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EUROMOD Country Report - Netherlands

2021-2024

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

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

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

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

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

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

EUROMOD documentation: https://euromod-web.jrc.ec.europa.eu/resources/documentation
Glossary of EUROMOD terms: https://euromod-web.jrc.ec.europa.eu/resources/glossary
Policy parameters used in EUROMOD: https://euromod-web.jrc.ec.europa.eu/resources/parameters

CONTENTS

1. BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The tax-benefit system is largely a unified, national system. The main exception is the immovable property tax (*Onroerendezaakbelasting, OZB)* collected and determined by local authorities (municipalities).
- The tax system generally changes on 1st January, each year. Main benefit changes happen at the same time, but may also be implemented on 1st July.
- Up to 2012, the state pension age was 65 for men and women. Beginning in 2013, the state pension age is gradually increased to 67 in 2024. After 2024, the state pension age will follow changes in the life expectancy.
- Minimum school leaving age is 16; dependent children are defined as age under 16 or under 18 and (largely) provided for by the parents.
- For benefit purposes lone parents are the parents of resident dependent children; they do not cohabit with a partner (but could live with other family members). For tax purposes a lone parent is a parent of a resident dependent child; here, the only other household members are children aged younger than 27.
- The income tax system is largely an individual system, with the spouses being assessed independently. However, until 2023 spouses with low or zero taxable income may be entitled to tax credits depending on the income of a higher earning partner. From 2023 on this tax credits are not paid anymore to low or zero taxable income spouses born after 1962.
- The means-tested benefit system assesses entitlement according to benefit unit income. The benefit unit is the nuclear family - the couple (cohabiting or married) or single adult plus any dependent children.
- Income tax withholdings are usually collected in such a way that the amount due in the financial year is more or less approximated. In principle all tax payers must file a tax return for income tax.
- Capital income taxation amounts to 30% of the assumed rate of return of 4% (taking account of a minimum threshold). Starting in 2017, the assumed rate of return is differentiated: low amounts of assets are assumed to yield the lowest rates of return.
- Most taxation amounts are subject to automatic yearly indexation by the inflation rate. Net benefits are linked to the net minimum wage.
- Most social contributions and state benefits and pensions are assessed and delivered on a monthly basis. Amounts are referred to in monthly terms. The main exception is income tax, where liability is based on annual income and allowances and thresholds are referred to in annual terms. Another exception is child benefit, which is paid out on a three-monthly basis. Furthermore, the municipal property tax is levied annually.
- Self-employed who work a minimum number of hours (1,225 per year) in their own firm are entitled to self-employment deduction. They are not included in unemployment insurance and disability insurance and are subject to separate arrangements with respect to social assistance. If the partner works in the business for no pay, the self-employed can apply for the working partner's abatement.
- Consumption taxes consist of (1) VAT with two rates (standard and reduced) and (2) excises on tobacco, alcohol and fuels.

- The policy parameters saved as constants in the model and their values for the most recent year are available at https://euromod-web.jrc.ec.europa.eu/resources/parameters.

1.2 Benefits

Child benefit (*kinderbijslag AKW*): benefit paid to all couples and single parents with dependent children aged below 18. Amount per child depends on age of the child and, to a minor extent, on the number of dependent children. The benefit is not taxable.

Survivor benefit (*nabestaandenuitkering ANW*): paid to surviving spouses aged younger than the state pension age, with a dependent child or a disability (or born before 1st January, 1950). The benefit is means tested, income received 'in relation with work' (i.e. social insurance benefits) are deducted entirely, but part of income received from work is exempt.

The state old age pension (*ouderdomspensioen, AOW)* is a flat rate benefit paid to all persons aged above the state pension age who were resident in the Netherlands between the ages of 15 and the state pension age. For each year of absence from the Netherlands during the 50 years before reaching the state pension age 2% of the full benefit is deducted.

Social assistance (*bijstand)* is paid to households (couples, single parents, single persons) with low income and low assets. Separate arrangements without asset test exist for unemployed persons born before 1st January 1965 (IOAW), self-employed persons above 55 (IOAZ) and unemployed persons above 60 year and 4 months (IOW).

Rent allowance (*huurtoeslag*) is a benefit paid to tenants with low income and low assets whose rent exceeds a norm amount (but does not exceed a maximum 'social rent' threshold). The benefit is not taxable. Income and assets of the applicant, his/her benefit partner ('*toeslagpartner*') and other residents are taken into account.

Unemployment benefit (*werkloosheidsuitkering WW*) is paid to persons younger than the state pension age who lost their job. The benefit amount is a percentage of previous earnings (with a maximum). Entitlement requires a certain minimum employment history as well as active job search. Duration depends on age and employment history. The maximum duration is 24 months.

Disability benefit (*arbeidsongeschiktheidsuitkering, WIA):* two main arrangements, after two years of illness, for working-age persons. IVA for persons who fully lost their ability for work (> 80%) with no/small recovery probability, WGA for persons who lost their ability for work for 35-80%. IVA pays 75% of earnings (with maximum) until the state pension age. WGA depends on rate of disability and extent to which remaining ability is used. Notably, WIA was introduced in 2006. Disability benefit recipients whose disability started earlier keep the previous benefit (WAO). Moreover, separate disability arrangements exist for persons who were already disabled as a child (Wajong) and for disabled self-employed (WAZ, no new cases accepted).

Care allowance (*zorgtoeslag*) is a benefit paid by the tax authorities to persons with low income to (partly) enable them to pay for their (compulsory) private health insurance. Income and assets of the applicant and his/her benefit partner ('*toeslagpartner*') are taken into account.

Child care allowance (*kinderopvangtoeslag*) is a benefit paid by the tax authorities to persons in work or education to (partly) enable them to pay for (professional) child care. The benefit consists of two parts: an income dependent part paid out of the government budget and a part dependent on the actual child care costs, paid for by the employer.

The Work and care act (Wet Arbeid en Zorg, WAZO) regulates several allowances related to maternity, parenthood and care.

1. **Pregnancy and Childbirth Allowance (*Zwangerschaps- en bevallingsuitkering*).** This is a non-contributory benefit for the period of maternity leave. Available to employees, recipients of unemployment and disability benefits and self-employed persons. The allowance is paid for at least 16 weeks (including 4-6 weeks before the childbirth and 10 weeks after the childbirth).
2. **Adoption and Foster care Allowance (*Adoptie- en pleegzorguitkering).*** This is a non-contributory benefit available to employees and recipients of unemployment and disability benefits. The allowance is paid for a maximum of 6 weeks for both parents who adopt a child or become a foster-parent.
3. **Paternity leave, parental leave (*Kraamverlof, ouderschapsverlof*).** The partner of the mother is entitled to one working week of paid paternity leave and additionally five weeks paid parental leave per childbirth, if he/she is employee. The payment is 70% of the salary with a maximum of 70% of the social security maximum daily wage. In addition, both parents are entitled to 26 weeks of parental leave per child, of which 9 weeks in the first year are paid (70%).

Child related budget (*kindgebonden budget*) is a means tested benefit paid by the tax authorities to parents with dependent children. The benefit is not taxable. Income and assets of the applicant and his/her benefit partner ('*toeslagpartner*') are taken into account.

There are a number of specific benefits for specific target groups such as artists, military, war victims 1940-45, persons active in the resistance 1940-45, and there are specific compensations for necessary expenditures by chronically ill and handicapped and e.g. families with children younger than 18 who are in specific types of education not financed by the state. There are also specific social assistance arrangements for the self-employed.

- ***Not strictly benefits***

In addition there are components of income that are not strictly part of the benefit system. These include:

Scholarships (*basisbeurs, aanvullende beurs)* are paid to students aged between 18 and 30. The basic scholarship (*basisbeurs*) depends on the level of education and on whether the student lives with his parents or not. The supplementary scholarship *(aanvullende beurs)* depends on the level of education and the income of the parents. The paid amounts also depend on the own income of the student and are conditional on the progress in education. Additionally, student loans are available. Notably, from September 1, 2015 basic scholarships for new students in higher education have been replaced by student loans.

Occupational (employer-provided) **pensions** are earnings related pensions that for the majority of employees supplement the flat-rate state pension (AOW) after the state pension age. In a decreasing number of cases, the occupational pensions include early retirement arrangements (starting before the state pension age).

In case of **sickness** the employer pays (at least) 70% of the wage for a period of at most two years (*Wet Uitbreiding Loondoorbetalingsverplichting Bij Ziekte* and *Wet Verlenging Loondoorbetalingsverplichting Bij Ziekte*).

1.3 Social Insurance contributions

Many benefits are largely or wholly paid for by social insurance contributions. A difference can be made between employees insurances (unemployment insurance, *Werkloosheidswet (WW)* and

disability insurance, *Wet Werk en Inkomen naar Arbeidsvermogen (WIA)*) where the contributions are shared between employee and employer or paid by the employer, and national insurance schemes (basic state pension: *Algemene Ouderdomswet (AOW)*, survivor benefit *Algemene Nabestaandenwet* (*ANW)* and long term health care costs: *Wet Langdurige Zorg (WLZ))* which are collected by the tax authorities in combination with income tax. In addition, all residents are obliged to take out private health insurance, which is partly paid for by amounts determined by the insurance companies and partly by income related amounts which are paid by the employer, if any (health care insurance act, *Zorgverzekeringswet (ZVW)*).

Employees insurance contributions

Unemployment insurance contribution (*werkloosheidswet, WW)* is partly paid by the employer and partly by the employee. A distinction can be made between a national component and a component which differs by sector. Starting in 2020, a distinction is made between a low contribution for employees with a fixed contract and a high contribution for employees with a temporary or flexible contract.

Disability insurance contribution (*Wet Werk en Inkomen naar Arbeidsvermogen (WIA)*) is paid by the employer. Unemployment and disability insurance have the same tax base and the same ceiling determining the maximum contribution and the maximum benefit).

