Contributory) & State Pension (Transition)
bhl_ie	on	on	on	on	BEN: Injury Benefit
bdict_ie	on	on	on	on	BEN: Illness Benefit (formerly Disability Benefit)
bunct_ie	on	on	on	on	BEN: Jobseeker's Benefit
poanc_ie	on	on	on	on	BEN: State Pension (Non-Contributory)
bfalp_ie	on	on	on	on	BEN: One-Parent Family Payment
bfalpt_ie	off	off	off	On	BEN: Jobseeker's Transitional Payment
psuwdnc_ie	on	on	on	on	BEN: Widow's, Widower's or Surviving Civil Partner's Pension (Non-Contributory)
bdinc_ie	on	on	on	on	BEN: Disability Allowance
bunnc_ie	on	on	on	on	BEN: Jobseeker's Allowance
optim_ie	on	on	on	on	BEN: Select optimal benefit bundle & adjust benefit durations
bunctec_ie	n/a	n/a	n/a	on	BEN: Unemployment Payment (COVID)
tin_ie	on	on	on	on	TAX: Income Tax (second iteration)
bch_ie	on	on	on	on	BEN: Child Benefit
bcc_ie	n/a	n/a	n/a	n/a	BEN: Early Childcare Supplement (until 2010)
bfua_ie	n/a	n/a	n/a	on	BEN: Fuel Allowance
bhors_s	n/a	n/a	n/a	on	BEN: Rent Supplement

bwkmt_ie	on	on	on	on	BEN: Working Family Payment (formerly Family Income Supplement)
bsa00_ie	on	on	on	on	BEN: Basic Supplementary Welfare Allowance
output_std_ie	on	on	on	on	DEF: Standard output individual level
output_std_hh_ie	off	off	off	off	DEF: Standard output household level

Three technical aspects are worth pointing out:

- BTA_ie allows for benefit take-up adjustments in the run phase. Currently, adjustments are made to bwkmt_ie (Working Family Payment, formerly Family Income Supplement) so as to restrict take-up to a random third of those eligible.
- The optimal bundle of benefits is determined in optim_ie, reflecting actual practice.
- IT (tin_ie) is calculated on market income first and on the full base in a second iteration, once (most) benefits have been calculated. Although IT is usually *not* deducted in means tests, this iterative process is more flexible, allowing users to explore alternative means-test rules.

The order of simulation is also determined by further dependencies between the instruments being modelled:

- If switched on, the National Minimum Wage (yem_ie) can alter market income, and in turn most of the modelled instruments. While compulsory, there is a small proportion of workers reporting earnings below the minimum hourly wage.
- All market income is liable for PRSI since 2014.
- PRSI, union dues (not available in the data) and pension contributions are deducted in the assessment of means for means-tested benefits.
- Contributory benefits are calculated first, followed by means-tested benefits. This allows to simplify the optimisation routine optim_ie by calculating increases for qualified adults for means-tested benefits only if the partner is not in receipt of a contributory benefit.

2.4 Benefits

This section describes the benefits simulated in EUROMOD in detail (eligibility, components and amounts, payment duration and modelling limitations) and the optimal benefit bundle selection process. For a brief description of each scheme, see Section 1.2. All amounts from 2017 to 2020 are summarized in Table 8. For information on non-simulated benefits, visit www.welfare.ie and www.citizensinformation.ie.

2.4.1 Determining the optimal benefit bundle (optim_ie)

The very detailed approach implemented for Ireland in earlier versions of EUROMOD and in the national model SWITCH is not supported by the data available from the UDB. What is proposed here is an approach that captures key elements of the system.

2.4.1.1 Single person

- 1) If in receipt of a contributory benefit, then
 - a) model amount of benefit received (partial simulation=PS), which may depend on age, number of dependent children
 - b) mark this case as ineligible for other “personal benefits” on contributory or non-contributory system – may still be eligible for some supplements such as Family Income Supplement or Rent and Mortgage Supplement
- 2) Otherwise, establish whether a means-tested benefit (MTB) is payable. The approach here is to establish which type of MTB the individual is eligible for, and then assess means using the relevant means-test. If the amount payable (=maximum rate for the MTB *less* the means assessed) is positive, then the individual is simulated as receiving the benefit, and marked as ineligible for other benefits.
 - a) Age \geq 66, then assess for State Non Contributory Pension (Since 29th September 2006 payment of One-Parent Family Payment will no longer be made to persons aged 66 years and over. One-Parent Family Payment Customers will instead be entitled to apply for the State Pension (Non-Contributory)).
 - b) Age \geq 18 and Age \leq 65
 - i. Has \geq 1 dependent child
 1. Eligible for One-Parent Family Payment
 2. Assess means, payment $>$ 0?
 - ii. Has no dependent children & marital status=widowedAssess for widows non-contributory pension.
 - c) Otherwise, if in receipt of one of the means-tested illness payments (using receipt for eligibility as info on medical condition is insufficient)
 - i. Make eligible for that payment
 - ii. Assess means, size of payment
 - d) If ‘available for work’ and/or in receipt of Jobseeker’s Allowance
 - i. Make eligible for UA
 - ii. Assess means, size of payment
 - e) Supplementary Welfare Allowance is the residual scheme – most of those on this scheme are actually entitled to something else, so few will be modelled on the scheme.
- 3) Supplementary payments

- a) Family Income Supplement
 - i. Depends on net earnings and number of children, hours ≥ 19 ?
- b) Rent and Mortgage Supplement
 - i. Varies by location – location variable in UDB may be absent or very restrictive.
 - ii. Rules on maximum rent allowable
 - iii. Depends on net income after tax and PRSI compared with basic social welfare payment rates.

- ***EUROMOD notes***

In the first step, all benefits someone is entitled to are still calculated in the model. It is only in the second step when the approach above is imposed. This allows more flexibility in changing underlying assumptions (if necessary) as well as checking their validity.

If someone is observed in receipt of several contributory benefits (e.g. could have received each for part of the year) then the one with highest entitlement is chosen in the model and simulated as if received for the full year (if possible).

2.4.1.2 Couples

Social welfare for each couple should allow for the possibility that

- One spouse claims a benefit and claims an increase for a qualified adult
- Each spouse claims benefit/assistance payments in their own right

Whichever combination gives the maximum amount for the couple will be awarded. For example, couples are often financially better off if they receive one personal rate payment and an increase for a qualified adult rather than both claiming a personal rate of payment independently.

The optimization routine is then similar to the above single case. Although contributory benefits are not means tested, adult dependant allowances under the contributory schemes are. The optimization routine for a couple is therefore:

- 1) If both spouses are eligible for (i.e., receive in the data) a contributory benefit then this will be the optimal combination for them
- 2) If one spouse is eligible for a benefit (mtb or contributory) and the other is not eligible for any benefit, then the best option is to take the benefit for which they are eligible and model the IQA to which they may be entitled.
- 3) If both spouses are eligible for a means-tested benefit, or one for contributory and one for means-tested rate, then the outcome depends on whether they are of pension age or working age
 - a) For pension age, means are assessed jointly and halved. Then each partner's potential claim can be assessed independently. If they would obtain more from taking one benefit and an IQA, then this is allocated instead.
 - b) For working age, the total payment on Jobseeker's Assistance is limited to the couple rate; and if one partner is on JB and the other potentially on JA, there is also a limitation

in force such that the maximum payment is JB personal rate plus IQA. The means-testing arrangements for JA and JB are described in section 2.4.1.1.

4) Supplementary payments

a) Family Income Supplement

Depends on net earnings and number of children, hours ≥ 19 . Couple can combine their work hours to reach this level if required.

b) Rent and Mortgage Supplement

Varies by location – location variable in UDB is very restrictive.

Rules on maximum rent allowable – different rates for couples versus singles (see **Error! Reference source not found.** in the country report ‘Maximum rent levels for the assessment of rent supplement’)

Depends on net income after tax and PRSI compared with basic social welfare payment rates.

2.4.2 Non-Contributory Benefits

Non-contributory benefits are means-tested and do not require any social insurance contributions. They are also referred to as social assistance payments. They are usually paid for as long as the recipient is eligible.

As mentioned in Section 1.1, means are assessed at the benefit unit level. In most cases, the means test assesses cash income net of social insurance contributions, pension contributions and union dues (only in the Disability Allowance means test is Income Tax deductible) and capital (other than the primary residence). Income derived from assessed capital is disregarded to avoid a form of double counting. Social welfare payments do not count as means except in the Supplementary Welfare Allowance means test. Other supports are also always exempt but either unavailable or not separately identifiable in the data so we do not discuss them.⁴

Except for Disability Allowance and Supplementary Welfare Allowance, which have their own capital assessment schedules, capital is assessed as follows:

Table 4. Capital Assessment Schedule

Capital	Weekly means assessed
First €20,000	€0
Next €10,000	€1 per €1,000
Next €10,000	€2 per €1,000
Balance	€4 per €1,000

Also note that for the purpose of an increase for a qualified adult, the dependent in question cannot be the main claimant of Carer’s Allowance (on a half-rate basis), Child Benefit, Death Benefit in respect of an orphan, Disablement Benefit, Domiciliary Care Allowance, Foster Care Allowance, Guardian’s Payment (Contributory), Guardian’s Payment (Non-Contributory) or Supplementary Welfare Allowance.

⁴ Visit www.citizensinformation.ie and www.welfare.ie for more information.

2.4.2.1 Basic Supplementary Welfare Allowance (bsa00_ie)

- *Eligibility conditions*

Live in the State, satisfy the habitual residence condition (except for EU, EEA and Swiss citizens who have been working in the State), have applied for any other benefit one is entitled to, satisfy the means test and have registered with the local Intreo Centre if of working age.

People working 30 hours or more per week, in full-time education or involved in a trade dispute do not qualify but may be eligible for payments in respect of their dependents.

- *Income test*

All cash income is assessed as means except Child Benefit, tertiary education maintenance grants and other supports or expenses that are not available or separately identifiable in the data. Parental income is also taken into account for applicants of up to 24 years if they live with a parent or step-parent in the family home. This is known as the ‘benefit and privilege’ rule but it is not currently modelled in EUROMOD. Capital is assessed as follows:

Table 5. Supplementary Welfare Allowance Capital Assessment

Capital	Weekly means assessed
First €5,000	€0
Next €10,000	€1 per €1,000
Next €25,000	€2 per €1,000
Balance	€4 per €1,000

- *Benefit amount*

Increases for a qualified adult and qualified children are payable (see Section 1.1 for definitions). The amount payable is the maximum rate applicable (e.g., the personal rate plus a qualified adult increase for a couple) less means. People under 26 get reduced rates, unless they have qualified children or were in the care of the Child and Family Agency at any time over the 12 months before they turned 18.

- *EUROMOD notes*

Since not all eligibility conditions can be ascertained from the data, receipt is used as a proxy of eligibility.

2.4.2.2 Disability Allowance (bdinc_ie)

- *Eligibility conditions*

Satisfy a means test and the habitual residence condition. The injury, disease or physical or mental disability must have lasted or be expected to last for at least one year, be assessed by a doctor and result in substantial work restrictions. Disability Allowance is payable from 16 to 65 and to people in hospital or residential care, as long as they qualify.

- ***Income test***

The first €120 of weekly earnings from employment or self-employment and half of subsequent earnings up to €350 are disregarded. Partner income is assessed at 60% with a disregard of €20 a day, up to three days a week. Capital is assessed as follows:

Table 6. Disability Allowance Capital Assessment

Capital	Weekly means assessed
First €50,000	€0
Next €10,000	€1 per €1,000
Next €10,000	€2 per €1,000
Balance	€4 per €1,000

- ***Benefit amount***

Increases for a qualified adult, qualified children and living alone are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, else halved. The personal rate is gradually withdrawn as means increase.

2.4.2.3 Fuel Allowance (bfua_s)

- ***Eligibility conditions***

Paid to households of recipients of long-term social welfare payments to help with heating costs in winter. Must satisfy a means test and be unable to provide for heating needs from own resources.

Individuals may qualify for a Fuel Allowance if they are getting:

- State Pension (Contributory) or State Pension (Non-Contributory)
- Widow's, Widower's or Surviving Civil Partner's (Contributory) Pension or Widow's, Widower's or Surviving Civil Partner's (Non-Contributory) Pension
- Incapacity Supplement under the Occupational Injuries Benefit scheme
- Blind Pension
- Invalidity Pension
- Disability Allowance
- Deserted Wife's Benefit or Allowance
- One-Parent Family Payment
- Guardian's Payment (Contributory) or Guardian's Payment (Non-Contributory)
- Farm Assist
- Basic Supplementary Welfare Allowance for more than 455 days (over 15 months - it is paid on a 7-day week basis so 15 months' payment is reached after day 455)

- Jobseeker's Allowance for more than 390 days
- Jobseeker's Transitional payment
- Death Benefit under the Occupational Injuries Scheme
- Social Security Pension from an EE/EEA country or a country with whom Ireland has a bilateral social security agreement (provided there is an equivalent Irish payment).
- Or if you are taking part in certain schemes - Back to Work Allowance, Back to Work Enterprise Allowance (BTWEA), Rural Social Scheme, Tús or Community Employment and are entitled to keep your secondary benefits

And

They live alone or only with:

- A dependent spouse, civil partner or cohabitant and/or dependent children (if the dependant is getting half-rate Carer's Allowance - see 'Carer's Allowance' below)
- Other people getting one of the qualifying payments who would also be eligible for a Fuel Allowance in their own right
- A person who is getting Carer's Allowance or Carer's Benefit and is caring for the individual or for their dependent spouse, partner or cohabitant on a full-time basis
- A person getting short-term Jobseeker's Allowance or basic Supplementary Welfare Allowance

- ***Income test***

If the applicant is receiving a non-contributory social welfare payment, he/she is accepted as satisfying the means test. If on an employment support scheme or getting a Back to Education Allowance the individual is entitled to keep Fuel Allowance if he/she continues to satisfy the conditions – including the means test. The Fuel Allowance means test is linked to the maximum rate of the State Pension (Contributory). It is possible to have a combined weekly income of €100 above the maximum State Pension (Contributory) and still be eligible for a Fuel Allowance.

- ***Benefit amount***

Paid during the Fuel Season, which runs for 28 weeks from the 30 of September. The fuel season has been extended from 28 weeks to 32 weeks in 2020 due to the COVID-19 pandemic. This means that the fuel Season will now end on Friday, 8 May 2020. Paid on a weekly basis, or if preferred, in two lump sum amounts. Only one fuel allowance is paid to a household. If two or more people who would qualify for a Fuel Allowance live together, a single Fuel Allowance is paid to one qualified person in that household.

- ***EUROMOD notes***

Means-test for those not in receipt of a means-tested benefit:

- Contributory pension at the couple level should be lower than €513,70 per week
- Contributory pension for a single individual < 80 years of age should be lower than €348 per week

2.4.2.4 Jobseeker's Allowance (bunnc_ie)

- ***Eligibility conditions***

Be unemployed for at least four days a week, be capable of, available for and genuinely seeking work, and satisfy the means test and the habitual residence condition.

Applicants engaged in part-time or casual work for up to three days a week may still qualify for the other days if they satisfy the other conditions. Third-level students and people who have left school within the last three months generally do not qualify.

- ***Income test***

Tertiary education maintenance grants do not count as means. A labour income disregard of €20 a day, three days a week applies to the claimant and his or her partner. Partner income is assessed at 60%. Like with Supplementary Welfare Allowance, the benefit and privilege rule applies but is not currently simulated. Capital is assessed as per Table 4.

- ***Benefit amount***

Increases for a qualified adult and qualified children are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, else halved. The amount payable is the maximum rate applicable (e.g., the personal rate plus a qualified adult increase for a couple) less means. People under 25 get reduced rates, unless they have qualified children, were in the care of the Child and Family Agency at any time over the 12 months before they turned 18 or transitioned from Disability Allowance.

In the case of a couple, the combined amount of two separate claims cannot exceed the maximum amount payable in respect of a joint claim for a personal rate and an increase for a qualified adult. If it does, each is entitled to a half of the joint claim.

- ***EUROMOD notes***

Since not all eligibility conditions can be ascertained from the data, receipt is used as a proxy of eligibility. Benefit and privilege is not currently modelled in EUROMOD.

2.4.2.5 One-Parent Family Payment (bfalp_ie)

- ***Eligibility conditions***

One-Parent Family Payment is payable to lone parents of children under 7 who have made efforts to get maintenance from the parent of the child or children and satisfy a means test and the habitual residence condition. Lone parents must have been separated from their spouses or civil partners for at least three months. Where a partner is in prison, he or she must have been sentenced to or spent at least six months in prison.

- ***Income Test***

Tertiary education maintenance grants do not count as means. As of 2019, the first €150 of weekly earnings from employment or self-employment and half of subsequent earnings up to €425 (on a gross basis) are disregarded. Housing costs of up to €95.23 and half of subsequent costs can be deducted from maintenance income, but this is not currently simulated. Capital is assessed as per Table 4.

- ***Benefit amount***

Increases for qualified children are payable. The personal rate is withdrawn one-to-one as means increase.

2.4.2.6 Jobseeker's Transitional Payment (bfalpt_s)

- *Eligibility conditions*

This payment is available to people who are not cohabiting and whose youngest child is aged between 7 and 13 years inclusive. The applicant must be the main carer for at least one child. Jobseeker's Transitional Payment (JST) is not payable if parents have joint equal custody of a child – in this case, it is payable to the main carer.

Applicants do not have to be available for or genuinely seeking full-time work. This is to allow for meeting caring responsibilities for individuals with young children. There are childcare supports available if applicant does find work.

Applicants can take part in a course of education and get JST (and, if eligible, a student maintenance grant).

The applicant does not have to be fully unemployed for 4 out of 7 days. This means that applicants could work part-time for 5 days and still receive a payment (subject to the means test).

- *Income test*

Tertiary education maintenance grants do not count as means. A labour income disregard of the first €165 of gross weekly earnings applies to the claimant, and 50% of the balance is assessed as means. Like with Supplementary Welfare Allowance, the benefit and privilege rule applies but is not currently simulated. Capital is assessed as per Table 4.

- *Benefit amount*

Increases for qualified children are payable. The maximum weekly rate of payment is the same as applies to Jobseeker's Allowance.

In the case of joint equal custody of a child, the benefit amount is payable to the main carer – it cannot be made a joint claim.

2.4.2.7 Rent Supplement (bhors_s)

- *Eligibility conditions*

Must be a genuine (bona fide) tenant and meet one of the following conditions:

- Receiving Rent Supplement in the 12 months before the date of application.
- Living in private rented accommodation for at least 6 of the last 12 months, could afford the rent at the beginning of tenancy but unable to continue doing so because of a substantial change in circumstances which occurred after the start of renting.

For applicants who apply on or after 13 March 2020, he or she must have been in current tenancy for more than 4 weeks and could have continued to pay rent from own resources, if it was not for the COVID-19 public health emergency.

Applicants must also satisfy a means test and a habitual residence test.

- *Income test*

Applicants will not qualify if in full-time employment, or if full-time students. Claims from self-employed people are assessed on the individual circumstances of the case. If working over 30 hours a week in employment or self-employment, or if a person is getting the Back to Work

Enterprise Allowance, he or she can only continue to get Rent Supplement if his or her local authority considers them eligible for the Rental Accommodation Scheme (RAS).

Income taken into account for Rent Supplement includes net income from employment, any social welfare payments, the Working Family Payment, cash income, all income and value of all property of which an individual deprived his or herself in order to qualify for Rent Supplement, and capital.

Capital is assessed as per Table 5.

- ***Benefit amount***

This is a complicated policy and due to data limitations has been simplified for the purposes of EUROMOD. The amount of Rent Supplement is primarily determined by the amount of rent payable on tenancy and levels of income, presence of dependents, as well as county specific rent limits. All persons receiving rent supplement are expected to contribute towards their rental costs, the minimum contribution for single persons (receiving a BASI payment) and not subject to an age-related reduction on their social welfare payment is €30 per week; similarly, a couple's expected minimum contribution is €40.

Rent Supplement ensures that your income, after paying rent, does not fall below a minimum level. This minimum level is the basic Supplementary Welfare Allowance rate for your circumstances minus a set Household Contribution (pay more depending on means). The basic Supplementary Welfare Allowance rate is normally €201, with a higher rate if dependents are involved.

The rent paid to your landlord (contribution plus Rent Supplement) should not be above the maximum rent limit set for each county or area (this provision can be waived in some circumstances). The maximum rent limit for each county is set by the Department of Employment Affairs and Social Protection (DEASP). However, the DEASP may set lower rates within these limits. If actual rent is higher than the local maximum, an individual may be refused Rent Supplement entirely. The supplement payment is a subtraction of an individual's total contribution to rent from the weekly rent figure.

2.4.2.8 State Pension (Non-Contributory) (poanc_ie)

- ***Eligibility conditions***

Be 66 or over and satisfy a means test and the habitual residence condition.

- ***Income test***

The first €200 of weekly earnings from employment are disregarded. Self-employed applicants can deduct €133 per qualified child, with only one deduction per child if both the claimant and his or her partner are self-employed. The first €30 are further deducted from the final means.

- ***Benefit amount***

Increases for a qualified adult under 66 and qualified children are payable. Qualified adults aged 66 or over can make their own claims. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, else halved. The personal rate and the qualified adult increase are gradually withdrawn as means increase. Increases for living alone and being 80 or over are also payable.

2.4.2.9 Widow's, Widower's or Surviving Civil Partner's (Non-Contributory) Pension (psuw dnc_ie)

- ***Eligibility conditions***

Be under 66 and satisfy a means test and the habitual residence condition. Applicants cannot be cohabiting or living with dependent children. Widows, widowers and surviving civil partners with dependent children can apply for One-Parent Family Payment or Jobseeker's Transitional Payment.

- ***Income test***

The first €100 of weekly earnings from employment are disregarded, together with the first €7.60 or the final means.

- ***Benefit amount***

This benefit is made only of a personal rate. It is withdrawn one-to-one as means increase.

2.4.3 Contributory Benefits

Contributory benefits are based on the applicant's number of social insurance contributions. They are not means-tested and are normally paid for a limited period of time. They are also referred to as social insurance payments.

2.4.3.1 Illness Benefit (bdict_ie)

- ***Eligibility conditions***

Apply within six weeks of becoming ill, be under 66, have a certificate of incapacity for work and satisfy the following social insurance contributions:

- 104 weeks of paid contributions, and either
- 39 weeks of paid or credited contributions in the second-last complete tax year and 13 weeks of paid contributions in the current, last, second-last or fourth-last complete tax year, or
- 26 weeks of paid contributions in each of the second-last and third-last complete tax years.

Only A, E, H and P contributions are reckonable for Illness Benefit. Recipients cannot work.

- ***Duration***

Two years for recipients with at least 260 weeks of paid social insurance contributions, one year otherwise.

- ***Benefit amount***

Increases for a qualified adult and qualified children are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, and halved (withdrawn) if the qualified adult has means under (over) €400 per week. The personal rate and increase for a qualified adult are graduated according to average weekly earnings in the second-last complete tax year.

2.4.3.2 Injury Benefit (bhl_ie)

- ***Eligibility conditions***

Be in insurable employment under Class A, D, J or M, apply within six weeks of the accident or development of the disease and have a certificate of incapacity for work. No minimum number of contributions applies. Injury Benefit can be received while in training or part-time work.

- ***Duration***

Twenty-six weeks from the date of the accident or development of the disease. Injury Benefit is not paid for the first six days of incapacity.

- ***Benefit amount***

Increases for a qualified adult and qualified children are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, and halved (withdrawn) if the qualified adult has means under (over) €400 per week.

If in receipt of other selected social welfare payments, half the personal rate is payable and no increase is payable for any child dependants. If these other payments are at a reduced rate, more than half the personal rate of injury benefit may be paid.

2.4.3.3 Invalidation Pension (pdi_ie)

- ***Eligibility conditions***

Be under 66, be permanently incapacitated for work and satisfy the following social insurance contributions conditions:

- 260 weeks of paid social insurance contributions, and
- 48 weeks of paid or credited social insurance contributions in the last or second-last complete year before becoming permanently incapacitated.

Only A, E, H and S contributions are reckonable for Invalidation Pension.

- ***Duration***

Invalidation Pension is paid until pension age, at which point recipients automatically transfer to State Pension (Contributory) at the full rate.

- ***Benefit amount***

Increases for a qualified adult and qualified children are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, and halved (withdrawn) if the qualified adult has means under (over) €400 per week. Qualified adult increases are gradually withdrawn as the qualified adult's means increase.

2.4.3.4 Jobseeker's Benefit (bunct_ie)

- ***Eligibility conditions***

Be under 66, unemployed for at least four days a week, capable of, available for and genuinely seeking work, and satisfy the following social insurance contributions conditions:

Employees (A, H or P contributions)

- 104 weeks of paid contributions, and either

- 39 weeks of paid or credited contributions in the second-last complete tax year and 13 weeks of paid contributions in the current, last, second-last or fourth-last complete tax year, or
- 26 weeks of paid contributions in each of the second-last and third-last complete tax years.

Self-employed (since November 2019)

- 156 weeks of paid S contributions or 104 weeks of paid A, H or P contributions, and
- 56 weeks of paid S contributions in the second-last complete tax year.

Applicants under 55 may be disqualified for up to nine weeks if they are in receipt of redundancy payments of €50,000 or more.