Peoples insurance contributions:

Basic state pension contribution *(Algemene Ouderdomswet (AOW))* is paid by all persons with taxable income from work and/or accommodation under the state pension age. It is calculated as a percentage up to a maximum.

Survivor benefit contribution *(Algemene Nabestaandenwet (ANW))* is paid by all persons with taxable income from work and/or accommodation. It is calculated as a percentage up to a maximum.

Act on long term health care cost contribution *(Wet Langdurige Zorg (WLZ))* is also paid by all persons with taxable income from work and/or accommodation. It is also calculated as a percentage up to a maximum.

Other social insurance contributions:

Health insurance contribution (*Zorgverzekeringswet ZVW*): all residents have to insure privately and pay health insurance premiums to health insurance companies. In addition, an income related contribution is levied up to a maximum; this contribution is usually paid by the employer or benefit agency in the case of earnings and most benefits (not: old age pensions).

1.4 Taxes

Direct taxes:

Personal Income Tax (*inkomstenbelasting*): income is taxed at the individual level, but tax credits of partners with a low income may depend on the income of the higher earning spouse. The base of the income tax is relatively broad. The main exceptions are child benefit and child support, and rent allowance, care allowance and child care allowance. Mortgage interest payments for the main residence are deductible from taxable income but imputed rent is taxed. Apart from the main residence, (returns from) properties and assets are taxed by a separate schedule. Income tax is largely collected at source (*loonbelasting*) but the final assessment is made on the basis of tax returns sent in after the end of the tax year (= calendar year).

Corporate Income Tax (*vennootschapsbelasting*) is taxed on the profits of (larger) firms.

Dividend Tax (*dividendbelasting*): companies paying dividends to their shareholders have to pay a fixed percentage as dividend tax. For shareholders who also pay income tax the dividend tax withheld by the company is deducted from the income tax due.

Inheritance tax (successierecht): Inheritances are charged using flat tax rates. There are exemptions and deductions as well as different rates, dependent on the type of relationship the individual has/had with the deceased and the nature of the donation or bequest.

Indirect taxes:

Value Added Tax (*belasting toegevoegde waarde*): there are two rates: 9 percent for books, magazines and newspapers, food and non-alcoholic beverages, agricultural products and services, personal transport, rent of holiday homes and campings, access to cultural and sports events, services of hair dressers, repairs of clothing, shoes and bicycles, medicines; and 21 percent for other goods and services. Immovable property older than two years, medical services, education, sports services to club members, socio-cultural services and products, child care, care and housekeeping services, most bank services and services by composers, writers and journalists are exempt.

Excise duties (*accijnzen*): are charged on alcohol and alcoholic beverages, beer, tobacco, and fuels. Soft drinks are subject to a separate consumption tax (*verbruiksbelasting*).

Motor vehicle tax (*motorrijtuigenbelasting*) A tax applies to individuals and corporations owning motor vehicles. The amount due depends on the type of motor vehicle, the cylinder capacity, the horsepower and the type of fuel used.

Tax of passenger cars and motorcycles (*belasting personenauto's en motorrijwielen*) is charged on new and/or imported cars and other motor vehicles.

A **Transfer tax (*overdrachtsbelasting*)** of 2% is charged when one buys an immovable property (except newly built properties). As from 1 January 2021, a rate of 8% is charged if the property will not be used as the residence of the buyer. There is an exception for buyers in the age 18 – 35 years. They do not have to pay the transfer tax if the price of the house is below € 510.000.

Energy tax (*energiebelasting)* is charged on the use of electricity, natural gas, and various fuels.

Municipal taxes:

Immovable property tax (*onroerendezaakbelasting*): is levied by municipal authorities on the owned residence. Municipalities determine the tax as a percentage of the estimated value of the house.

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

2.1 Scope of simulation

Most of the taxes, benefits and social insurance contributions mentioned in the previous section are simulated by EUROMOD, but not all. Some taxes and/or benefits are beyond its scope (i.e. indirect and business taxation) and are ignored. Others cannot be simulated or can only be partially simulated based on the available data: they are included in the EUROMOD database, uprated to the relevant income period and they contribute either as individual or as aggregate

income sources. However this means that eligibility rules and amounts for these income components can only rarely be changed by the model. When possible, the output includes both the simulated and the original survey reported variables.

Table 2.1 and Table 2.2 list the main tax-benefit instruments in the Netherlands, as discussed in Section 1, and provide a brief explanation in which format the instruments are included in the EUROMOD database or why they are not (fully) simulated. The benefits that are simulated in EUROMOD include family benefits that depend on the number of children and their age. Furthermore, EUROMOD simulates a number of contributory (social insurance based) benefits, such as the state pension and non-contributory benefits such as social assistance assigned to low income households. A number of benefits with entitlement rights dependent on contribution history (i.e. unemployment, etc.) are only partially simulated due to the lack of data on previous employment history and salaries received.

Table 2.1 Simulation of benefits in EUROMOD [2021-2024]

	Variable name(s)	Treatment in EUROMOD				Comments
		2021	2022	2023	2024	
State pension	poa_s	S	S	S	S	
Survivor benefit	psu_s	S	S	S	S	
Other pensions	poacm	I	I	I	I	Insufficient information on contributions/rules etc
Contributory Unemployment benefit	bunct	PS	PS	PS		Insufficient information on unemployment history
Other unemployment benefit	bunst	I	I	I	I	Insufficient information
Disability benefit	pdi	I	I	I	I	Insufficient information on earnings history, extent of disability etc
General Social assistance	bsa00_s	S	S	S	S	
Other taxable social assistance	bsaot	I	I	I	I	Insufficient information
Other nontaxable social assistance	bched	I	I	I	I	Insufficient information
Scholarships etc	bed	I	I	I	I	Insufficient information
Sickness benefit	bhl	I	I	I	I	Insufficient information
Care allowance	bhlmt_s	S	S	S	S	
Child benefit	bfa_s	S	S	S	S	
Child allowance	bch_s	S	S	S	S	
Pregnancy allowance	bcbma01	I	I	I	I	Insufficient information
Childbirth allowance	bcbma02	I	I	I	I	Insufficient information
Housing benefit	bho_s	S	S	S	S	
Temporary social assistance self-employed (Covid-19)	bsase00_s	PS	E	-	-	

Monetary compensation for employers (Covid-19)	bmcer_s	PS	E	-	-	In 2022 benefit is calculated but not included in the baseline simulation

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

Most of the direct income taxes and social insurance contributions are simulated (except some minor ones). Nevertheless, application of some income tax allowances or estimation of some income taxation is not possible or not accurate enough due to the lack of more detailed information on a person's disability degree, economic activity type or other specific socio-economic information that is not collected in the EU-SILC database. In such cases, basic tax allowance levels or other general income taxation rules are applied.

Table 2.2 Simulation of taxes and social insurance contributions in EUROMOD [2021-2024]

	Variable name(s)	Treatment in EUROMOD				Comments
		2021	2022	2023	2024	
Personal Income Tax	tin_s	S	S	S	S	
Corporate Income Tax		E	E	E	E	Insufficient information
Inheritance tax		E	E	E	E	Insufficient information
Immovable Property tax		E	E	E	E	Insufficient information
Other direct taxes		E	E	E	E	Insufficient information
Value Added Tax	tva[coicop]	S	S	S	S	Calculation based on extended input files with consumption expenditures from HBS
Excise duties	txa[coicop] txv[coicop]	S	S	S	S	Calculations based on extended input files with consumption expenditures from HBS
Other indirect taxes		E	E	E	E	Insufficient information
Unemployment insurance employees	tsceeui_s	S	S	S	S	
Unemployment insurance employers	tscerui_s	S	S	S	S	
Disability insurance Employers	tscerdi_s	S	S	S	S	
Health insurance	tschl_s	S	S	S	S	
Peoples insurance:	tsceepi_s	S	S	S	S	
Basic State Pension Contribution AOW	i_PIpension	S	S	S	S	
Long term health care contribution WLZ	i_PIhealth	S	S	S	S	

Survivor benefit contribution ANW	i_PIsurvivor	S	S	S	S	

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

2.2 Main policy changes

- ***Main policy changes between 2021 and 2022***

1) Social insurance contributions
   a) Disability insurance contributions were differentiated between small and large firms

2) State pension
   a) The state pension age has been increased by 3 months to 66 years and 7 months.

1) Covid-19
   a) The Covid-19 measures were suspended as of 1 April, 2022

- ***Main policy changes between 2022 and 2023***

1) State pension
   a) The state pension age has been increased by 3 months to 66 years and 10 months.
2) Income tax
   a) In 2023, the payment of tax credits to a spouse with low or zero income ceased altogether for persons born after 1962.
   b) The tax reduction for working residents (work credit) is increased to a maximum of € 5,052 for an income up to € 37,691. At the same time the speed of the decrease of this tax reduction is increased starting at an income of € 37,691.
3) Paid parental leave
   a) From August 2022 (both) parents are entitled to paid parental leave for a period of 9 weeks during the first year of their child. The payment is 70% of the salary with a maximum of 70% of the social security maximum daily wage.

- ***Main policy changes between 2023 and 2024***

1) Minimum wage
   As of 1 January 2024 the minimum wage is an hourly minimum wage instead of a wage based on a monthly, a weekly and an amount per day.

2) Child allowance, child related budget and Child care allowance are increased.

3) State pension
   The state pension age has been increased by 2 months to 67 years.

2.3 Order of simulation and interdependencies

The following table shows the order in which the main elements of the Dutch system are simulated. Notably, although yem_nl (minimum wage calculation) is switched on, the minimum wage is not implemented in the baseline. Social assistance is calculated after all other benefits that are included in the means test have been simulated (bsanet_nl, bsa_gross_nl). The final calculation of social assistance also includes the recalculation of income tax and social insurance contributions. Care allowance and housing benefit are calculated at the end because they depend on taxable income.