- ***Duration***

Nine months for recipients with at least 260 weeks of paid social insurance contributions, six months otherwise.

- ***Benefit amount***

Increases for a qualified adult and qualified children are payable. Qualified children increases are conditional on getting a qualified adult increase, and halved (withdrawn) if the qualified adult has means under (over) €400 per week (except for lone parents). Qualified adult increases are gradually withdrawn as the qualified adult's means increase. The personal rate and qualified adult increases are graduated according to the claimant's average weekly earnings in the second-last complete tax year. The main characteristics of Jobseeker's Benefit are summarised in Table 7.

Table 7. Characteristics of Jobseeker’s Benefit

		2017	2018	2019	2020
Eligibility	Employees (A, H or P contributions)	104 weeks of paid contributions, and either 39 weeks of paid or credited contributions in the second-last complete tax year and 13 weeks of paid contributions in the current, last, second-last or fourth-last complete tax year, or 26 weeks of paid contributions in each of the second-last and third-last complete tax years			
	Self-employed	Not eligible		156 weeks of paid S contributions or 104 weeks of paid A, H or P contributions, and 56 weeks of paid S contributions in the second-last complete tax year	156 weeks of paid S contributions or 104 weeks of paid A or H contributions, and 52 weeks of paid S contributions in the second-last complete tax year
Payment	Contribution base	Reckonable earnings for PRSI purposes (see Table 9)			
	Personal rate	Four different rates depending on previous earnings (see Table 8)			
	Increases	Increases available for a qualified adult and qualified children (see Table 8)			
	Floor	€86.70	€88.90	€91.10	€91.10
	Ceiling	€193.00	€198.00	€203.00	€203.00
Duration	≥ 260 contributions	9 months			
	< 260 contributions	6 months			
Subject to	Income Tax	Yes			
	SIC	No			

- **EUROMOD notes**

Since not all eligibility conditions can be ascertained from the data, receipt is used as a proxy of eligibility. However, rather than only using receipt, all eligibility rules are modelled so the benefit can also be simulated for those currently employed for replacement rates calculations. Therefore, assumptions are made, including considering some rules fulfilled by actual recipients.

Unemployment duration ($lunmy_s$) is set to the minimum between the maximum receipt duration and the greater of observed unemployment duration ($lunmy$) and observed receipt ($bunmy$). When modelling unemployment benefit for those currently employed, unemployment duration is set to the minimum between the maximum receipt duration and the reported number of months in employment in the current year ($liwmy$). It is also assumed that unemployment spells start in the reference year. Simulated unemployment duration is also used for Jobseeker's Allowance.

Social insurance contributions are modelled using the reported number of months in employment ($liwmy$), controlling for the total number of months in work ($liwwh$):

- For those currently employed ($lnu > 0$), this is used.
- For those currently unemployed ($lunmy_s > 0$) and in receipt ($bunct > 0$), this is set at least to the minimum qualifying period.
- For those currently unemployed ($lunmy_s > 0$) and not in receipt ($bunct = 0$), this is set to zero.

At this point, people who are unemployed ($lunmy_s > 0$), under retirement age and have enough social insurance contributions are considered eligible; they are assumed to be capable of, available for and genuinely seeking work.

Benefit duration ($bunmy_s$) is set to the minimum of unemployment duration ($lunmy_s$) and the maximum receipt duration.

The amount payable depends on average weekly earnings in the second-last complete tax year, which are not available in the data. For those employed, current earnings are used instead. For those unemployed and in receipt, they are assumed to be entitled to the maximum rate, which is consistent with full-time work. Finally, imputed wages are used for those currently unemployed and not in receipt.

Once the personal rate is determined, increases for an adult and child dependent are calculated and the final amount is adjusted for the number of months in receipt ($bunmy_s$).

2.4.3.5 Maternity Benefit (bma_ie)

- **Eligibility conditions**

Satisfy the following social insurance contributions conditions:

Employees (A, E or H contributions)

- 39 weeks of paid contributions in the 12-month period before the first day of maternity leave, or
- 39 weeks of paid contributions and 39 weeks of paid or credited contributions in the last or second-last complete tax year, or
- 26 weeks of paid contributions in each of the second-last and third-last complete tax years.

Self-employed

- 52 weeks of paid S contributions in the last complete tax year, or
- 52 weeks of paid S contributions in the second-last complete tax year, or
- 52 weeks of paid S contributions in the third-last complete tax year.
- ***Benefit duration***

Twenty-six weeks, of which at least two and no more than 16 must be taken before the end of the week in which the baby is due.

- ***Benefit amount***

In the presence of dependants, Maternity Benefit is compared to Illness Benefit and the higher of the two is paid. Maternity Benefit is halved if the recipient is getting One-Parent Family Payment, Widow's, Widower's or Surviving Civil Partner's Pension (contributory or non-contributory) or other benefits that are not modelled in EUROMOD.

Paternity and Adoptive Benefits are not currently modelled.

2.4.3.6 State Pension (Contributory) (poact_ie)

- ***Eligibility conditions***

Be 66 or over and satisfy certain social insurance contribution conditions. These include having started paying social insurance contributions before the age of 56. At least 156 full-rate contributions must have been paid to receive the maximum pension. Exceptions apply if in employment for a long period. A reduced rate pension may be payable if less contributions have been made. A mixed insurance Pro-Rata Pension may be payable to people who have a mixture of full-rate insurance and modified insurance and because of this would not ordinarily qualify.

- ***Benefit amount***

Increases for a qualified adult, qualified children, living alone or being 80 or over are payable. Except for lone parents, qualified children increases are conditional on getting a qualified adult increase, else halved. Qualified adult increases are gradually withdrawn as their means increase. The increase for being 80 or over is doubled if the recipient is getting a qualified adult increase and the qualified adult is also 80 or over. If living in Ireland, a recipient is entitled to a Free Travel pass and may be entitled to non-cash benefits such as energy benefits, a free television licence and a Medical Card.

2.4.3.7 Widow's, Widower's or Surviving Civil Partner's (Contributory) Pension (psuwdct_ie)

- ***Eligibility conditions***

Not be cohabiting and satisfy social insurance contribution conditions. This pension also applies if the late partner was in receipt of State Pension (Contributory) with a qualified adult increase. This pension may be based on the late partner's social insurance contributions, but the two records cannot be combined. At least 156 weeks of contributions must have been paid before pension age or the partner's death. Otherwise, 39 weeks must have been paid or credited over the three or five tax years before pension age or the partner's death. This pension cannot be combined with State Pension (Contributory) cannot be combined.

- ***Benefit amount***

Increases for qualified children, living alone or being 80 or over are payable.

2.4.4 In-work benefits

2.4.4.1 Working Family Payment (bwkmt_ie)

- ***Eligibility conditions***

Applicants must be employed for at least 38 hours per fortnight (couples can combine their hours), live with at least one qualified child and earn less than the income limit, which depends on family size. Additionally, the claimant's employment must be likely to last for at least three months.

Income is assessed net of social insurance contributions, pension contributions, Income Tax and USC. All sources of income, including income from capital, are taken into account except:

- Carer's Allowance
- Child Benefit
- Domiciliary Care Allowance
- Foster Child Allowance
- Guardian's Payment (Contributory) and Guardian's Payment (Non-Contributory)
- Income from casual employment by the Health Service Executive as a home help
- Income from charitable organisations
- Supplementary Welfare Allowance

Of those exemptions, only Child Benefit and Supplementary Welfare Allowance are available and separately identifiable in the model. Because income from capital is assessed, capital is not.

- ***Benefit amount***

The amount payable is equal to 60% of the difference between benefit unit income and the income limit for the family's size.

- ***EUROMOD notes***

This benefit has a relatively low take-up rate (Callan and Keane, 2008). Therefore, adjustment for non-take-up is made in the model by assuming that only a certain proportion (33% based on earlier estimates) of those eligible actually claim it, using a random allocation. This adjustment can easily be omitted by switching off the corresponding function in the policy itself or by setting the master switch for non-take-up off in the spine (BTA_ie).

2.4.5 Universal Payments

2.4.5.1 Child Benefit (bch_ie)

- **Eligibility**

Child Benefit is paid in respect of children under 16, or under 18 if they are in full-time education or training or have a disability and cannot support themselves. No means test or social insurance contributions requirements applies.

- **Benefit amount**

Child Benefit is flat monthly rate per child who satisfies the conditions above. For twins, it is paid at one and a half times the normal rate per child. For triplets and other multiple births, it is paid at double the normal monthly rate per child.

2.4.6 Temporary COVID-19 benefits

2.4.6.1 Pandemic Unemployment Payment (bunctec_ie)

- **Assessment unit**

The unit of analysis is the individual (tu_individual).

- **Eligibility conditions**

COVID-19 Pandemic Unemployment Payment is a new social welfare payment for employees and self-employed people who have lost all their employment due to the COVID-19 public health emergency. Individuals can apply for the payment if aged between 18 and 66 and have lost all employment due to the coronavirus restrictions. Students, non-EEA nationals and part-time workers can apply for the payment.

- **Benefit amount**

The payment is €203 per week for those whose previous earnings were <€200 per week. It is €350 per week for those whose previous earnings were >= €200 per week. Between March 13th and 29 June 2020, the rate of payment was €350 for all recipients.

The COVID-19 Pandemic Unemployment Payment was introduced on March 13th, 2020 and has been extended until 10 August 2020. (EUROMOD variable bwkmceemy_s)

2.4.6.2 Temporary Wage Subsidy Scheme (bwkmcee_s)

The Temporary Wage Subsidy Scheme consists of two types of payments: the government payment (bwkmcee_s) and the firm payment (yemmc_s). The firm payment is discretionary and the EUROMOD note below describes how we model it. This section describes the government subsidy.

- **Assessment unit**

The unit of analysis is the individual (tu_individual).

- **Eligibility conditions**

The TWSS was introduced on March 24th. The scheme subsidises the wages of employees of firms who have suffered loss of revenue due to the pandemic. The total number of workers receiving the subsidy is set on the national level by industry, whereas the allocation of the subsidy within industry is random. The subsidy is based on prior earnings.

- **Benefit amount**

Wage compensation paid by the government. The rate of the subsidy is as follows:

Employees previously earning up to €586 net per week

- An 85% subsidy, to a maximum of €350, shall be payable in the case of employees whose previous average net weekly pay does not exceed €412.
- A flat rate subsidy of up to €350 shall be payable in the case of employees whose previous average net weekly pay is more than €412 but not more than €500.
- A 70% subsidy shall be payable in the case of employees whose previous average net weekly pay is more than €500 but not more than €586, with the maximum cap of €410 applying.

Employees previously earning in excess of €586 net per week

- For employees whose average net weekly pay is greater than €586 per week but not more than €960 per week, the temporary wage subsidy shall not exceed €350 per week, and shall be calculated with reference to the gross salary paid by the employer and its effect on net average wages as follows:
 - A subsidy of €350 shall be payable to employees with average net weekly pay greater than €586, where the employer pays a sufficient gross salary which equates to an amount up to 60% of the employee's net weekly earnings;
 - A subsidy of €205 shall be payable to employees with average net weekly pay greater than €586, where the employer pays a sufficient gross salary which equates to an amount that is more than 60% but not more than 80% of the employee's net weekly earnings;No subsidy shall be payable to employees with average net weekly pay greater than €586, where the employer pays a sufficient gross salary which equates to an amount that is more than 80% of the employee's net weekly earnings.

The support can be simulated for a defined number of months (EUROMOD variable `bwkmceemy_s`).

- **EUROMOD notes**

It is not possible to model discretionary firm payments in EUROMOD. We model the firm payment (`yemmc_s`) so that anyone who is in receipt of the wage subsidy and earning below €586 per week, receives the full amount of net earnings less the subsidy amount. For those earning above €586 per week, we assume 60% of their previous earnings, less the subsidy amount.

Both government and firm payments can be simulated for a defined number of months (`bwkmceemy_s`).

Income tax and USC are not payable on the subsidy through payroll but may be due at the end of the year. The subsidy is not subject to employee or employer PRSI. The employer can make an additional payment to employees (up to a maximum) that is not subject to employee PRSI but is subject to a reduced rate of employer PRSI (from 11.05% to 0.5%). For employees in the childcare sector, the Department of Children and Youth Affairs announced that it would subsidise the remaining 30% of the wage bill up to a maximum of €350 per week (not modelled).

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_ie` 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.

2.4.7 Benefit Rates (2017-2020)

Table 8 summarizes the rates of all the benefits modelled in EUROMOD from 2017 to 2020.

Table 8. Benefit Rates (2017-2020) (€)

Instrument name	Parameter	2017	2018	2019	2020
Child Benefit	Rate (monthly)	140.00	140.00	140.00	140.00
Disability Allowance	Personal rate (maximum)	193.00	198.00	203.00	203.00
	Increase for a qualified adult	128.10	131.40	134.70	134.70
Fuel Allowance	Weekly payments	22.50	22.50	22.50	24.50
	Lump sum payment 1	315.00	315.00	315.00	315.00
	Lump sum payment 2	343.00	343.00	343.00	343.00 ⁵
Illness Benefit	Previous earnings lower limit 1	300.00	300.00	300.00	300.00
	Previous earnings lower limit 2	220.00	220.00	220.00	220.00
	Previous earnings lower limit 3	150.00	150.00	150.00	150.00
	Personal rate 1 (above previous earnings lower limit 1)	193.00	198.00	203.00	203.00
	Personal rate 2	151.20	155.10	159.00	159.00
	Personal rate 3	124.60	127.80	131.00	131.00
	Personal rate 4 (under previous earnings lower limit 3)	86.70	88.90	91.10	91.10
	Increase for a qualified adult 1 (above previous earnings lower limit 1)	128.10	131.40	134.70	134.70 ⁶
	Increase for a qualified adult 2	83.00	85.10	87.20	87.20
Increase for a qualified adult 3	83.00	85.10	87.20	87.20	

⁵ Due to COVID-19, the fuel season of 2019-2020 has been extended from 28 weeks to 32 weeks. This means there will be a third lump sum payment of 98.00 to cover the extra 4 weeks.

⁶ The rate for a qualified adult has been temporarily increased to €147 from €134.70 for a 12-week period as part of the Government income support plans announced on the 24th March. These rates will expire on the week of the 15th June.

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	Increase for a qualified adult 4 (under previous earnings lower limit 3)	83.00	85.10	87.20	87.20
	Enhanced COVID-19 rate				350.00 ⁷
Injury Benefit	Personal rate	193.00	198.00	203.00	203.00
	Increase for a qualified adult	128.10	131.40	134.70	134.70
Invalidity Pension	Personal rate	198.50	203.50	208.50	208.50
	Increase for a qualified adult	141.70	145.30	148.90	148.90
Jobseeker's Allowance	Age group 1 (years)	> 25	> 25	> 25	>25
	Age group 2 (years)	= 25	= 25	= 25	= 25
	Age group 3 (years)	< 25	< 25	< 25	< 25
	Personal rate 1 (maximum)	193.00	198.00	203.00	203.00
	Personal rate 2 (maximum)	147.80	152.80	157.80	203.00
	Personal rate 3 (maximum)	102.70	107.70	112.70	203.00
	Increase for a qualified adult 1	128.10	131.40	134.70	134.70 ⁶
	Increase for a qualified adult 2	128.10	131.40	134.70	134.70 ⁶
	Increase for a qualified adult 3	102.70	107.70	112.70	112.70
Jobseeker's Benefit	Previous earnings lower limit 1	300.00	300.00	300.00	300.00
	Previous earnings lower limit 2	220.00	220.00	220.00	220.00
	Previous earnings lower limit 3	150.00	150.00	150.00	150.00
	Personal rate 1 (above previous earnings lower limit 1)	193.00	198.00	203.00	203.00
	Personal rate 2	151.20	155.10	159.00	159.00
	Personal rate 3	124.60	127.80	131.00	131.00
	Personal rate 4 (under previous earnings lower limit 3)	86.70	88.90	91.10	91.10

⁷ Individuals cannot get COVID-19 enhanced Illness Benefit and the COVID-19 Pandemic Unemployment Payment at the same time.

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	Increase for a qualified adult 1 (above previous earnings lower limit 1)	128.10	131.40	134.70	134.70 ⁶
	Increase for a qualified adult 2	83.00	85.10	87.20	87.20
	Increase for a qualified adult 3	83.00	85.10	87.20	87.20
	Increase for a qualified adult 4 (under previous earnings lower limit 3)	83.00	85.10	87.20	87.20
Jobseeker's Transitional Payment	Personal rate (maximum)	193.00	198.00	203.00	203.00
	Increase for a qualified child (12 or over)	29.80	31.80	37.00	40.00
	Increase for a qualified child (under 12)	29.80	31.80	34.00	36.00
Maternity Benefit	Personal rate	235.00	240.00	245.00	245.00
One-Parent Family Payment	Personal rate (maximum)	193.00	198.00	203.00	203.00
Other	Aged 80 Increase	10.00	10.00	10.00	10.00
	Increase for a qualified child (12 or over)	29.80	31.80	37.00	40.00
	Increase for a qualified child (under 12)	29.80	31.80	34.00	36.00
	Living Alone Increase	9.00	9.00	9.00	14.00
Pandemic Unemployment Payment	Rate 1				203.00 ⁸
	Rate 2				350.00 ⁹
Rent Supplement (monthly)	Rent limit 1 – urban area, single person, shared accommodation				365.00
	Rent limit 2 – urban area, couple in shared accommodation				419.00
	Rent limit 3 – urban area, single person				597.00
	Rent limit 4 – urban area, couple w/o kids				760.00
	Rent limit 5 – urban area, couple/lone parent, 1 child				1037.00

⁸ This rate is if earnings were below 200.00 per week before the pandemic.

⁹ This rate is if earnings were above 200.00 per week before the pandemic.

	Rent limit 6 – urban area, couple/lone parent, 2 children				1068.00
	Rent limit 7 - urban area, couple/lone parent, 3 children				1097.00
	Rent limit 8 – semi-urban area, single person, shared accommodation				262.00
	Rent limit 9 - semi-urban area, couple, shared accommodation				296.00
	Rent limit 10 - semi-urban area, single person				472.00
	Rent limit 11 - semi-urban area, couple, no children				533.00
	Rent limit 12 - semi-urban area, couple/lone parent, 1 child				728.00
	Rent limit 13 - semi-urban area, couple/lone parent, 2 children				756.00
	Rent limit 14 - semi-urban area, couple/lone parent, >3 children				784.00
	Rent limit 15 – rural area, single person in shared accommodation				217.00
	Rent limit 16 – rural area, couple in shared accommodation				243.00
	Rent limit 17 – rural area, single person				385.00
	Rent limit 18 – rural area, couple, no children				417.00
	Rent limit 19 – rural area, couple/lone parent, 1 child				496.00
	Rent limit 20 – rural area, couple/lone parent, 2 children				527.00
	Rent limit 21 – rural area, couple/lone parent, >3 children				557.00
State Pension (Contributory)	Personal rate	238.30	243.30	248.30	248.30
	Increase for a qualified adult of retirement age	213.50	218.00	222.50	222.50
	Increase for a qualified adult under retirement age	158.80	162.10	165.40	165.40

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State Pension (Non-Contributory)	Personal rate (maximum)	227.00	232.00	237.00	237.00
	Increase for a qualified adult under retirement age	150.00	153.30	156.60	156.60
Supplementary Welfare Allowance	Age group 1 (years)	> 25	> 25	> 25	>25
	Age group 2 (years)	= 25	= 25	= 25	= 25
	Age group 3 (years)	< 25	< 25	< 25	< 25
	Personal rate 1 (maximum)	191.00	197.00	201.00	201.00
	Personal rate 2 (maximum)	147.80	152.80	157.80	201.00
	Personal rate 3 (maximum)	102.70	107.70	112.70	201.00 ¹⁰
	Increase for a qualified adult 1	128.10	131.40	134.70	134.70
	Increase for a qualified adult 2	128.10	131.40	134.70	134.70
Temporary Wage Subsidy Scheme	Increase for a qualified adult 3	102.70	107.70	112.70	134.70 ¹¹
	Previous earnings lower limit 1				960.00
	Previous earnings lower limit 2				586.00
	Previous earnings lower limit 3				500.00
	Previous earnings lower limit 4				412.00
	Personal rate 1 (above previous earnings lower limit 1)				60% to 80% ¹²
	Personal rate 2				60% to 80% ¹³
	Personal rate 3				70% ¹⁶

¹⁰ If aged 18-24 and living independently and getting a state housing support, the allowance will increase from 112.70 to 201.

¹¹ If aged 18-24 and living independently and getting a state housing support, the allowance will increase from 112.70 to 134.70.

¹² Level of subsidy is calculated by reference to the amount of any additional payments made by employer and includes a flat rate subsidy dependent on top-up amount.

¹³ Level of subsidy is calculated by reference to the amount of any additional payments made by employer and includes a flat rate subsidy dependent on top-up amount.

¹⁶ 70% signifies 70% of the weekly average take home pay, up to a maximum of 410.00 if previous average take-home pay between 500.00 and 586.00 per week.

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	Personal rate 4				350.00
	Personal rate 5 (under previous earnings lower limit 4)				85% ¹⁷
Widow's, Widower's or Surviving Civil Partner's Pension (Contributory)	Personal rate (retirement age)	238.30	243.30	248.30	248.30
	Personal rate (under retirement age)	198.50	203.50	208.50	208.50
Working Family Payment	Income limit for 1 child	511.00	521.00	521.00	531.00
	Income limit for 2 children	612.00	622.00	622.00	632.00
	Income limit for 3 children	713.00	723.00	723.00	733.00
	Income limit for 4 children	834.00	834.00	834.00	834.00
	Income limit for 5 children	960.00	960.00	960.00	960.00
	Income limit for 6 children	1,076.00	1,076.00	1,076.00	1,076.00
	Income limit for 7 children	1,212.00	1,212.00	1,212.00	1,212.00
	Income limit for 8 children or more	1,308.00	1,308.00	1,308.00	1,308.00

Note: unless otherwise stated, amounts are weekly.

¹⁷ 85% signifies 85% of the weekly average take home pay, if previous average take-home pay below 412.00 per week.

2.5 Social insurance contributions (tscee_ie, tscer_ie, tscse_ie and tsceot_ie)

EUROMOD simulates social insurance contributions in respect of:

- employee income for both employees and employers (tscee_ie and tscer_ie);
- self-employed income (tscse_ie); and
- investment and rental income (tsceot_ie).

Due to data limitations, only Class A, J and S are simulated out of nine classes in total. However, this is not a major limitation of the model since most employees pay Class A contributions, while Class S covers all self-employed, investment and rental income. Table 9 shows what incomes fall into each class, as modelled in EUROMOD.

Table 9. Class A, Class J and Class S Incomes

Class	Incomes
A	Employee income (employee under retirement age earning at least €38 per week).
J	Employee income (employee of retirement age, or earning under €38 per week).
S	Self-employed, investment and rental income.

Table 10 sets out the contribution rates and weekly income bands. Note that a *single* rate applies to Class A employee and employer contributions: rate 1 applies when weekly earnings fall between €38 and the first upper income limit, rate 2 applies when weekly earnings fall between the first and second upper income limits, and rate 3 applies when weekly earnings exceed the second upper income limit.

Table 10. Social Insurance Contributions Schedule (2017-2020)

	2017	2018	2019	2020
Class A				
Upper income limit 1 (weekly)	€352	€352	€352	€352
Upper income limit 2 (weekly)	€376	€376	€386	€395
Rate 1 (employee)	0%	0%	0%	0%
Rate 1 (employer)	8.5%	8.6%	8.7%	8.8%
Rate 2 (employee)	4%	4%	4%	4%
Rate 2 (employer)	8.5%	8.6%	8.7%	8.8%
Rate 3 (employee)	4%	4%	4%	4%
Rate 3 (employer)	10.75%	10.85%	10.95%	11.05%
Class J				
Rate (employee)	0%	0%	0%	0%
Rate (employer)	0.5%	0.5%	0.5%	0.5%
Class S				
Exemption limit (yearly)	€5,000	€5,000	€5,000	€5,000

Minimum contribution (yearly)	€500	€500	€500	€500
Rate	4%	4%	4%	4%

A tapered PRSI credit for Class A contributions was introduced in 2016. It is equal to €12 less one-sixth of weekly earnings above €352.01, since this is the point at which employees start to pay PRSI. This credit is also modelled in EUROMOD.

2.6 Income Tax (tin_ie)

The Irish income tax system does not distinguish between earned and unearned income; various allowances and reliefs are deducted from total income to determine taxable income.

2.6.1 Tax Unit

Married couples were automatically jointly assessed before 2000 but could elect for single assessment. Under joint assessment, a couple was taxed as if it were just one individual, but with the distinction that the bands of income chargeable at the lower rate of tax was doubled as compared to a single individual. Since 2000, there is a limit on the degree of transferability of income tax bands between spouses.

2.6.2 Exemptions

In most circumstances, scholarships, lottery winnings and income earned by writers, composers, visual artists and sculptors from the sale of their works are exempt from Income Tax.

2.6.3 Income Tax Exemption and Marginal Relief

Individuals aged 65 or over and earning below the exemption limit set out in Table 11 are exempt from Income Tax. For couples, only one need meet the age condition. For those earning above but below twice the exemption limit, Income Tax is the minimum of the amount due under the ordinary schedule and the amount due by applying the marginal relief rate, less the exemption limit. The exemption limit is increased with the number of children who are born in the year of assessment, under 18 at the start of the year of assessment, or 18 or over and in full-time education, permanently incapacitated since before they turned 21, or in the custody of the claimant at his or her expense.