Table 2.3 EUROMOD Spine: order of simulation

Policy	Description	2021	2022	2023	2024
uprate_nl	Definition of uprating factors	on	on	on	on
ildef_nl	Definition of income lists	on	on	on	on
tudef_nl	Definition of tax units	on	on	on	on
constdef_nl	Definition of constants	on	on	on	on
random_nl	Random variables for yse loss	on	on	on	on
TransLMA_nl	Definition of transitions	on	on	on	on
yem_nl	Minimum wage	on	on	on	on
neg.nl	Recode negative income from self-employment to zero	on	on	on	on
bfa_nl	Child Benefit	on	on	on	on
bunct_nl	Unemployment ins. benefit	on	on	on	on
bma_nl [S]	Maternity allowance	off	off	off	off
psu_nl	Survivor pension	on	on	on	on
poa_nl	State pension	on	on	on	on
eesic_nl	Employee social ins. contr.	on	on	on	on
tschl_nl	Health ins. contr.	on	on	on	on
tin_nl	Gross income tax (box1)	on	on	on	on
tinkt_nl	Gross income tax (box3)	on	on	on	on
peoplesic_nl	Gross people insurance contribution	on	on	on	on
tintc_nl	Income tax credits	on	on	on	on
chall_nl	Child allowance	on	on	on	on
bsanet_nl	Social assistance benefit (net)	on	on	on	on
bsagross_nl	Social assistance benefit (gross)	on	on	on	on
bsasenet_nl	Temporary social assistance self-employed (net)	on	on	on	on
bsasegross_nl	Temporary social assistance self-employed (gross)	on	off	off	off
chall2_nl	Child allowance recalculated	on	off	off	off
bhlmt_nl	Care allowance	on	on	on	on
ersic_nl	Employer social ins. contr.	on	on	on	on
bho_nl	Housing benefit	on	on	on	on
yemcomp_nl	Monetary compensation for employers (Covid-19)	on	off	off	off
tco_cc	Consumption taxes	off	off	off	off
	Output policies	on	on	on	on

[S] Switch-controlled module.

In the 2020-2021 systems a number of policies has been added in order to simulate the temporary benefit for self-employed suffering income losses as a result of the Covid-19 crisis (*TOZO*) as described above. Similar to bsanet_nl and bsagross_nl, bsasenet_nl calculates the means tested net benefit. This is followed by a recalculation of income tax and social insurance contributions in bsasegross_nl. In addition, monetary compensation for employers suffering loss of revenue (*NOW*) is simulated in yemcomp_nl.

2.4 Policy extensions

Currently, there are three policy extensions[1] used in the Dutch EUROMOD model. Parental Benefits Extension (PBE) allows the user to choose between observed (extension set to off, the default) and simulated (extension on) values of maternity benefit. Due to issues in the validation and consistency over different policy years, the policy is turned off in the baseline. It can be switched on for 2015-2022 in the Run dialogue box.

The Minimum Wave Adjustment (MWA) allows the user to choose between the observed wage and the wage that would result if observed wage was replaced by the statutory minimum wage in cases where the observed wage was lower than the statutory minimum wage.

Benefit Calibration Adjustments (BCA), allowing the user to calibrate the receipt of benefits to match the simulated total number of beneficiaries of a benefit to real expenditure from external statistics. The extension is implemented for the simulation of the social assistance benefit (*bsanet_nl*). The default for the baseline is *off*. When the extension is on, a subset of eligible observations is selected as beneficiaries so that the real number of beneficiaries is reached, removing the benefit from the rest of the eligible observations; when off, all eligible observations are kept as beneficiaries. This extension shares most of its functions with the BTA extension; as a general rule, only one of the extensions should be on, but if both are, the lowest rate between the take-up rate and the calibration rate will be applied. More details on the specific implementation of BCA and BTA extensions are provided in the subsections describing the corresponding benefit(s).

Benefit Take-up Adjustments (BTA), allowing the user to apply non-take-up corrections. The extension is used for the simulation of social assistance benefit (*bsanet_nl*). The default for the baseline is *off*. When the extension is on, a share of (weighted) eligible observations equal to the take-up rate is selected randomly as beneficiaries, removing the benefit from the rest of the eligible observations; when off, all eligible observations are kept as beneficiaries. This extension shares most of its functions with the BCA extension; as a general rule, only one of the extensions should be on, but if both are, the lowest rate between the take-up rate and the calibration rate will be applied. More details on the specific implementation of BCA and BTA extensions are provided in the subsections describing the corresponding benefit(s).

Other policies can be switched on or off by changing the relevant parameters.

In addition, the monetary compensation for employers to mitigate the effects of Covid-19 in 2020 is switched off in the baseline, but can be switched on by the LMA add-on.

HHoT – Unemployment extension (HHoT_un): this extension improves the simulation accuracy of the unemployment insurance benefit when EUROMOD is run with hypothetical data. For instance, in most countries the legislation of this benefit requires information on variables such as individuals' employment history, which are not available in SILC; we can define these

[1] Policy extensions can be switched on (or off) from the Run dialogue box.

variables in HHoT and use them to simulate the policy's rules more precisely when running the model with hypothetical data. This extension is set by default to on when the model is used with HHoT data.

2.5 Benefits

2.5.1 Child benefit (*bfa_nl*)

- ***Brief description***

Benefit targeted to all benefit units with children aged below 18.

- ***Definitions***

Unit of analysis is the benefit unit consisting of the head, spouse or cohabitant partner and children under 16 or under 18 years if they are in education (at least 213 hours per quarter), or unemployed, or at least 45% disabled. Eligible children living in the household, but without parents (i.e. so called "loose children"), are also counted as dependent children.

- ***Eligibility conditions***

Parents (including foster-parents) are eligible for child benefits for children aged less than 18 but eligibility for children aged above 15 and less than or equal to 17 requires that they are in education, or unemployed, or at least 45% disabled. In previous years, for children aged 16 or 17, the parents were assumed to contribute to the sustenance of the children to an important extent, which translated to the condition that the income of the children in this age group should be less than some upper limit. Starting in 2020, this income test has been abolished.

- ***Benefit amount***

The base amount is €279.49 per quarter per child. Different multipliers apply depending on the age of the child:

Table 2.4 Child benefit: base amounts

	2021	2022	2023	2024
Base amount	223.37	224.87	269.76	279.49

Table 2.5 Child benefit: multipliers

AGE	
<6	1
6 to 11	1.2143
12 to 18	1.4286

In 2020 a household with 4 children: 1 aged 3, 1 aged 10, 1 aged 14 and 1 aged 17 would be entitled to (1 + 1.2143 + 2*1.4286) times the base amount per three months.

No taxes/contributions are payable on child benefit. It is not included in the means test for the calculation of social assistance, housing benefit and other benefits.

- ***EUROMOD modelling***

In EUROMOD, the condition that children aged 16 and 17 are in education is assumed to be met if *dec* (current education) > 0, or if *les* = 6 (self-defined economic status = pupil, student, further training, unpaid work experience).

2.5.2 Survivor benefit (*psu_nl*)

- ***Brief description***

Benefit for surviving spouse younger than the state pension age (see section 2.5.3).

- ***Definitions***

Unit of analysis is the benefit unit - consisting of the head, spouse or cohabitant partner and own children under 18 years - if it consists of a surviving spouse with or without children.

- ***Eligibility conditions***

Entitlement to the survivor benefit exists for the survivor younger than the state pension age who:

a) has an unmarried child younger than 18 who does not belong to somebody else's household or

b) is disabled for work for at least 45%

Entitlement to the survivor benefit stops if the survivor repartners, but not if he/she starts living with two or more adults.

- ***Income test***

The survivor benefit is income dependent: income received 'in relation with' work (i.e. social insurance benefits) is deducted entirely, but a part of income received from work (earnings, profits, private pensions (A)) is exempt (0.5 * the minimum wage of €1,684,80 per month (B), plus a third of the remainder). In other words, the disregard equals: max(0, min(A,0.5*B) +0.333*max(A – 0,5*B, 0)). As a result, the benefit is paid in full if income from work is below €842,40.90, and zero if income from work is above €2,709.77. Notably, all these amounts are net of holiday allowance.

Table 2.6 Survivor benefit: relevant thresholds

	2021	2022	2023	2024
Minimum wage (B)	1,684.80	1,725	1,934.40	2,133.59
Full benefit paid below (A)	842.40	862.50	967.20	
No benefit paid above	2,709.77	2,757.92	3064.37	3,175

- ***Benefit amount***

Survivor benefit: maximum: €1,349.79 = €1,244.91 + €87.21 holiday allowance + €17.67 extra allowance per month

As of 2007, recipients of the survivor benefit are awarded an extra allowance[2].

Table 2.7 Survivor benefit: base amounts

	2021	2022	2023	2024
Amount	1,244.91	1,263.61	1,398.11	1,493.51
Holiday allowance	87.21	86.49	90.20	96.51
Extra allowance	17.67	17.90	19.03	20.91
Total	**1,349.79**	**1,368.00**	**1,507.34**	**1,610.93**

The survivor benefit is taxable. It is included in the means test for social assistance and other benefits.

- ***EUROMOD modelling***

In EUROMOD, it is assumed that a holiday allowance of 8% is already included in income from work and benefit income. The holiday allowance added to the survivor benefit is reduced by the same percentage by which the survivor benefit is reduced as a result of the means test.

In EUROMOD, private pensions received by males younger than 60 and females younger than the state pension age[3] are assumed to be private survivor pensions, and, as such, not counted as income. Private pensions received by males aged between 60 and the state pension age are assumed to be old-age pensions, and counted as income received from work.