Table 11. Marginal relief

	2017	2018	2019	2020
Annual exemption limit (twice for couples)	€18,000	€18,000	€18,000	€18,000
Increase for the first two children (each)	€575	€575	€575	€575
Increase for subsequent children (each)	€830	€830	€830	€830
Marginal relief rate	40%	40%	40%	40%

2.6.4 Tax Allowances

Tax allowances reduce taxable income. Some apply to all taxable income, others to the portion of income that is taxable at the standard rate only. Two are modelled in EUROMOD: tax relief for pension contributions and mortgage interests. Trade union fees, certain medical expenses, health insurance and tuition fees are also deductible but cannot be modelled due to data limitations.

The portions of pension contributions eligible for relief (at the marginal rate) are shown in Table 12, subject to an income limit of €115,000 per year.

Table 12. Percentage of earnings qualifying for relief on pension contributions (2017-2020)

	Under 30	30-39	40-49	50-54	55-59	60 or over
%	15	20	25	30	35	40

Mortgage Interest Relief works differently. It is effectively a refundable tax credit for interest paid for a mortgage taken out between 2004 and 2012 for the purchase, repair or improvement of a principal residence in the Republic of Ireland. That is, it is paid by the lender as a deduction of mortgage payments regardless of taxable income, as set out in Table 13 and Table 14. Note that for purchases made between 2004 and 2008, first-time buyers attract a rate of 30% irrespective of the age of the mortgage. For purchases made after 2008, first-time buyers shift to the 15% rate in year 8 of their mortgage. Due to data limitations, every mortgage holder is assumed to be a non-first-time buyer.

Table 13. Mortgage Interest Relief: maximum qualifying interest per year (2017-2020)

	2017	2018	2019	2020
First-time buyer (twice for couples)	€10,000	€7,500	€5,000	€2,500
Non-first-time buyer (twice for couples)	€3,000	€2,250	€1,500	€750

Table 14. Mortgage Interest Relief rates (2009-2020)

First-time buyer	Yes			No
	Years 1 and 2	Years 3 to 5	Years 6 and 7	
%	25	22.5	20	15

2.6.5 Tax Base

Taxable income is calculated as gross income less any relief at the marginal rate. Gross income consists of labour income, including notional pay and share-based remuneration, investment income, rental income, pension income, maintenance payments and a number of social welfare payments. Expenses attracting relief at the standard rate reduce the portion of taxable income subject to that rate only. While technically taxable, the following social welfare payments are de facto exempt:

- Back to School Clothing and Footwear Allowance
- Back to Work Family Dividend
- Carer’s Support Grant

- Child Benefit
- Constant Attendance Allowance
- Disability Allowance
- Disablement Gratuity (Disablement Pension *is* taxable)
- Domiciliary Care Allowance
- Farm Assist
- Fuel Allowance
- Guardian’s Payment (Contributory) and Guardian’s Payment (Non-Contributory)
- Household Benefits Package
- Jobseeker’s Allowance and Jobseeker’s Transitional Payment
- Jobseeker’s Benefit for recipients who have had their working week temporarily reduced
- Pre-Retirement Allowance
- Supplementary Welfare Allowance
- Telephone Support Allowance
- Widowed or Surviving Civil Partner Grant
- Working Family Payment

Likewise, increases for qualified children are exempt in respect of Disablement Pension, Illness Benefit, Incapacity Supplement, Injury Benefit and Partial Capacity Benefit, as are the first €13 of Jobseeker’s Benefit and the Short-Term Enterprise Allowance.

2.6.6 Tax Schedule and Tax Credits

Table 15 sets out the schedule for Income Tax. If a two-earner couple elects for joint taxation, the standard-rate band is calculated as the sum of the one-earner couple band and the lower earner’s income up to the maximum increase shown in Table 9. Tax credits are then deducted from total Income Tax liability (non-refundable).

Table 15. Income Tax Rates and Bands (2017-2020)

	2017	2018	2019	2020
Standard rate	20%	20%	20%	20%
Higher rate	40%	40%	40%	40%
Standard-rate band				
Single person	€33,800	€34,550	€35,300	€35,300
Single person child carer	€37,800	€38,550	€39,300	€39,300
One-earner couple	€42,800	€43,550	€44,300	€44,300
Two-earner couple (maximum increase)	€24,800	€25,550	€26,300	€26,300

Note: a single person child carer is a person who is eligible for the Single Person Child Carer Tax Credit (see below).

Table 16 lists the tax credits simulated in EUROMOD and their amounts.

- ***Personal Tax Credit***

Everyone is eligible to this tax credit and the amount depends on personal circumstances. The tax credits for widowed persons for the bereavement year and widowed parents from the first to the fifth year after death specifically (not shown) cannot be modelled due to data limitations.

- ***Single Person Child Carer Tax Credit***

This tax credit applies to individuals caring for a child or children under 18, or 18 or over and in full-time education or permanently incapacitated. The child or children must live in the household.

- ***Age Tax Credit***

This tax credit applies to individuals aged 65 or over and to their spouses or civil partners irrespective of age and assessment method (separate or joint).

- ***Employee Tax Credit***

This tax credit applies to income that is taxable under the PAYE system, which consists of wages, benefit in kind, occupational pensions and income received from the Department of Employment Affairs and Social Protection. It is calculated as 20% of such income, capped at the limit set out in Table 10.

- ***Earned Income Tax Credit***

Introduced in 2016, this tax credit applies to income that is taxable under self-assessment, i.e. not taxable under the PAYE system, except investment and rental income. It is also calculated as 20% of qualifying income, capped at the limit set out in Table 10.

- ***Rent Tax Credit***

This tax credit was discontinued in 2018. It applied to individuals renting private accommodation and was calculated as a tax relief at the standard rate on the amount of rent paid in the tax year, subject to the limits set out in Table 10.

- ***Home Carer Tax Credit***

The home carer tax credit is a tax credit for jointly assessed couples when someone cares for one other person or more, other than her or his spouse or civil partner. That person must be living in the same house or in close proximity and can be a child for whom Child Benefit is received, a person aged 65 or over, or someone who is permanently incapacitated due to mental or physical disability. This tax credit cannot be claimed together with the standard-rate band increase for two-earner couples (the most beneficial treatment applies). It is calculated as the maximum credit less half of the difference between the carer's income (net of Carer's Allowance) and €7,200. A reduced tax credit applies if the carer's income is between €7,200 and €10,400.

Table 16. Tax Credits Simulated in EUROMOD (2017-2020)

	2017	2018	2019	2020
Personal tax credit (single person)	€1,650	€1,650	€1,650	€1,650
Personal tax credit (married couple or civil partners)	€3,300	€3,300	€3,300	€3,300
Personal tax credit (widowed person or surviving civil partner with dependent children)	€1,650	€1,650	€1,650	€1,650
Personal tax credit (widowed person or surviving civil partner without dependent children)	€2,190	€2,190	€2,190	€2,190
Single person child carer tax credit	€1,650	€1,650	€1,650	€1,650
Age tax credit (single or widowed person, or surviving civil partner)	€245	€245	€245	€245
Age tax credit (married couple or civil partners)	€490	€490	€490	€490
Employee tax credit (maximum credit)	€1,650	€1,650	€1,650	€1,650
Earned income tax credit (maximum credit)	€950	€1,150	€1,350	€1,500
Rent tax credit, qualifying rent (single under 55)	€200			
Rent tax credit, qualifying rent (single 55 or over)	€400			
Rent tax credit, qualifying rent (widowed person under 55, married couple or civil partners both under 55)	€400			
Rent tax credit, qualifying rent (widowed person 55 or over, married couple or civil partner one 55 or over)	€800			
Home carer tax credit (maximum credit)	€1,100	€1,200	€1,500	€1,600

2.7 Other taxes and deductions

2.7.1 Universal Social Charge (USC) (txcin_ie)

The USC was introduced in 2011 and replaced the Income Levy and Health Contribution. It is in addition to Income Tax and payable on all income except:

- social welfare payments, including some payments made by organisations other than the Department of Employment Affairs and Social Protection;
- income liable for DIRT;
- some employer benefits (e.g., travel passes, Cycle-to-Work Scheme);
- income attracting tax relief for childcare services provided and rent-a-room relief;
- scholarships; and
- Additional Voluntary Contributions (AVCs).

People earning below a certain limit are exempt. Above it, *all* income becomes chargeable, as set out in Table 17. Reduced rates apply for people with annual income of €60,000 or less if they are aged 70 or over or hold a Medical Card.

Table 17. USC exemption limit and schedule (2017-2020)

	2017	2018	2019	2020
Exemption limit	€13,000	€13,000	€13,000	€13,000
Rate 1	0.5%	0.5%	0.5%	0.5%
Threshold 1	€12,012	€12,012	€12,012	€12,012
Rate 2 (reduced rates: on the balance)	2.5%	2%	2%	2%
Threshold 2	€18,772	€19,372	€19,874	€20,484
Rate 3	5%	4.75%	4.5%	4.5%
Threshold 3	€70,044	€70,044	€70,044	€70,044
Rate 4 (on the balance, except where rate 5 applies)	8%	8%	8%	8%
Rate 5 (self-employed income over €100,000)	11%	11%	11%	11%

2.7.2 Local Property Tax (LPT) (tprhm00_ie)

The LPT was introduced in 2013 and replaced the flat Household Charge, which had been in place the previous year. It is calculated as 0.18% of the property's estimated market value on 1 May 2013 (the valuation date) up to €1,000,000 and 0.25% of the value in excess of that amount. The valuation date was set to change to 1 November 2019 but this was extended for a year.

2.7.3 Pension-Related Deduction (PRD) and Additional Superannuation Contribution (ASC) (tsceepb_ie)

The ASC replaced the PRD in January 2019. While the PRD applied to taxable income, the ACS applies to *pensionable* remuneration only. Both qualify for tax relief at the marginal rate and for employer PRSI relief. Given their similarities, they are modelled in the same policy (tsceepb_ie).

Table 18 shows the PRD and ASC schedules. The Single Public Service Pension Scheme (‘Single Scheme’), introduced in January 2013, is the pension scheme for all new public sector workers. For simplicity, all public sector workers are assumed to be members of pre-existing standard accrual schemes. This assumption may be relaxed in the future as a higher proportion of public sector workers are members of the Single Scheme relative to the pre-existing schemes.

Table 18. PRD (2017-2018) and ASC (2019-2020) schedules

	2017	2018	2019			2020		
			Single Scheme	Std. Accrual	Fast Accrual	Single Scheme	Std. Accrual	Fast Accrual
Rate 1	0%	0%	0%	0%	0%	0%	0%	0%
Threshold 1	€28,750	€28,750	€32,000	€32,000	€28,750	€34,500	€34,500	€28,750
Rate 2	10%	10%	6.66%	10%	10%	3.33%	10%	10%
Threshold 2	€60,000	€60,000	€60,000	€60,000	€60,000	€60,000	€60,000	€60,000
Rate 3 (on the balance)	10.5%	10.5%	7%	10.5%	10.5%	3.5%	10.5%	10.5%

3 DATA

3.1 General description

The input data is constructed from EUROSTAT’s user database (UDB) of the EU Statistics on Income and Living Conditions (EU-SILC), the source of official poverty, deprivation and social exclusion indicators. The underlying data is collected by the Irish Central Statistics Office (CSO) in an annual voluntary survey of private households starting in June 2003. For most respondents, administrative data from the Department of Employment Affairs and Social Protection (DEASP) and Office of the Revenue Commissioners is also used. Note that income information relates to the 12 months prior to the interview, unlike in other Member States where it tends to be the previous calendar year.

The sample is a four-year rotational sample drawn using a multi-stage cluster design. In the first stage, 1,200 blocks of households from Census 2011 are sampled with stratification by county and quintiles of the Pobal HP Deprivation Index, using probability proportional to size sampling. In the second stage, simple random samples of households are drawn from each block, and the selected households stay in the sample for four years. Importantly, the sampling methodology last changed in 2014, so all households in the 2018 cross-section were sampled the same way.

The weights are calculated to correct for sampling design and non-response, and calibrated on the estimated population by age group and sex (drawn from the census), as well as estimates of the household population in each of the eight NUTS 3 regions and overall household composition (derived from the larger Labour Force Survey).

Table 19. EUROMOD input data description

Dataset name	IE_2018_a1
Source	EU-SILC (UDB)
Provider	EUROSTAT
Year of collection	2018
Period of collection	January to December 2018
Income reference period	The 12 month-period prior to the interview
Sampling	Multi-stage cluster sampling
Units	Households and individuals
Coverage	All private households on the night of Census 2011
Sample size	11,131 individuals from 4,382 households
Response rate	56%

3.2 Data adjustments

Data adjustments are kept to a minimum. Data cleaning routines ensure that intra-household relationships are coherent (e.g., that young children are not living alone), and all children born during the survey year are dropped to guarantee consistency between demographic variables and income variables, which refer to the 12 months prior to the interview. Lastly, all monetary variables are converted from annual to monthly, and all income values are gross unless only the net was available.

3.3 Imputations and assumptions

3.3.1 Missing values and variables

Table 20 details the imputation of missing values and variables (variables that are not in the data but required for the simulations). Changes from previous years were kept to a minimum. For dwelling values (amrmv), new model estimates were drawn from the underlying Research Microdata File (RMF), the national SILC dataset, to replace old ones from the 2001 Living in Ireland Survey.

Table 20. Imputation of missing values and variables

Variable(s)	Description	Imputation method
Dms	Marital status	Partner’s marital status, or ‘single’ if without a partner or if the partner’s marital status is also missing.
Ddt	Date of interview (quarter of the year)	Minimum mode within the household, or minimum mode in the sample if missing in the entire household.
Dmb	Month of birth	February (no information on month or quarter of birth).

Dcz	Citizenship	Mode within the household ('Irish' chosen over 'EU' and 'EU' chosen over 'other' if there is more than one mode), or 'Irish' if missing in the entire household.
Ddi	Disability status	'Yes' if PH020 = 1 or PH030 = 1 or PH030 = 2.
dec, decde, deh, dehde, dey, dew	Current and highest education levels, number of years in education and year when the highest level was attained	Imputed using typical progression through the Irish education system and as much education-related information as possible (e.g., using the highest level attained if not missing to impute the current level as the next one up).
lfs, lindi, loc	Firm size, detailed industry and occupation	Sample mode (only if non-missing employee or self-employed income information over the income reference period).
Les	Economic status	Imputed according to the type of income received over the income reference period (the employee category is exhausted first, then the self-employed, retirees, ill or disabled persons, students, and other inactive individuals).
Lcs	Civil servant dummy	'Yes' if occupation is: armed forces occupations; chief executives, senior officials and legislators; teaching professionals; legal, social, cultural and related associate professionals; or protective services workers.
Lse	Self-employment status	Without employees.
Lhw	Hours worked in a typical week	Imputed using own earnings and median hourly earnings by category (employee income only, self-employed income only, or both).
liwwh	Months in paid work over entire work history	Imputed using female and male group means where groups are defined by age, highest education attained, marital status and the number of children.
aco, aca	Own a computer, own a car	Sample mode.
amrmv	Value of the dwelling	Imputed for all observations using a log-linear model of values estimated in the RMF with covariates available in the UDB.
afc	Financial capital	Imputed as investment income divided by an average interest rate calculated from National Accounts figures for property income (of which interest but not only)

		and total financial assets in the household sector (retrieved on Eurostat’s website).
Xhc	Housing cost	Rent or mortgage interest.
tpceepi, tpceepx	Superannuation contributions and contribution rate	Imputed as the gap between taxes as simulated in EUROMOD and the difference between gross and net employee income in the UDB, for enough observations (ranked randomly) to match RMF estimates of non-State pension coverage in the public and private sectors.
yemmy, ysemy, bunmy, pdimy, poamy, psumy	Months in employment, self-employment, unemployment, in receipt of disability benefits, in receipt of old-age benefits and in receipt of survivor benefits	Imputed using own annual income (employment income, self-employed income, unemployment benefits, etc.) and median monthly income (or benefit) by age.

3.3.2 Disaggregation of harmonised variables

To facilitate meaningful comparisons across countries, the UDB only contains aggregated benefit information (e.g., non-contributory and means-tested old age benefits). To create the necessary input variables, each individual benefit must be retrieved from these aggregates. In cases where they do not map to a single benefit, information extracted from the 2008 SILC RMF was used as follows.¹⁴

First, the total number of recipients was ascertained for each benefit to be disaggregated. The entire aggregated variable was then assigned to the right number of observations, assuming that of its individual components only a single benefit can be received (this assumption is relaxed for bch and bma, which can be received alongside other benefits). The selected observations were determined using the actual eligibility criteria where possible or predicted benefit receipt probabilities using estimated parameters derived from the 2008 RMF. Table 21 below lists the input variables that were disaggregated and the UDB variables they were disaggregated from.

Table 21. Benefit disaggregation

UDB variable	Description	EUROMOD variable(s)
HY050G	Family/Children-related allowances	Bch, bfalp, bfaot, bma, bsa00
HY060G	Social exclusion not elsewhere classified	Bsaab, bsaot
HY070G	Housing allowances	bho00, bhoht, bhout
PY092G	Unemployment benefits (Contributory and non means-tested)	bunct

¹⁴ The 2008 RMF is the last RMF that the previous National Team had access to. While the current National Team has access to all RMFs, it was not possible to revise all of the disaggregation parameters this year due to time constraints.

PY093G	Unemployment benefits (Non-contributory and means-tested)	bunnc
PY102G	Old-age benefits (Contributory and non means-tested)	poact
PY103G	Old-age benefits (Non-Contributory and means-tested)	poanc
PY112G	Survivor benefits (Contributory and non means-tested)	psuwdct
PY113G	Survivor benefits (Non-Contributory and means-tested)	psuwdnc
PY120G	Sickness benefits	bhl
PY122G	Sickness benefits (Contributory and non means-tested)	bdict
PY132G	Disability benefits (Contributory and non means-tested)	pdi
PY133G	Disability benefits (Non-Contributory and means-tested)	bdinc

3.4 Uprating

Monetary variables in the input data are uprated to account for any time difference between the dataset and the ‘system year’, i.e. the year of the policies (e.g., if the 2020 policies are run on the 2018 dataset). Uprating indices are generally based on changes in the average value of an income component between the income reference period and the system year. Although simulated variables are not uprated, the uprating indices are defined irrespective of whether a variable is simulated, in case one wishes to turn off the simulation of a particular variable and use the uprated input variable instead. All uprating indices are listed in Appendix 1, along with their source and the forecasting assumptions.

4 VALIDATION

4.1 Aggregate validation

EUROMOD results are validated against external benchmarks. Detailed comparisons of the number of people receiving a given income component and total yearly amounts are shown in Annex 2. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against these benchmarks. The main discrepancies are discussed in the following subsections. Factors that may explain the observed differences are also discussed.

4.1.1 Components of disposable income

The definition of disposable income in EUROMOD follows closely the EU-SILC definition. The minor differences are outlined in Table 22. Note that disposable income in EUROMOD is constructed using simulated components whenever possible.

Table 22. Components of disposable income

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

4.1.2 Input data

Table 4.2 in Annex 2 shows the number of employed and unemployed persons estimated from the 2018 input data. The number of people in work is underestimated in the database by 4 percentage points in 2017. On the other hand, the number of unemployed individuals is overestimated by 16 percentage points in 2017 and this discrepancy increases in the following years.

Table 4.3 and Table 4.4 report the number of recipients and annual amounts of different income components. Benchmarks are only available for employment and self-employment income and for 2017 and 2018. We can see that the input data is low on both employee numbers and total income received from employment. This is partly because the benchmarks are based on the total number of ‘Schedule E’ income tax cases during the year, which include taxable pensioners,

whereas the EUROMOD figure for employment income excludes them. The weights may also contribute to this discrepancy, as no income information is used in their calibration¹⁵.

While the number of self-employed is high, self-employed income from SILC is low. This may reflect under-reporting of self-employed income, a common problem in income surveys.

Tables 4.5 and 4.6 report the validation of benefits included in EUROMOD but not simulated. Benchmarks are scarce, but where they are available discrepancies are acceptable.

4.1.3 Output data

Tables 4.7 and 4.8 report the validation of the taxes and benefits simulated in EUROMOD. It is important to bear in mind the nature of the input data and the need to disaggregate variables into individual benefits. Another potential source of discrepancy is the fact that the benchmarks are based on recipients on 31 December, while the EUROMOD figures include all recipients at any point during the year. While this should not be an issue for long-term payments (such as pensions), it is an issue for short-term payments (such as maternity benefit).

The number of recipients of both Jobseeker's Benefit and Jobseeker's Allowance are relatively high compared to the benchmarks but the discrepancy in expenditure is smaller. When taken together, the contributory and non-contributory State pensions match reasonably well, and so does Disability Allowance. Schemes with a lower number of recipients (such as Injury Benefit) are prone to large differences, mostly because of the aggregation of benefits in the UDB.

Thanks to a new implementation, the number of recipients of Maternity Benefit has improved relative to previous years, but the external benchmarks for expenditure have a larger discrepancy. Supplementary Welfare Allowance is still very low, which is because EUROMOD does not factor in payments' waiting times (remember that Supplementary Welfare Allowance can be paid to claimants of other benefits with no or little income who have not started to receive their payments).

Overall, taxes and social insurance contributions match reasonably well. The number of cases for Local Property Tax is somewhat low because EUROMOD only captures the share of the tax paid by owner-occupiers, since the data only has (imputed) information on primary residences. The number of cases of employee PRSI is also low, in sharp contrast to receipts. However, while the documentation on the benchmark number of cases is unclear, it is likely that it includes individuals who earn too little to pay any PRSI but who are covered by employer PRSI. By contrast, the EUROMOD figure is based on the number of positive contributions only. Receipts may be high because all employees are assumed to pay Class A PRSI (due to data limitations), which has higher rates than, say, Class B PRSI.

4.2 Income distribution

The following results are based on equivalised household disposable income (EHDI), which is defined as the sum of all income sources of all household members net of income tax and social insurance contributions, equivalised by the modified OECD equivalence scale¹⁶.

¹⁵ See Callan et al. (2011).

¹⁶ The first adult (aged 14 or over) counts as one, subsequent adults as 0.5 and children (aged under 14) as 0.3.

4.2.1 Income inequality

Table 4.9 shows the main inequality indices from EUROMOD and SILC. Overall, EUROMOD performs well. Simulated results in 2017 almost perfectly match external benchmarks. In 2018, there are only a few deciles with small discrepancies, for example simulated EHDI overshoots slightly at the bottom of the income distribution and undershoots slightly in the middle deciles. For this reason, mean and median EHDI in 2018 are also somewhat below the benchmarks.

4.2.2 Poverty rates

EUROSTAT's standard measure of poverty risk (the proportion of individuals in households with EHDI below 60% of the median EHDI) is overestimated by approximately 12% (Table 4.10). There are large differences with respect to estimates based on lower poverty lines, the elderly poverty rate and poverty rates over time. In the case of the elderly poverty rate, a high proportion of the elderly population is found close to the poverty threshold. Perhaps a more important factor is the fact that, due to lack of data on social insurance contributions, it is assumed that all recipients of the State Pension (Contributory) get the maximum rate.

4.3 Validation of minimum wage

By default, EUROMOD uses stated gross employment income. However, users may activate a policy that corrects employment income by ensuring it is not below the gross minimum wage consistent with hours worked. This leaves the main components of disposable income virtually unchanged (Table 4.11).

4.4 Summary of 'health warnings'

- It is important to keep in mind that individual benefits in the input data are imputed from aggregated variables in the source data using receipt information from the 2008 national SILC dataset. While lower levels of aggregation are available (distinguishing between means-tested and non-means-tested, contributory and non-contributory benefits), smaller benefits appear to be particularly affected by this procedure, with rather large differences compared to administrative data. This will then have an impact on disposable income, which may include non-simulated disaggregated benefits or benefits that are simulated based on observed receipt of disaggregated benefits.
- Care should be taken in interpreting results for small sub-groups due to small sample sizes.
- Uprating factors help correct for price differences between the year of data collection and the year of analysis (e.g., wages), but no account is taken of structural changes like falling unemployment by reweighting or now-casting.
- The weights are calibrated against a limited set of information, which does not include information about the income distribution. Unpublished research by the National Team suggests that this results in the over-representation and under-representation of the bottom and middle of the income distribution, respectively.
- Simulated poverty rates for certain groups are rather low compared to the benchmarks. Caution needs to be taken for analysis focusing on certain groups, such as the elderly, for which differences are large.

- The simulation of monetary compensation schemes (INCLUDE THE NAMES OF THE POLICIES) is triggered by the simulation of labour market transitions defined in policy TransLMA_cc. 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.
- 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 2020 to be higher than disposable income in previous years.