Notably, the current survivor benefit act ('Algemene Nabestaandenwet', ANW) was introduced on 1st July 1996. Special rules apply for persons who were already survivor before that date, and for persons born between 1st January 1950 and 1st July 1956 who lost their partner before 1st July 1999. These special cases are not taken into account in EUROMOD. Entitlement to ANW may also apply to divorcees if the ex-spouse dies. This is also not taken into account in EUROMOD.

2.5.3 State pension (*poa_nl*)

- ***Brief description***

Flat rate state pension for all residents who have reached the state pension age[4].

- ***Definitions***

Unit of analysis is the individual.

[2] The extra allowance is an addition to the regular allowance. It is added to maintain the purchasing power of the benefit separate from the normal indexation.

[3] We try to distinguish (private) survivor pensions from (early-retirement) old-age pensions. Relatively few women are working up to their early retirement age; therefore we assume that their pensions are survivor pensions (if they are survivor). On the other hand most men receiving pensions between age 60 and the state pension age would be entitled to old age pensions based on their own work history. If younger than 60, the likelihood that they are already receiving an early retirement pension is small, and hence we assume that the pension they receive is a survivor pension if they are survivor.

[4] From 2013 the official pension age is gradually increased from 65 to 67 in 2024. The results presented in this Country Report (for the years 2021-2024) are based on a pension age of 66.

- ***Eligibility conditions***

All residents who have reached the state pension age are entitled to the flat rate State Pension (AOW). If both spouses have reached the state pension age they both receive (in net terms) slightly more than half the (net) minimum wage, whilst single persons receive about 70% of the minimum wage. Persons with a spouse younger than the state pension age old receive 50% of the minimum wage, with a supplement of at most 50% of the minimum wage. The supplement depends on the means of the younger spouse.

- ***Income test***

The only means to be taken into account in the calculation of the State Pension are the means of the younger spouse (if aged below the state pension age). When both spouses have reached the state pension age, they are both entitled to the full flat rate State Pension, irrespective of their income.

Means = max(0, Income 'in relation with' work (i.e. benefits))

+ max(0, 2/3 * max (0, Income from work(A) - 0.15*gross minimum wage(B)).

In other words, there is a disregard of: max (0, min(A, 0.15*B) +1/3 * (max(0, A - 0.15 * B))

Gross minimum wage equals €1,684,80 in 2021. Notably, these amounts are net of holiday allowance. In EUROMOD, it is assumed that in income from work and benefit income a holiday allowance of 8% is included. The holiday allowance added to the supplement of the state pension is to be reduced by the same percentage as the supplement.

Private pensions are counted as income in relation with work.

- ***Benefit amount***

Amounts for the state pension (per month):

Single: €1,266.46 + €71.93 holiday allowance + €26.04 extra allowance= €1364.43.

Married/cohabiting: €857.63 + €51.37 + €26.04 = €935.04 (per person).

Supplement if spouse younger than the state pension age: at most €857.63 + €51.37 = €909.00

Table 2.8 State pension: benefit amounts per person

	2021	2022	2023	2024
Single person	1,266.46	1,290.39	1,425.80	1,536.03
Holiday allowance	71.93	70.54	71.77	76.20
Extra allowance	26.04	26.38	5.00	5.50
Married/cohabiting	857.63	874.69	968.86	1,042.10
Supplement	857.63	874.69	968.86	1,042.10
Holiday allowance	51.37	50.39	51.25	54.44
Supplement holiday allowance	51.37	50.39	51.25	54.44
Extra allowance	26.04	26.38	5.00	5.50

Supplement = max (0, maximum supplement - means of younger spouse)

The latter amounts are valid for pensions started from 1st July 1996. For pensions started earlier, rules for persons with a younger spouse differ to some extent (not taken into account in EUROMOD). Starting in 2015, the supplement for pensioners with a younger spouse is abolished for pensioners who did not receive this supplement previously.

Since 2007, recipients of the state pension are awarded an extra allowance. This extra allowance does not affect the calculation of the supplement.

The state pension is taxable. It is included in the means test for social assistance and other benefits.

In addition to the state pension, many pensioners who were previously employed receive additional occupational pensions (included in *poacm)*, administered by sector- or employer specific pension funds. These pensions usually aim to supplement the flat rate state pension to 70% of average earnings of the employee.

- ***EUROMOD modelling***

EUROMOD does not account for the 2% reduction for each year lived abroad during the 50 years prior to the State Pension age.

2.5.4 Social assistance (*bsanet_nl, bsagross_nl*) and temporary social assistance for self-employed (*bsasenet_nl, bsasegross_nl*)

- ***Brief description***

A means tested benefit for benefit units lacking other sources of income.

- ***Definitions***

Unit of analysis is the benefit unit consisting of the head, spouse or cohabitant partner and children under 16 or under 18 years if they are in education (at least 213 hours per quarter), or unemployed, or at least 45% disabled. Eligible children living in the household, but without parents (i.e. so called "loose children"), are also counted as dependent children.

- ***Eligibility conditions***

A benefit unit (couple, single person, lone parent) is eligible for social assistance if:

a) they are not a student and

b) if single, assets are less than single asset limit of €6,295

c) if married/cohabiting/lone parent, assets are less than married asset limit of €12,590

d) aged 18 or over or

e) a parent (Note: Even if a parent, persons below 18 are not generally entitled)

Self-employed persons with (temporary) low incomes (which includes those in receipt of the separate social assistance benefit (*Besluit Bijstandsverlening Zelfstandigen* BBZ) for self-employed) are not entitled to the regular social assistance benefit (*algemene bijstand,* as defined in the *Participatiewet*), indicated as BSA in this report. In 2020, as result of the COVID-19 crisis, a temporary social assistance for self-employed was introduced (TOZO). Amounts and conditions for this benefit are broadly similar to general social assistance, but in phases 1 and 2 no asset test is performed.

Table 2.9 Social assistance: Asset test amounts

	2021	2022	2023	2024
Single persons	6,295	6,505	7,605	7,575
Couples, lone parents	12,590	13,010	15,210	15,150

Assets include financial assets (savings, cash, shares) of all members of the benefits unit but also the value of cars, motorcycles, caravans, boats, houses. The local authorities (municipalities) have some discretionary power in taking into account the value of cars, motorcycles and caravans (if not extremely expensive, they may be excluded). Debts are subtracted if the recipient of social assistance can show that the debt in question has to be repaid. Homeowners are usually excluded from social assistance (they have to 'eat' their house first).[5]

- ***Income test***

The income base for the means test consists of all other employment income[6], benefits and pensions except child benefits and allowances such as rent allowance and care allowance. Because the benefit is calculated as a net (after tax) amount, this requires the calculation of the taxes and social insurance contributions on all other income components before the entitlement to Social Assistance can be calculated. Notably, Social Assistance is subject to social insurance contributions and income tax as well. It is paid out as a net amount, on top of which the municipalities pay taxes and social insurance contributions directly to the relevant authorities.

So, to obtain net means, income taxation and social insurance contributions payable on gross means have to be calculated. In EUROMOD, the policy modules designed to compute income taxation and social insurance contributions are also used for the purpose of calculating the means taken into account for the calculation of social assistance. The withdrawal rate is 100%.[7]

In the case of a couple, the resulting net BSA amount is supposed to be shared equally among both spouses.

Next, gross social assistance is approximated, by applying grossing-up factors to net BSA: gross BSA = *factor1**net BSA

Table 2.10 Social assistance: Factor 1

	2021	2022	2023	2024

[5] In EUROMOD we approximate financial capital afc on the basis of investment income yiy. Similarly, we could have imputed the value of property on the basis of property income ypr. However, ypr may be income from the rental of rooms in the (rented) house it should be counted as income in the means test. For the time being we count ypr as income in the means test, and do not include an imputed value of property in the asset test.

[6] Employment income of dependent children is not taken into account.

[7] In exceptional cases (not taken into account in EUROMOD) (persons 57.5 - 64, single parents with child younger than 5, persons who are deemed to be dependent on part-time jobs for medical or social reasons) municipalities may allow that (for at most six months) min (0.25*inc, 215) per month is not taken into account when calculating the BSA. Furthermore the interest received on assets below the asset-limit is not taken into account. Some lump sum benefits for necessary education and for accepting a job are not taken into account. In addition, the child tax credit is not taken into account, and for single parents with a child under 5, the child tax credit, the combination credit, the supplementary combination credit and the supplementary single parent credit are not taken into account in the means test.

age < state pension age	1.589825	1.589067	1.58554	1.586546
age >= state pension age	1.061008	1.058201	1.057418	1.056189

Finally, income taxation and social insurance contributions payable on gross social assistance are calculated and added to the amounts calculated earlier.

Notably, this procedure leads to incorrect results when the total amount of income tax and peoples' insurance contributions calculated for the BSA recipient (single person, single parent or couple) is negative. In these cases a revised calculation of net means applies in which income tax, people's insurance contributions and tax credits are not taken into account.

- ***Benefit amount***

a) Couple with children

€ 1,536.34 (if both aged between 21 and the state pension age)
€1,620.74 (if both above the state pension age)
€1,620.74 (if one above state pension age, one between 21 and state pension age)
€838.25 (if both 18-20)
€1,340.93 (if one 18-20, one 21+)

b) Couple without children

€1,536.34 (if both aged between 21 and the state pension age)
€1,620.74 (if both above the state pension age)
€1,620.74if one above state pension age, one between 21 and state pension age)
€530.98 (if both 18-20)
€1,033.66 (if one 18-20, one 21+)

c) Single Parent[8]

€1,075.44 (if aged between 21 and the state pension age)
€1,195.97 (if above state pension age)

d) Single person

€768.17+ € 307.27 (if really living alone) (between 21 and the state pension age)
€1,195.97 (above state pension age)
€265.49 (if 18-20)

Table 2.11 Social assistance: base amounts

[8] As from 2015, social assistance no longer distinguishes single parents from other single persons.

	2021	2022	2023	2024
Couple with children				
21-s.p.a.[1]	1536.34	1559.58	1708.08	1,742.34
s.p.a.+	1620.74	1642.54	1807.20	1,835.70
1 21-s.p.a, 1 s.p.a.+	1620.74	1642.54	1807.20	1,835.70
18-20	838.25	850.94	932.02	950.66
1 18-20, 1 20+	1340.93	1361.22	1490.86	1,520.73
Couple no children				
21-s.p.a.	1536.34	1559.58	1708.08	1,742.34
s.p.a.+	1620.74	1642.54	1807.20	1,835.70
1 21-s.p.a, 1 s.p.a.+	1620.74	1642,54	1807.20	1,835.70
18-20	530.98	539.02	590.40	602.18
1 18-20, 1 20+	1033.66	1049.30	1149.24	1,172.26
Single parents				
21-s.p.a.	1075.44	1091.71	1195.66	1,219.64
Supplement				
s.p.a.+	1195.97	1213.06	1330.67	1.354.47
18-20	265.49	269.51	295.20	301.09
Single persons				
21-s.p.a.	768.17	779.79	854.04	871.17
Supplement	307.27	311.92	341.62	348.47
s.p.a.+	1195.97	1213.06	1330.67	1.354.47
18-20	265.49	269.51	295.20	301.09

[1]s.p.a. = state pension age

Persons aged below the state pension age born before 1965 who became unemployed after age 50 and exhausted their entitlement to (earnings related) unemployment benefits are entitled to a separate social assistance benefit: IOAW.[9] The difference with the general BSA (*Participatiewet*) is that no asset test is applied to calculate the entitlement for IOAW. The IOAW also applies to persons partially disabled for work, younger than 50, who were already disabled for work at age 17 and who are receiving a disability benefit (Wajong) based on their partial disability (< 80%).

Persons above the state pension age with insufficient means are entitled to the separate supplementary income provision for the elderly: AIO (*Aanvullende Inkomensvoorziening Ouderen*). This includes pensioners who did not build up the full state pension and insufficient supplementary pensions, and, as from 2015, pensioners with younger spouses with low incomes, with combined means below the social assistance norms.

- ***EUROMOD modelling***

As from January 2015, for recipients of social assistance who can share their housing costs with other persons aged 21 or over living in the same accommodation, social assistance is reduced. With 3 non-student persons aged 21 or over sharing the accommodation, the base amount is

[9] Since the eligibility for IOAW can only be approximated (in particular the age at which one became unemployed is not registered in the data) previous EUROMOD versions overestimated the number of persons receiving IOAW and underestimated ordinary BSA. In actual fact, the number of recipients of IOAW is less than 5% of that of BSA. Lacking better data, we do not model IOAW in EUROMOD

reduced by 13.3%, 4: 20%, 5: 24%, 6: 26.7%, 7: 28.6%, 8: 30%. Until July 2015 this only affected new beneficiaries. It was not implemented in the base version of EUROMOD 2015 but available as an option (using switch FYA_nl). Now that it is fully enforced, about 15% of all benefit units are affected, reducing the total expenditures by about 3.4%.

As mentioned above, self-employed with low incomes are not entitled to regular social assistance. They may be entitled to social assistance for self-employed (*Bijstandsbesluit Zelfstandigen*, BBZ) supplementing their income to the same level. Conditions depend on whether the self-employed has a viable enterprise with temporary financial problems, is approaching retirement with a non-viable enterprise or is stopping the enterprise. Depending on the circumstances, the benefit may also be paid out as a loan. BBZ is not simulated in EUROMOD. By contrast, the temporary benefit for self-employed suffering income losses as a result of the Covid-19 crisis (TOZO) is simulated in EUROMOD (policy bsase00_s). In phase 1, the income of the spouse was not taken into account in the calculation of the benefit, but in phase 2 and 3, the income of the spouse is taken into account. The EUROMOD simulation for 2020 takes into account rules of phase 2.

Notably, in EUROMOD the income losses of self-employed in 2020 as a result of Covid-19 are taken into account only when the model is run in combination with the LMA add-on. The individuals that had a loss in self-employment income are defined in the TransLMA_nl 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.

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

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

- BTA: The estimated take-up rate of the benefit should be set as the value of the *$bsa_BTA_rate* constant in the model. Currently, the value is set to 1, indicating no adjustment for non-take-up.
- BCA: The aggregate total number of benefit recipients needs to be filled out in the External Statistics table, so that the calibration rate *($bsa_BCA_rate*) is computed accordingly. Data are currently available for the years 2018-2023; given the absence of information for 2024, the calibration rate is not computed within the 2024 system, but the one computed within the 2023 system is used instead. For the modelling of reforms, the 2024 system should be used in order to allow for variation in the number of beneficiaries (hence expenditure): beneficiaries will change when the eligibility conditions change by applying the share of 2023 to the new pool of eligible units. If previous systems were used for reforms, total number of beneficiaries would remain constant irrespective of the reform applied, since the model would always stick to the existing external statistics.

2.5.5 Rent allowance (*bho_nl*)

- ***Brief description***

Rent allowance is a benefit targeted to tenant households with high (but not too high) rents given their income. These households are entitled to a monthly means-tested rent subsidy.

- ***Definitions***

Unit of analysis is the household: in addition to the income of the benefit unit, income of other household members is also taken into account. Income of children younger than 23 is only taken into account above a threshold.

Actual rent: rent to be paid to the landlord/owner of the accommodation

Norm rent: Rent amount used in the formula for the computation of the rent allowance, depending on the income of the tenant and his household composition.

- ***Eligibility conditions***

Since 2006, the current taxable income (*il_taxabley*) is taken into account. There is also an asset test: the tax unit is not entitled to rent subsidy if income in Box 3 (Income from saving and investment - see section 2.7.4) produces a positive amount of income tax.

The eligible households can be subdivided in four groups depending on age and number of people in the household:

A. Single person households (*nPersInUnit=1*) aged under state pension age (*dag<$PenAge*)

C. Multiperson households *(nPersInUnit >=2)* in which more than half of income is received by persons under state pension age on 1/1/2021. The latter condition is assumed to be satisfied if the head is younger than the state pension age in 2021.

E. Single person (*nPersInUnit=1*) elderly (above state pension age on 1/1/2021) households (*dag>=$PenAge*).

G. Multiperson elderly households *(nPersInUnit >=2)* in which more than half of income is received by persons above state pension age on 1/1/2021 *(dag >=$PenAge)*

- ***Income test***

The rent allowance is a means-tested benefit as it depends on income as described in the next section.

Asset test: no rent subsidy is paid if tax payable on income in Box 3 is nonzero.

Income disregard: for children younger than 23 up to € 4964 of their income is not taken into account. This income disregard is not taken into account in Euromod.

Table 2.12 Rent allowance: disregarded child income

	2021	2022	2023	2024
Disregarded child income	5044	5110	5432	5970

- ***Benefit amount***

Computation of rent subsidy (amounts per month): If the actual rent is below €752.33 (*up_rent_lt*) per month in 2021, the monthly rent subsidy is calculated as follows:

Table 2.13 Rent allowance: relevant amounts

	2021	2022	2023	2024
up_rent_lt	752.33	763.47	808.06	879.66
rent1_lt	442.46	442.46	452.20	454.47

rent21_lt	633.25	633.25	647.19	650.43
rent22_lt	678.66	678.66	693.60	697.07
subsidy2_rt	0.65	0.65	0.65	0.65
subsidy3_rt	0.4	0.4	0.4	0.4

1) norm rent < actual rent <= €432.51 (*rent1_lt)*:

   subsidy = actual rent - norm rent

2) (norm rent < actual rent) & (€432.51 < actual rent <= B).

   (B= €619.01 (1,2pers), *(rent21_lt)*, B= € 663.40 (3+ pers) (*rent22_lt))*:

   subsidy = 0.75*(subsidy2_rt)**(actual rent - max (norm rent, 432.51)) + max (0, 432.51 - norm rent)

3) norm rent < actual rent & Actual rent > B:

   subsidy = 0.5(=*subsidy3_rt)** (actual rent-max (B, norm rent)) + 0.75*max(0,B-max(norm rent, 432.51)) + max (0, 432.51 - norm rent)

Notably, the *subsidy3_rt* of 0.5 reduces to zero unless the household is a single person household or one of the household members is aged above the state pension age.

Norm rent calculation: it depends on the age and the number of persons in the household (groups A, C, E and G as mentioned above) and the taxable income. Since 2008, the monthly norm rent is calculated on the basis of a formula: a*income*income + b*income + c where income is annual taxable income. There is a minimum norm rent, and a maximum income threshold above which no rent allowance is received. The minimum norm rent holds for incomes below the minimum threshold. No subsidy is awarded if income is higher than highest amounts (maximum income) or if actual rent above €737.17 (*up_rent_lt*) or below the minimum norm rent. The relevant parameters are presented in Table 2.14. Notably, starting in 2020, the maximum income threshold has been abolished.

Table 2.14 Parameters used for the calculation of norm rent

2020	**A**	**C**	**E**	**G**
A	6.37464E-07	3.6736E-07	8.71018E-07	5.34258E-07
B	0.00234178	0.002072355	-0.004327048	-0.004410802
C	16.94	16.94	16.94	16.94
minimum rent	232.65	232.65	230.83	229.02
minimum thr	16650	21575	18350	24475
maximum income	-	-	-	-
2021	**A**	**C**	**E**	**G**
A	6.23385E-07	3.61614E-07	8.40817E-07	5.19036E-07
B	0.002453085	0.002075391	-0.004129344	-0.00431555
C	16.94	16.94	16.94	16.94

minimum rent	237.62	237.62	235.8	233.99
minimum thr	16950	22000	18775	25025
maximum income	-	-	-	-
2022	**A**	**C**	**E**	**G**
A	5.96879E-07	3.42858E-07	8.00848E-07	4.99095E-07
B	0.002363459	0.002093692	-0.003802527	-0.004173489
C	16.94	16.94	16.94	16.94
minimum rent	237.62	237.62	235.8	233.99
minimum thr	17350	22500	19075	25450
maximum income	-	-	-	-
2023	**A**	**C**	**E**	**G**
A	4.74433E-07	2.79402E-07	6.71404E-07	4.30722E-07
B	0.002448638	0.001893212	-0.002850602	-0.003611908
C	0	0	0	0
minimum rent	225.54	225.54	223.72	221.91
minimum thr	19375	25225	20500	27275
maximum income	-	-	-	-

Rent allowance is not taxable. It is not included in the means test for social assistance and other benefits.