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6 ANNEX 1: UPRATING FACTORS

Index	Reference	2017	2018	2019	2020	Source	Income components updated
Harmonised Index of Consumer Prices	\$HICP	100.1	100.8	101.7	101.65	http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en	
Consumer price index (2007=1)	\$f_cpi	1.035	1.04	1.049	1.048	https://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=CPA01&PLanguage=0	poals, poapu, poaps, ypp, xmp, xpp, ypr, afc, kfb, kfbcc, kivho, bwkmt, bfaot, bsaot, bhout, bhoht, bho00, bed, buntr, bsaab, xhcrt, xhcmomi, xhcot
HCPI: actual rentals for housing (2015=100)	\$f_house	115.9	123.4	129.9	130.6	https://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=122.ICP.M.IE.N.041000.4.INX&start=&end=&submitOptions.x=0&submitOptions.y=0&trans=AF	
GNP per capita (2007=1)	\$f_gnp	1.267	1.348	1.402	1.321	https://cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=NQQ36&PLanguage=0 https://cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0	
GDP per capita (2007=1)	\$f_gdp	1.375	1.480	1.565	1.482	https://cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=NQQ36&PLanguage=0	Yiy

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						https://cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=PEA01&PLanguage=0	
Average earnings per week, €	\$f_yem	723.76	747.45	774.68	809.72	https://cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=EHQ03&PLanguage=0	yem, yivwg, yot, ypt, yunsv
Average lagged earnings per week, €	\$f_yempv	710.27	723.76	747.45	774.68	Ibid.	Yempv
Average earnings per week (one-year lead), €	\$f_yemLead	747.45	774.68	809.72	809.72	Ibid.	Ymwdt
Self-employed income (2006=1)	\$f_yse	0.928	0.996	1.050	0.965	https://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=RV A01&PLanguage=0	Yse
Farm income (2006=1)	\$f_ysef	0.928	0.996	1.050	0.965	Ibid.	
Personal rate for contributory benefits, claimant working age	\$f_benct	193	198	203	203	Statutory parameter	
Personal rate for contributory benefits, claimant retirement age	\$f_penct	238.3	243.3	248.3	248.3	Statutory parameter	pyr, poact, psuwdct, pdi

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Personal rate for means-tested benefits claimant working age	\$f_benmt	193	198	203	203	Statutory parameter	bfalp, bsa00, bhl, buncnc, bunct, bdict, bdinc
Personal rate for means-tested benefits retirement age	\$f_penmt	227	232	237	237	Statutory parameter	psuwdnc, poanc
Child benefit rate for first two children	\$f_bch	140	140	140	140	Statutory parameter	Bch
Maternity benefit rate, lower limit	\$f_bma	235	240	245	245	Statutory parameter	Bma
Unit index	\$f_unit	1	1	1	1		tpr, yds

7 ANNEX 2: MACROVALIDATION TABLES

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

	EUROMOD		External				Ratio			
	2017	2017	2018	2019	2020	2017	2018	2019	2020	
Employed	2,102	2,194	2,258	2,323	N/A	0.96	0.93	0.91	N/A	
Unemployed	183	158	137	121	N/A	1.16	1.33	1.51	N/A	

Sources: EUROMOD; Labour Force Survey.

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

	EUROMOD		External				Ratio			
	2017	2017	2018	2019	2020	2017	2018	2019	2020	
Employment income	1,951	2,256	2,331	N/A	N/A	0.86	0.84	N/A	N/A	
Fringe benefits	76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Self-employment income	388	305	316	N/A	N/A	1.27	1.23	N/A	N/A	
Dividend income	368	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Rental income	197	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Private pensions	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Sources: EUROMOD; Office of the Revenue Commissioners.

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

	EUROMOD				External				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Employment income	73,034	75,425	78,104	81,708	88,350	94,044	N/A	N/A	0.83	0.80	N/A	N/A
Fringe benefits	356	357	360	360	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employment income	16,375	18,606	19,609	18,030	19,318	20,740	N/A	N/A	0.85	0.90	N/A	N/A
Dividend income	276	300	318	300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rental income	1,730	1,738	1,753	1,751	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Private pensions	467	469	473	473	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources: EUROMOD; Office of the Revenue Commissioners.

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

	EUROMOD		External				Ratio			
	2017		2017	2018	2019	2020	2017	2018	2019	2020
Benefits										
Education allowances	89		11	9	7	N/A	8.15	10.09	12.75	N/A
Residual family allowances	64		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rent/Mortgage Supplement ¹⁷	45		33	N/A	N/A	N/A	1.36	N/A	N/A	N/A
Fuel Allowance and residual housing allowances ¹⁸	450		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Household Benefits Package	508		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social welfare and pensions from abroad	17		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Donations from charitable organisations and Exceptional Needs Payment	45		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources: EUROMOD; Statistical Information on Social Welfare Services Annual Report 2019, Department of Employment Affairs and Social Protection.

¹⁷ The EUROMOD value here is a non-simulated value from 2016, as now we simulate Rent Supplement which will be displayed in tables 4.7 and 4.8.

¹⁸ The EUROMOD value here is a non-simulated value from 2016, as we now simulate Fuel Allowance which will be displayed in tables 4.7 and 4.8.

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

	EUROMOD				External				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Benefits												
Education allowances	331	333	336	340	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residual family allowances	261	262	264	267	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rent/Mortgage Supplement ¹⁹	211	212	215	N/A	235	N/A	N/A	N/A	0.90	N/A	N/A	N/A
Fuel Allowance and residual housing allowances ²⁰	164	165	168	N/A	229	N/A	N/A	N/A	0.72	N/A	N/A	N/A
Household Benefits Package	287	289	291	291	232	248	187	N/A	1.24	1.17	1.55	N/A
Social welfare and pensions from abroad	45	45	45	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Donations from charitable organisations and Exceptional Needs Payment	15	15	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources: EUROMOD; Statistical Information on Social Welfare Services Annual Report 2019, Department of Employment Affairs and Social Protection.

¹⁹ From 2020 onwards, Rent Supplement is simulated, and 2020 validation results are displayed in tables 4.7 and 4.8.

²⁰ From 2020 onwards, Fuel Allowance is simulated, and 2020 validation results are displayed in tables 4.7 and 4.8.

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

	EUROMOD				SILC	Ratio	External				Ratio			
	2017	2018	2019	2020	2017	2017	2017	2018	2019	2020	2017	2018	2019	2020
Benefits														
State Pension (Contributory)	589	589	589	589	589	1.00	394	412	N/A	N/A	1.49	1.43	N/A	N/A
State Pension (Transition)	0	0	0	0	0	N/A	55	N/A	N/A	N/A	0.00	N/A	N/A	N/A
Widow's etc. (Contributory) Pension	31	31	31	31	40	0.79	121	122	N/A	N/A	0.26	0.26	N/A	N/A
Invalidity pension	197	197	197	197	209	0.94	58	58	N/A	N/A	3.43	3.41	N/A	N/A
Injury Benefit	9	9	9	9	9	1.00	1	1	N/A	N/A	8.28	9.58	N/A	N/A
Illness Benefit	6	6	6	6	9	0.72	53	56	N/A	N/A	0.12	0.11	N/A	N/A
Jobseeker's Benefit	101	101	101	101	106	0.95	35	34	N/A	N/A	2.86	2.96	N/A	N/A
Maternity Benefit	15	15	15	15	0	N/A	22	21	N/A	N/A	0.68	0.70	N/A	N/A
State Pension (Non-Contributory)	79	79	79	79	100	0.79	95	95	N/A	N/A	0.83	0.83	N/A	N/A
Widow's etc. (Non-Contributory) Pension	8	8	8	9	1	9.22	1	1	N/A	N/A	5.73	5.87	N/A	N/A
Disability Allowance	108	108	108	116	132	0.82	134	141	N/A	N/A	0.81	0.77	N/A	N/A
Jobseeker's Allowance	259	259	260	265	350	0.74	184	155	N/A	N/A	1.40	1.67	N/A	N/A
One-Parent Family Payment	107	103	102	41	140	0.76	39	39	N/A	N/A	2.72	2.73	N/A	N/A

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Supplementary Welfare Allowance	0	0	0	1	13	0.03	18	16	N/A	N/A	0.02	0.02	N/A	N/A
Working Family Payment	13	13	10	10	16	0.80	58	54	N/A	N/A	0.22	0.24	N/A	N/A
Child Benefit	683	683	683	683	683	1.00	625	628	N/A	N/A	1.09	1.09	N/A	N/A
Fuel Allowance	0	0	0	403	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rent Supplement	0	0	0	10	0	N/A	32	23	16	N/A	0.00	0.00	0.00	N/A
Pandemic Unemployment Payment	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Temporary Wage Subsidy Scheme	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance Contributions														
Income Tax	1,990	2,026	2,054	2,059	N/A	N/A	1,579	1,652	N/A	N/A	1.26	1.20	N/A	N/A
Universal Social Charge	1,814	1,842	1,861	1,880	N/A	N/A	1,726	1,798	N/A	N/A	1.05	1.01	N/A	N/A
Local Property Tax	1,322	1,322	1,322	1,322	N/A	N/A	1,920	1,920	1,920	N/A	0.69	0.69	0.69	N/A
Employee PRSI	1,454	1,473	1,496	1,523	N/A	N/A	2,168	2,220	N/A	N/A	0.67	0.66	N/A	N/A
Self-employed PRSI	335	345	348	342	N/A	N/A	275	306	N/A	N/A	1.22	1.10	N/A	N/A
Employer PRSI	1,951	1,951	1,951	1,951	1,894	1.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Sources: EUROMOD; Statistical Information on Social Welfare Services Annual Report 2019, Department of Employment Affairs and Social Protection; Office of the Revenue Commissioners.

Notes: External benefit recipient numbers are at 31 December and may therefore differ from the total annual number of recipients.

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

	EUROMOD				External				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Benefits												
State Pension (Contributory)	8,222	8,390	8,560	8,632	4,916	5,217	5,603	N/A	1.67	1.61	1.53	N/A
State Pension (Transition)	0	0	0	0	0	0	0	N/A	0	0	0	N/A
Widow’s etc. Pension (Contributory)	351	361	373	375	1,467	1,510	1,559	N/A	0.24	0.24	0.24	N/A
Invalidity Pension	2,378	2,439	2,507	2,523	673	694	728	N/A	3.53	3.51	3.44	N/A
Injury Benefit	49	49	49	51	20	18	14	N/A	2.51	2.73	3.62	N/A
Illness Benefit	36	35	36	38	599	623	607	N/A	0.06	0.06	0.06	N/A
Jobseeker’s Benefit	389	399	410	410	340	339	348	N/A	1.14	1.18	1.18	N/A
Maternity Benefit	96	98	100	100	256	265	267	N/A	0.37	0.37	0.38	N/A
State Pension (Non-Contributory)	969	986	1,005	1,024	995	1,020	1,043	N/A	0.97	0.97	0.96	N/A
Widow’s etc. Pension (Non-Contributory)	77	79	80	90	14	14	14	N/A	5.44	5.51	5.75	N/A
Disability Allowance	1,223	1,254	1,292	1,383	1,469	1,586	1,706	N/A	0.83	0.79	0.76	N/A
Jobseeker’s Allowance	1,657	1,688	1,740	1,822	2,103	1,841	1,629	N/A	0.79	0.92	1.07	N/A
One-Parent Family Payment	1,156	1,187	1,255	534	498	511	533	N/A	2.32	2.32	2.35	N/A
Supplementary Welfare Allowance	4	4	4	11	97	112	120	N/A	0.04	0.03	0.03	N/A
Working Family Payment	56	53	39	44	415	411	397	N/A	0.13	0.13	0.1	N/A
Child benefit	2,040	2,040	2,040	2,040	2,086	2,098	2,103	N/A	0.98	0.97	0.97	N/A

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Fuel Allowance	N/A	N/A	N/A	300	229	240	235	N/A	0.72	0.69	0.71	N/A
Rent Supplement	N/A	N/A	N/A	21	231	175	125	N/A	0.91	1.21	1.72	N/A
Pandemic Unemployment Payment	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Temporary Wage Subsidy Scheme	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Taxes and Social Insurance Contributions												
Income Tax	18,807	20,266	21,369	21,981	15,380	16,589	N/A	N/A	1.22	1.22	N/A	N/A
Universal Social Charge	3,761	3,893	4,004	4,079	3,474	3,553	N/A	N/A	1.08	1.10	N/A	N/A
Local Property Tax	318	318	318	318	459	455	444	N/A	0.69	0.70	0.72	N/A
Employee PRSI	2,678	2,783	2,900	3,056	2,114	2,280	2,491	N/A	1.27	1.22	1.16	N/A
Self-employed PRSI	664	754	793	730	522	605	631	N/A	1.27	1.25	1.26	N/A
Employer PRSI	7,696	8,032	8,325	9,429	7,137	7,697	8,408	N/A	1.08	1.04	0.99	N/A

Sources: EUROMOD; Statistical Information on Social Welfare Services Annual Report 2019, Department of Employment Affairs and Social Protection; Office of the Revenue Commissioners.