- ***EUROMOD modelling***

To the extent that taxable income and rent are measured accurately, EUROMOD should be able to simulate rent allowance fairly accurately. Notably, EUROMOD assumes 100% take up.

2.5.6 Unemployment benefit (*bunct_nl*)

- ***Brief description***

The (contributory) unemployment insurance benefit comprises two types of benefits:

- General (short-term) benefit;
- Extended (earnings related) benefit

The unemployment insurance scheme covers all employees under the state pension age. *Self-employed* are not covered.

- ***Definitions***

The unit of analysis is an individual person.

- ***Eligibility conditions***

Short term benefit: eligible are persons who have been at least 26 weeks in paid employment during the last 36 weeks. Notably, short term benefit is received only if one is not eligible for extended benefit.

Extended benefit: eligible persons are those who have been at least 26 weeks in paid employment during the last 36 weeks plus they have worked at least 52 days or more during at least four of the last five years.

- ***Benefit amount***

Short term and extended benefit: 75% of previous earnings up to a maximum daily wage of €214.28 during the first two months, 70% thereafter.

Table 2.15 Characteristics of the unemployment benefit

		2021	2022	2023	2024
Eligibility	Contribution period	at least 26 weeks out of last 36	at least 26 weeks out of last 36	at least 26 weeks out of last 36	at least 26 weeks out of last 36
	Other conditions	younger than pension age	younger than pension age	younger than pension age	younger than pension age
	Eligibility of self-employed	no	no	no	no
Payment	Contribution base	il_sic	il_sic	il_sic	il_sic
	Basic amount	70%	70%	70%	70%
	Additional amount	5% (1st 2 months)	5% (1st 2 months)	5% (1st 2 months)	5% (1st 2 months)
	Floor	0	0	0	0
	Ceiling	70%/75% * €223.4#d (max. daily wage)	70%/75% * €228.76#d (max. daily wage)	70%/75% * €228.76#d (max. daily wage)	70%/75% * €274.44#d (max. daily wage)
Duration	Standard (in months)	3-24 months dep. on age / employment period	3-24 months dep. on age / employment period	3-24 months dep. on age / employment period	3-24 months dep. on age / employment period
	Special cases (in month)	-	-	-	-
Subject to	Taxes	yes	yes	yes	yes
	SIC	yes	yes	yes	yes

Payment duration:
Short term benefit: three months
Extended benefit: duration in months equals the number of years worked (employment record), with a maximum of 24 (the minimum being four months with a minimum employment record of four years). From January 2016, the maximum duration decreased by one month per quarter until it reached 24 months in 2019. Moreover, where the number of years worked exceeds 10, the benefit duration increases by half a month instead of a full month before 2016[10].

Employment record (when relevant)
The employment record includes each of the previous five years in which the recipient has been employed 52 or more days[11] plus the number of calendar years since 18th birthday minus five[12] if

[10] This reduction of the benefit duration is compensated by private insurance for a considerable part of the work force.
[11] From 1st January 2013, years in which the number of paid working hours exceeding 208 are counted instead of the number of years with 52 or more paid working days.
[12] Notably, since 1st January 2005, if possible, the actual number of years worked is taken into account. In practice, the number of years from age 18 until 1997 is added to the actual number of years worked from 1997.

he/she is age >22. Moreover, for people who were not in paid employment in the last five years, calendar years spent taking care of children younger than 6 are taken into account, as well as half of the years in which he/she took care of children aged between 6 and 12.

Previous earnings: is defined as gross employment income minus pension contributions.
Notably, when the total net household income (defined according to the means test for Social Assistance) is below the Social Assistance level, persons entitled to Unemployment Benefit are entitled to a supplement to reach the SA-level without an asset test, according to the *Toeslagenwet* ('extra allowances act') (this is comparable to the way the IOAW benefit is calculated). During at most two years (or until the state pension age when having become unemployed when older than 57.5 years) part of the income from work may not be taken into account when computing this extra allowance: all if less than 5% of the minimum wage, 30% up to 15% of the minimum wage.

No extra allowance is granted to single persons younger than 21 living with their parent(s), and to persons with a partner, when born after 31/12/1971 and not having a child younger than 12.

Minimum wage for persons younger than 23:

AGE	22	21	20	19	18	17	16	15
%	85	72.5	61.5	52.5	45.5	39.5	34.5	30
As of July 1, 2017	100	85	70	55	47.5	39.5	34.5	30
As of July 1, 2019	100	100	80	60	50	39.5	34.5	30

Unemployment benefit is taxable. It is included in the means test for social assistance and other benefits.

- ***EUROMOD modelling***

In EUROMOD, eligibility is assessed chiefly by checking who is actually in receipt of unemployment benefits in the data. But rather than simply using the observed receipt as part of the eligibility criteria, all eligibility rules are covered. However, as not all required information (e.g. detailed work or unemployment history) is available; several assumptions are made, among else considering some rules automatically fulfilled for those in receipt. This approach is chosen so that the benefit can be also modelled for those currently *employed* if needed (e.g. to simulate their entitlement to unemployment support if they become unemployed from the current year, for replacement rates calculations).

Therefore, EUROMOD distinguishes individuals into three groups:

- Those currently employed (*yem* != 0 & *lunmy_s* = 0 & *bunct* = 0)
- Those currently unemployed (*lunmy_s* > 0) and in receipt (*bunct* > 0)
- Those currently unemployed (*lunmy_s* > 0) and not in receipt (*bunct* = 0)

Both general and extended unemployment benefits are simulated. Which benefit one is entitled to depends on its employment history duration.

Unemployment duration (lunmy_s): it is set equal to the maximum between the observed unemployment duration (*lunmy*) and the observed benefit receipt (*bunctmy*) for the unemployed.

Contributory history (liwmy_s): is based on the reported number of weeks in employment (*liwmy*) subject to be maximum equal to the total number of weeks in work (*liwwh*). The qualifying period is computed for the three groups described above making sure that individual currently unemployed and in receipt of the benefit satisfy the qualifying condition (taking the maximum between their time in work and the limit of 26 weeks necessary to qualify for the UB). For people currently unemployed and not in receipt of the benefit, qualifying period is set to zero.

Short term unemployment benefit duration (*bunctmy_s*) is calculated according to the rules above, using modelled contribution history (*liwmy_s*), while also controlling for the unemployment duration (*lunmy_s*). It is set to be equal to the unemployment duration subject to the maximum benefit duration (three months).
Extended unemployment benefit duration (*bunctmy01_s*) is also set to be equal to the unemployment duration (*lunmy_s*) subject to the maximum benefit entitlement period.

Although it is possible that some unemployment spells had started before the beginning of the reference year, SILC does not record information on unemployment history. Setting the UB duration to *bunctmy_s* or *bunctmy01_s* it is like assuming that unemployment spells always start from the reference year (*lunmy_s* varies between 0-12 months and refers only to the reference year). Although this is a strong assumption, we think this assumption becomes acceptable when considering that the main aim of the unemployment policy simulation is to simulate variation in the current employment status of employees.

When applying the upper daily threshold to previous gross earnings, we assume that there are 30.38 days per month and 52/12 = 4.34 weeks per month.

At this point, working age people who are unemployed (*lunmy_s* > 0), have sufficient contribution history and are not self-employed (i.e. have employment earnings or no self-employment status as defined by *temp_tinyse* (income from self-employed work represents more than 60% of earnings)) are considered eligible. It is assumed that all of them are involuntary unemployed and capable and available for work (there is a variable in the SILC data identifying the latter but only filled in for those currently unemployed).

Benefit amount is calculated based on previous earnings and benefit duration, subject to the lower and upper thresholds. For those currently employed, current earnings are used. For those currently unemployed and in receipt, previous earnings are used which have been imputed by reversing unemployment insurance benefit rules. For those currently unemployed and not in receipt, imputed wage is set to zero. Finally, the benefit amount is adjusted with the number of months in receipt (*bunctmy_s and bunctmy01_s*).

EUROMOD simulates the contributory part of the unemployment benefit in the Netherlands, but when this policy is switched off, income lists using simulated contributory unemployment benefit *bunct_s* should replace this with the observed SILC variable *bunct*. This is done by making use of EUROMOD's *fnc_SetDefault* which sets *bunct_s=bunct* (from SILC) when *bunct_s* is not found because the UB policy is switched off.

2.5.7 Care allowance (*bhlmt_nl*)

- ***Brief description***

This benefit provides partial compensation for the obligatory private health insurance premium for residents aged 18+ with a Dutch health insurance and low taxable income.

- ***Definitions***

Tax unit is the individual with his/her 'allowance partner' which could be:

1) the spouse in a married or registered couple
2) the fiscal partner
3) the spouse with a cohabitation contract
4) the other parent of a child
5) last year's allowance partner
6) the pension partner
7) the co-owner of the accommodation (with shared responsibility for the mortgage) or
8) a household member with a child younger than 18 living in the household

Family members can be fiscal partners if one of the other conditions applies. In addition, for parent and child to be allowance partners, both have to be aged 27 or older.

- ***Eligibility conditions***

All residents aged 18 or over with a Dutch health insurance are eligible if their total taxable income (Box 1, Box 2 and Box 3) passes the income test. Notably, assets in Box 3 exceeding € 85,767 plus the tax-free asset allowance of both tax partners (see 2.7.5) reduce the care allowance to zero.

- ***Income test***

There are separate income tests for single tax payers and for tax payers with allowance partners. In 2021, eligibility was limited to single tax payers with total taxable income less than € 31.138 per year and tax payers with allowance partners with total taxable income less than € 39,979 per year.

Table 2.16 Income and asset limits health care allowance

	2021	2022	2023	2024
Single tax payers	31,138	31,998	38,520	37,496
Tax payers with allowance partners	39,979	40,944	48,224	47,368
Asset threshold	118,479[13]	120,020	127,582	140,213

- ***Benefit amount***

The benefit is calculated as follows: the norm premium is calculated as 0.1355*max(0, total taxable income – 21,431) + 887.24*(1 if person with allowance partner, 0 otherwise) + 392.19*(1 if person without allowance partner, 0 otherwise).

[13] This is the total threshold (including tax free allowance) for earners without an allowance partner. For earners with an allowance partner the threshold amount is €149,819.

The health care allowance is then calculated as (3,275.24 – norm premium) in the case of persons with allowance partners, and (1,640.19 – norm premium) in the case of persons without allowance partners.

Norm premium = A*max(0, total taxable income – B) + C*(1 if person with allowance partner, 0 otherwise) + D*(1 if person without allowance partner, 0 otherwise)

Health care allowance = (E – norm premium) for persons with allowance partners

= (F – norm premium) for persons without allowance partners

Table 2.17 Parameters used in calculation of health care allowance

	2021	2022	2023	2024
A	0.1358	0.1361	0.1364	0.1367
B	21,835	22,356	25,070	26,816
C	915.98	944.54	596.16	1,141.29
D	411.59	413.14	30.84	503.87
E	3,399.98	3,488.54	3,776.16	3,974
F	1,695.59	1,745.14	1,878.84	1,987

- ***EUROMOD modelling***

EUROMOD provides a perfect simulation of the entitlement to the health care allowance if taxable income is measured accurately. Notably, EUROMOD assumes 100% take up whereas in reality households whose entitlement to the health care allowance is small may not bother to apply.

2.5.8 Child related budget (*chall_nl*)

- ***Definitions***

The child related budget was introduced in 2008 as child allowance (see chall_nl), instead of the previously existing child tax credit. The main difference with the child tax credit is that the child related budget is also payable in the case of low or zero income.

- ***Eligibility Conditions***

Presence of (at least one) child aged below 18.

- ***Income test***

The child related budget is a means tested benefit of which the amount depends on total taxable income of the tax payer (including the income of their fiscal partner where applicable).

- ***Benefit Amount***

The allowance amounts to C – D*max(0,(income – B)) where 'income' is the sum of taxable income in Box 1, 2 and 3 net of all deductions (tax allowances) of the tax payer and his/her fiscal partner (*il_taxabley_box1 + i_taxbase_box3*). The amount C is differentiated by the number of children for whom there exists entitlement to child benefit.

The child related budget is only received by one allowance partner. In EUROMOD, the allowance is awarded to the partner with the highest taxable income – in the case where both partners have the same taxable income, it is received by the oldest – where the partner's age is the same, the male will receive the allowance.

Table 2.18 Income related child allowance parameters

	2021	2022	2023	2024
Income threshold				
B (single parents)	21,835	22,356	25,070	26,819
B (couples)	38,853	39,596	43,397	35,849
C	1,204	1,220	1,644	2,436
D	6.75%	6.75%	6.75%	6.75%
C 2 kids	2,226	2,326	3,180	4,872
C 3 kids	3,145	3,327	4,716	7,308
C 4 kids	4,064	4,328	6,240	9,744
C 5+ kids, extra per child	919	1,001	1,536	2,436
Increase 12-15	247	251	276	694
Increase 16-17	441	447	480	924
Single parent supplement	3,242	3,285	3,641	3,480
Asset threshold	68,479	69,370	70,582	83,213

Single parents receive a supplement of at most €3,242 per year (as a compensation for the abolishing of various single parent benefits as of 2015: the single parent allowance in the income tax, the single parent supplement in the social assistance and the half-orphan benefit).

In 2013, an asset test was introduced: in 2021 assets in Box 3 exceeding € 68,479 plus the tax-free asset allowance of both tax partners (see 2.7.5) reduce the child related budget to zero.

Starting in 2020, the income amount B, above which the benefit is reduced, is higher for couples than for single parents. Notably, in the versions of EUROMOD used for two earlier editions of the Country Report (2020 and 2021), this was -erroneously - not taken into account.

- ***EUROMOD modelling***

EUROMOD provides a perfect simulation of the entitlement to the child related budget if taxable income is measured accurately. Similar to other allowances, EUROMOD assumes 100% take up whereas in reality households whose entitlement is small may not bother to apply.

2.5.9 Pregnancy and Childbirth Allowance/Zwangerschaps- en bevallingsuitkering, (*bma_nl*)

- ***Definitions***

This is a non-contributory benefit for the period of maternity leave. Available to employees, recipients of unemployment and disability benefits and self-employed persons. The allowance is

paid for at least 16 weeks: 4-6 weeks before the childbirth (pregnancy allowance *bcbma01*) and (at least) 10 weeks after the childbirth (childbirth allowance *bcbma02*).

- ***Eligibility conditions***

Giving birth while being an employee, recipient of unemployment or disability benefit, self-employed or partner of self-employed working in the family business.

- ***Income test***

No.

- ***Benefit duration***

The maternity leave begins 4-6 weeks before the expected birth and lasts a total of at least 16 weeks of which at least 10 weeks after the childbirth. For women who expect more than one child, the benefit period is extended by up to four weeks (as of 1st April 2016). Starting from the 1st April 2018, for women who expect twins, the benefit duration is at least 20 weeks.

- ***Benefit amount***

For employees and recipients of earnings replacing benefits, the benefit equals 100% of the daily wage, with a maximum of €219.28 (2020). For self-employed, the benefit equals the minimum wage.

Table 2.19 Maximum benefit amounts

	2020	2021	2022	2023	2024
Maximum daily wage	219.28	223.40	228.76	256.54	274.44

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

Yes

- ***Take up***

Nearly all mothers in paid employment take maternity leave.

- ***EUROMOD modelling***

We assume that the maternity leave (for those eligible) commences 4 weeks before the birth and lasts the maximum length possible. Since the month of birth is unavailable, we assume that the child is born in the second month of the year (February). For women who expect more than one child, we assume that the benefit period is 20 weeks starting from 2018.

By default the simulation is switched off in the baseline, but could be included switching on the policy. Due to data limitation, in the input dataset, we can identify the pregnancy allowance (*bcbma01*) and the childbirth allowance (*bcbma02*) only for employees. Indeed, to avoid double counting, if the policy is turned on, the benefit is simulated only for employees and *bcbma01* and *bcbma02* are set to 0.

2.5.10 Monetary compensation for employers (*yemcomp_nl*)

- ***Definitions***

In order to mitigate the economic impact of the COVID-19 crisis, the Dutch government implemented the policy NOW (*Noodmaatregel Overbrugging Werkgelegenheid*, Emergency measure bridging employment).

In phase 2 (June-September 2020), NOW subsidized up to 90% of the wage cost of employers in case of loss of revenue of more than 20%. In phase 3.1 (October-December 2020) the subsidy was reduced to 80% and in phase 3.2 (January-March 2021) and 3.3 (April-June 2021) it was 85%.

- ***Benefit amount***

The monthly amount in phase 2, as implemented in EUROMOD, is calculated on the basis of the following formula:

A x B x 1.3 x 0.9

where A is the expected percentage loss of turnover, B is the monthly wage bill, 30% is supposed to cover employer SICs (simulated in Euromod) but also employer pension contributions (not simulated in Euromod), and non-monthly components like holiday allowance (in Euromod included in yem). A maximum wage of 9,538 euro per month is taken into account. Employers are assumed to continue to pay 100% of the wages.

In phase 3.1 (October-December 2020) NOW is calculated as

A x B x 1.4 x 0.8

where a maximum wage of 9,616 euro per month is taken into account, and in phase 3.2 (January-March 2021) and 3.3 (April-June 2021) it is

A x B x 1.4 x 0.85

with a maximum wage of 9,718 euro per month.

- ***EUROMOD modelling***

The amount of this policy is reported as "Government expenditure on social transfers" in the statistic presenter. Since it is a subsidy for employers, it has no impact on household income. Notably, in the baseline, this policy is switched off, but it can be switched on 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_nl 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.

2.6 Social insurance contributions

Social contributions for unemployment and disability insurance are paid by employees and employers. However, from 2009 employees' contributions were set to zero. In addition, all recipients of earnings and benefits pay national insurance contributions. Statutory health insurance contributions consist of flat rate private insurance contributions and income related health insurance contributions. Self-employed do not pay separate social contributions since before 2006.

2.6.1 Employee social insurance contributions

a) **Employee contributions to unemployment insurance**

Employees in the private sector aged below the state pension age are insured against (loss of income as a result of) unemployment. On average they pay a total contribution of x% on wages between y and z per month: 0.01*x*(wage > y)*min(wage – y, z – y). Similar rules apply for public sector employees who are not identified separately in EUROMOD.

The basis for the calculation of unemployment insurance contributions (*il_sic)* includes next to gross wages net of (occupational) pension contributions, also wage replacement benefits such as unemployment and disability benefits. The relevant tax unit is the *individual.*

From 2009 the employees unemployment contribution was (not abolished, but) set to zero.