Table 23. Table 4.9. Distribution of equivalised household disposable income

	EUROMOD				External				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
D1	3.8	3.7	3.7	3.5	3.4	3.7	N/A	N/A	1.10	1.00	N/A	N/A
D2	5.0	5.0	4.9	4.9	5.0	5.3	N/A	N/A	1.00	0.94	N/A	N/A
D3	5.9	5.9	5.8	5.8	6.0	6.2	N/A	N/A	0.99	0.95	N/A	N/A
D4	6.8	6.8	6.7	6.7	6.9	7.2	N/A	N/A	0.98	0.94	N/A	N/A
D5	7.9	7.9	7.9	8.0	7.9	8.2	N/A	N/A	1.00	0.96	N/A	N/A
D6	9.2	9.2	9.2	9.2	9.1	9.2	N/A	N/A	1.01	1.00	N/A	N/A
D7	10.5	10.4	10.4	10.7	10.5	10.3	N/A	N/A	1.00	1.01	N/A	N/A
D8	12.2	12.2	12.2	12.2	12.2	12.1	N/A	N/A	1.00	1.01	N/A	N/A
D9	14.8	14.7	14.8	14.9	14.9	14.3	N/A	N/A	0.99	1.03	N/A	N/A
D10	23.9	24.2	24.4	24.2	24.2	23.5	N/A	N/A	0.99	1.03	N/A	N/A
Median	23,479	24,153	24,887	25,492	22,879	24,920	N/A	N/A	1.03	0.97	N/A	N/A
Mean	27,245	28,255	29,157	29,505	27,006	28,630	N/A	N/A	1.01	0.99	N/A	N/A
Gini	30.1	30.5	30.7	30.9	30.6	28.9	N/A	N/A	0.98	1.06	N/A	N/A
S80/S20	4.4	4.5	4.5	4.6	4.6	4.2	N/A	N/A	0.96	1.06	N/A	N/A

Sources: EUROMOD; EUROSTAT.

Note: Household disposable income is equivalised using the modified OECD equivalence scale.

Table 4.10. Poverty rates by gender and age

	EUROMOD				External				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
40% of median equivalised household disposable income												
Total	2.3	2.2	2.1	2.9	3.1	2.7	N/A	N/A	0.74	0.80	N/A	N/A
Males	2.1	2.0	1.9	2.5	2.8	2.8	N/A	N/A	0.77	0.71	N/A	N/A
Females	2.4	2.3	2.3	3.3	3.3	2.7	N/A	N/A	0.74	0.87	N/A	N/A
50% of median equivalised household disposable income												
Total	7.9	7.9	7.8	9.7	8.2	7.1	N/A	N/A	0.96	1.12	N/A	N/A
Males	7.5	7.5	7.4	9.0	7.4	6.9	N/A	N/A	1.01	1.08	N/A	N/A
Females	8.3	8.4	8.2	10.3	8.9	7.3	N/A	N/A	0.94	1.15	N/A	N/A
60% of median equivalised household disposable income												
Total	17.5	17.3	18.1	18.7	15.6	14.9	N/A	N/A	1.12	1.16	N/A	N/A
Males	16.0	15.8	16.4	17.3	14.7	13.5	N/A	N/A	1.09	1.17	N/A	N/A
Females	18.9	18.8	19.8	20.0	16.5	16.3	N/A	N/A	1.15	1.15	N/A	N/A
70% of median equivalised household disposable income												
Total	26.7	26.4	26.8	27.9	24.6	24.1	N/A	N/A	1.09	1.10	N/A	N/A
Males	24.5	24.2	24.7	25.6	23.7	21.9	N/A	N/A	1.03	1.11	N/A	N/A
Females	29.0	28.6	29.0	30.1	25.4	26.3	N/A	N/A	1.14	1.09	N/A	N/A
60% of median equivalised household disposable income												
0-15 years	20.0	19.7	20.4	22.3	15.6	14.8	N/A	N/A	1.28	1.33	N/A	N/A
16-24 years	16.3	16.0	16.1	17.9	24.8	17.0	N/A	N/A	0.66	0.94	N/A	N/A
25-49 years	12.7	12.5	12.9	14.5	11.8	11.2	N/A	N/A	1.08	1.12	N/A	N/A
50-64 years	17.1	16.7	16.7	18.4	17.0	16.2	N/A	N/A	1.01	1.03	N/A	N/A
65+ years	26.1	26.8	30.5	23.8	14.8	20.2	N/A	N/A	1.76	1.33	N/A	N/A

Sources: EUROMOD; EUROSTAT.

Note: Household disposable income is equivalised using the modified OECD equivalence scale.

Table 4.11. Minimum wage validation (monetary values in € million per year)

	Baseline				National Minimum Wage				Ratio			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Equivalised disposable income	85,661	88,844	91,663	92,774	85,661	88,844	91,663	92,630	1.00	1.00	1.00	1.00
Employment income	73,034	75,425	78,104	81,708	73,034	75,425	78,104	81,708	1.00	1.00	1.00	1.00
Income tax	18,807	20,266	21,369	21,981	18,807	20,266	21,369	21,977	1.00	1.00	1.00	1.00
Employee PRSI & pension contributions	3,029	3,158	3,260	3,452	3,029	3,158	3,260	3,452	1.00	1.00	1.00	1.00
Gini coefficient (%)	30.1	30.5	30.7	30.9	30.1	30.5	30.7	31.1	1.00	1.00	1.00	0.99
Poverty rate (%)	17.5	17.3	18.1	18.7	17.5	17.3	18.1	19.0	1.00	1.00	1.00	0.98

Source: EUROMOD.

Notes: Baseline: no adjustments to employment income apart from uprating; National Minimum Wage: hourly employment income adjusted so as not to be lower than the National Minimum Wage (see Part 2 for more details on the implementation of the National Minimum Wage). The poverty rate is defined as the proportion of individuals in households with equivalised household disposable income below 60% of the median.

8 ANNEX 3: POLICY EFFECTS (2019-2020)

Table A3.1 and Figure A3.1 show the effect of the 2020 policies on mean equivalised household disposable income (EHDI) by income component and income decile. The effect is estimated as the difference between simulated EHDI under the 2020 system (deflating monetary parameters by the Harmonized Index of Consumer Prices) and the 2019 system, as a percentage of mean EHDI in 2019.

In total, mean EHDI is 0.05% lower under the 2020 system than under the 2019 system. Other than the lowest decile, looking at individual deciles this change is somewhat regressive as low-income households are generally losing more than higher income households.

Changes in means-tested benefits account for a 0.21% loss in mean EHDI, with a particularly large loss in the lower income deciles – specifically, a 1.36% loss in the second to lowest decile and a 0.56% loss in the third decile. The lowest decile experiences a gain of 0.59% in mean EHDI. Increase in public pensions account for a 0.12% increase in EHDI. On par with public pensions, changes in direct taxes also account for a 0.12% increase in mean EHDI, with only a slight loss in the bottom decile of 0.04%.

The mean income losses here may be due to a combination of factors related to policy changes between 2019 and 2020. Results shown are in line with post budget analysis by the Economic & Social Research Institute which predicted that income would be lower in 2020 compared to a price indexed 2019 budget. The reduction in mean income is mainly driven by changes in means-tested benefits which did not keep pace with inflation.

All other income components have only a small effect on average equivalised household disposable income. Please note that these results represent the changes in the EUROMOD baseline and do not include new COVID related policies, such as the *Pandemic Unemployment Payment (PUP)* or the *Temporary Wage Subsidy Scheme (TWSS)*.

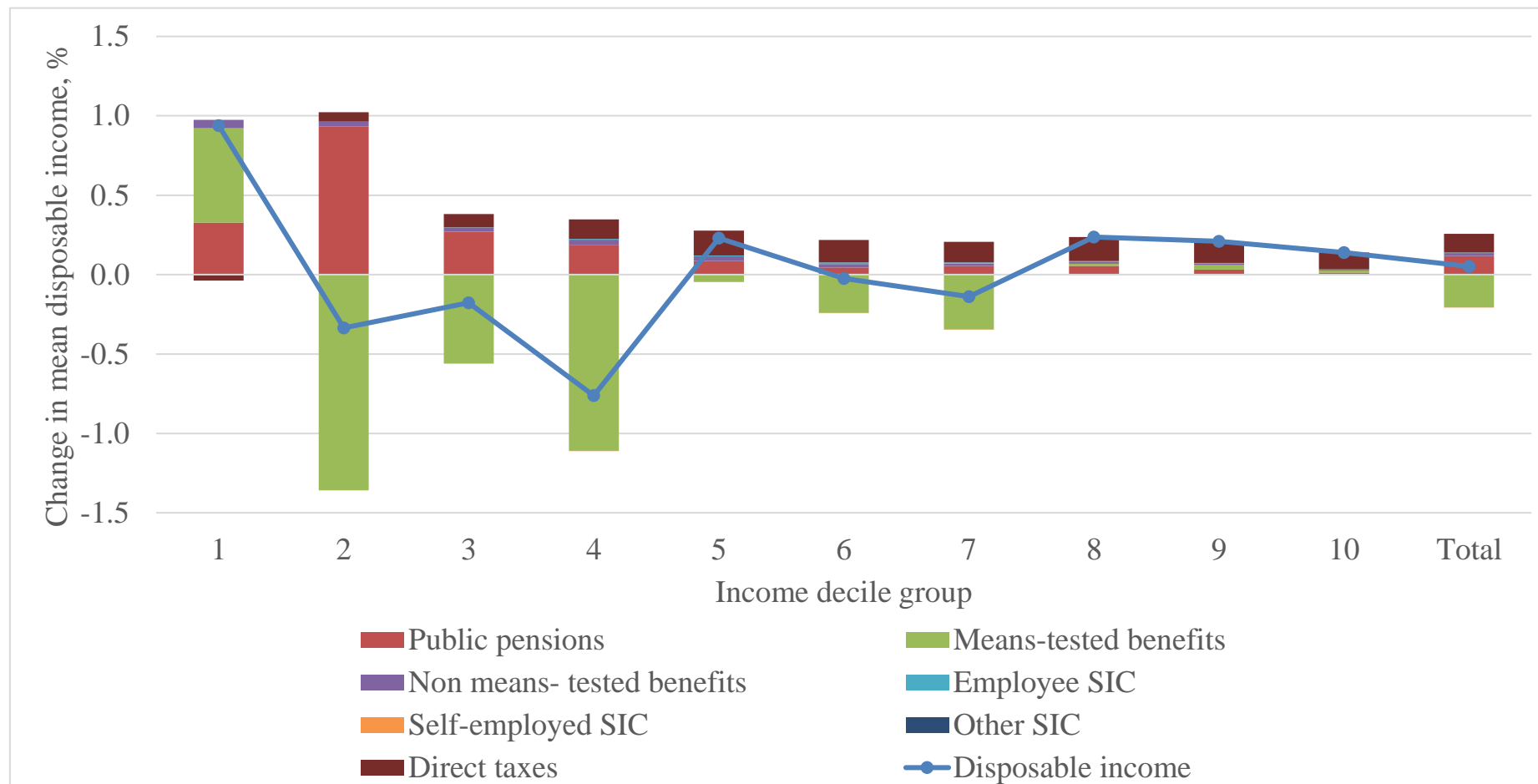
Table A3.1: Percentage change in average equivalised household disposable income: 2019-2020 (CPI indexation)

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.33	0.59	0.05	0.00	0.00	0.00	-0.04	0.94
2	0.00	0.93	-1.36	0.03	0.00	0.00	0.00	0.06	-0.34
3	0.00	0.27	-0.56	0.03	0.00	0.00	0.00	0.08	-0.18
4	0.00	0.19	-1.11	0.04	0.00	0.00	0.00	0.12	-0.76
5	0.00	0.09	-0.05	0.03	0.00	0.00	0.00	0.16	0.23
6	0.00	0.04	-0.24	0.02	0.01	0.00	0.00	0.14	-0.02
7	0.00	0.05	-0.35	0.02	0.01	0.00	0.00	0.13	-0.14
8	0.00	0.05	0.01	0.01	0.00	0.00	0.00	0.15	0.24
9	0.00	0.03	0.03	0.01	0.00	0.00	0.00	0.14	0.21
10	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.11	0.14
Total	0.00	0.12	-0.21	0.02	0.00	0.00	0.00	0.12	0.05

Source: EUROMOD.

Notes: income deciles are based on household disposable income in 2018, equivalised using the modified OECD equivalence scale. Each policy system has been applied to the same input data, adjusting monetary parameters by the Harmonized Index of Consumer Prices (HICP).

Figure A3.1: Percentage change in equivalised household disposable income: 2019-2020 (CPI indexation)



Source: EUROMOD

Notes: income deciles are based on household disposable income in 2018, equivalised using the modified OECD equivalence scale. Each policy system has been applied to the same input data, adjusting monetary parameters by the Harmonized Index of Consumer Prices (HICP).