Table 2.20 Parameters employee contribution to unemployment insurance

	2021	2022	2023	2024
x	0%	0%	0%	0%
y				
z				

2.6.2 Employer social insurance contributions (*ersic_nl)*

Employers pay social contributions divided into unemployment insurance contribution and disability insurance contribution[14].

a) Employer contributions to unemployment insurance (*tscerui_s*)

Employers of employees in the private sector aged below the state pension age on average pay a total contribution of 3.25% on wages between €0 and €4,859.25 per month. For public sector employees rules are the same.

The income basis for the employer contribution to unemployment insurance is the same as for the employee contribution to unemployment insurance (*il_sic*).

Actually, starting in 2020, the employer contribution to unemployment insurance is differentiated between a high rate for employees with a temporary/flexible contract and a low rate for employees with a fixed contract. However, due to data limitations, we cannot make an exact distinction between the two groups in EUROMOD. Instead, an average contribution rate (3.25% in 2021 and 2022, 3.19% in 2023, 3,89% in 2024) is used.

Table 2.21 Parameters employer contribution to unemployment insurance

	2021	2022	2023	2024
rate	2.7% 7.7%	2.7% 7.7%	2.64% 7.64%	2.64% 7.64%
average	3.25%	3.25%	3.19%	3,89%

[14] In addition, most employers pay occupational pension fund contributions, differing by sector or firm (not modelled in EUROMOD)

uplim	4,859.25	4,975.5	5,579.33	5,969.07

b) Employer contributions to disability insurance *(tscerdi_s)*

Employers of employees in the private sector aged below the state pension age pay, on average, a total contribution of 7.27% on wages with a wage limit of €4,859.25per month: 0.0696*min(wage, 4,859.25). For public sector employees rules are the same.

The income basis for the employer contribution to disability insurance is the same as for the employee contribution to unemployment insurance (*il_sic*).

Table 2.22 Parameters employer contribution to disability insurance

	2021	2022	2023	2024
rate2	7.81%	7.89% 6.33%	7.98% 6.33%	7.54% 6.18%
Maxbase2	4,859.25	4,975.5	5,579.33	5,969.07

Starting in 2022, the employer contribution to disability insurance is differentiated between higher contribution for large employers and a lower contribution for small employers (paying less than 25 times the average wage).[15]

- ***EUROMOD modelling***

In EUROMOD, employer contributions for unemployment insurance (*tscerui_s*) and disability insurance (*tscerdi_s)* are added up in *tscer_s*.

c) Employer contributions to health insurance

See section 2.6.4

As mentioned in section 2.6.4, all residents are obliged to take out private health insurance. For wage earners (and recipients of most benefits), the employer (or the benefit agency) pays the income related health insurance contribution.

2.6.3 Self-employed social insurance contributions

a) Self-employed contributions to disability insurance

Not in force in 2021.

b) Self-employed contributions to health insurance

Similar to other residents, self-employed pay a flat rate health insurance premium as well as an income related contribution. See section 2.6.4.

2.6.4 Other social insurance contributions (*peoplesic_nl, tschl_nl)*

a) Peoples' insurances (*tsceepi_s*)

[15] In EUROMOD, we cannot make an exact distinction between both groups. Instead, we use an average contribution rate (7.11% for 2022, 7.16% in 2023).

The so-called peoples' insurances or national insurances include the State pension insurance (AOW), the Survivor benefit insurance (ANW) and the Act on long-term care (WLZ). All income tax payers contribute to these insurances where the taxable income (Box 1) (see section 2.7.4) acts as the basis for the calculation of these contributions (*tsceepi_s*). In other words: all persons with income in Box 1 are subjected to these contributions. Therefore in EUROMOD we do not distinguish between employees and self-employed because the contributions are the same for both groups.

The contribution rates are reported for each year in Table 2.23 below. In 2020 they are 17.9%, 0.1% and 9.65% respectively for AOW, ANW and WLZ. Hence, the total contribution in 2020 amounts to 27.65%. Persons aged above the state pension age do not pay AOW contributions and their contribution rate is 9.75%.

The maximum base for the calculation of these contributions is €35,130 per year (€35,942 for persons born before January 1, 1946). Note that tax credits apply to income tax and peoples' insurance contributions as a whole. They reduce the income tax and peoples' insurance contributions proportional to the tax/contribution rates on the lowest income tax bracket[16].

Table 2.23 Contribution rates and maximum base peoples' insurances

	2021	2022	2023	2024
AOW	17.9%	17.9%	17.9%	17.9%
ANW	0.1%	0.1%	0.1%	0.1%
WLZ	9.65%	9.65%	9.65%	9.65%
pi_maxbase	35,130	35,473	37,149	38,089
pi_maxbase when born before 1-1-1946	35,942	36,410	38,703	40,021

- ***EUROMOD modelling***

As tax credits apply both to income tax and people's insurance contribution, in EUROMOD the calculation of this contribution is divided into two parts. The first policy sheet is PEOPLESIC_NL which calculates a "gross" amount of the contribution just applying the rates in the table above to the taxable income from Box 1 (*il_taxabley_box1*).

After the calculation of tax credits in *tintc_nl* and social assistance by *bsanet_nl*, EUROMOD computes the final people's insurance liability (*tsceepi_s*) in *bsagross_nl* – in combination with the income tax (*tin_s*).

b) Health insurance contributions (*tschl_s*)

[16] In 2020, the lowest income tax rate was 9.7%. The peoples insurance contribution rate is (17.9 + 0.1 + 9.65 =) 27.65% (9.75% for persons aged above the state pension age). So 9.7/(9.7+27.65) of the tax credit is to be subtracted from the income tax (9.7/(9.0+9.75) if above state pension age) and the remainder from the peoples insurance contributions. (Notably, in cases where this leads to zero income tax and insurance contributions in Box 1 all of the remaining amount of tax credit can be subtracted from income tax in Box 3).

All residents are obliged to take out private health insurance. Part of this is financed by flat rate health insurance premiums paid by the individual and part of this is financed by income related contributions. For wage earners, these income related contributions are paid by the employer. None of the health insurance contributions are deductible from taxable income.

In 2021, the average flat rate health insurance premium (*tschlfx_s*) amounted to €1,495 per adult (aged 18+) per year.

The earnings related contribution amounts to 7% of gross earnings and benefits, paid by employer or benefit agency On the state pension, self-employment income and supplementary pensions the contribution rate is 5.7%, paid by the individual. The maximum tax base is €55,927 per year.

Table 2.24 Parameters health insurance contribution

	2021	2022	2023	2024
Average flat rate	1,495	1,509	1,663	1,708
Contribution rate:				
Earnings etc	7%	6.75%	6.68%	6,57%
Self-employment etc	5.75%	5.5%	5.43%	5,32%
Maxbase	58,311	59,706	66,952	71,628

In the case of multiple sources of income, the contribution is calculated as follows: Firstly, as indicated above, the total maximum base is €58,311 per year. This maximum base consists of three possible components.

The first component (*tschl01_s*) is wages, unemployment benefits, disability benefits and social assistance benefits and other earnings replacing benefits (except pensions). Here the contribution is 7%. As of 2013, this contribution *tschl01_s* is paid by the employer or benefit agency, and no longer included in the tax base for income tax and peoples insurance contributions.

The second possible component (*tschl02_s*) is the state pension, with a contribution rate of 5.75%. Contribution: *tschl02_s*.

The third possible component (*tschl03_s*) consists of other pensions (*poacm*) as well as self-employment income (*yse*), with a contribution rate of 5.75% on *poacm* + max(0, *yse*). Contribution: *tschl03_s.*

So a person with €30,000 in wages and €30,000 in self-employment income would owe 7% of €30,000 (paid by his employer) + 5.75% of €25,927.

From 2012, the maximum threshold for the computation of the health insurance contribution is harmonized with (i.e. raised to) the maximum threshold for the unemployment and disability insurance contributions.

- ***EUROMOD modelling***

In EUROMOD, the health insurance contribution is simulated using the national average for the flat-rate part. In reality, this flat-rate contribution differs between health insurance companies.

Similar to the calculation of income tax and peoples' insurance contributions the final calculation of the health insurance contributions is performed after the calculation of Social Assistance in *bsagross_nl.*

2.7 Direct taxes (*tin_nl, tinkt_nl, tintc_nl)*

2.7.1 Tax unit

In general, the tax unit for income taxation is the individual. Income of other members in the household is taken into account in the calculation of the income tax credits (section 2.6.6). It is also important for the decision on who is paying taxes on components of household income such as imputed income from owner-occupied housing and for the decision on who can deduct expenditures such as mortgage interest, gifts etc. Fiscal partners may choose how to distribute non-personal income components and deductions between both partners.

Two persons living in the same household are fiscal partners

- if they are married,
- registered partners,
- two adults living together under a legally binding contract,
- two persons with a child,
- two persons, one of whom has recognized the other person's child,
- two pension partners,
- two persons who are co-owner of the accommodation in which they live,
- two persons with the same address as the child of one of them aged below 18,
- two persons living at the same address who were fiscal partners last year.

2.7.2 Exemptions

Following Verbist (2004), we define exemptions as "income components (that) are part of pre-tax income, but do not have to be declared to the tax authorities, and thus are not included in the concept of taxable income (e.g. child benefits in most countries)".

Child benefits, rent allowance, care allowance, child related budget and child care allowance are not included in taxable income, as are child maintenance payments made by the former spouse.

2.7.3 Tax allowances

Here, we define tax allowances as any amount subtracted from pre-tax income (including social insurance contributions). Differently from Verbist (2004) there is no distinction between those that are fixed amounts (tax allowances) and those whose level is a function of pre-tax income (deductions).

The most important tax allowance is formed by mortgage interest payments (*xhcmomi*), both in terms of the number of tax payers concerned and the amounts involved. Mortgage interest payments are deducted from personal income in Box 1 (see below).

From personal income (earnings, benefits, pensions) the amounts to be paid as occupational pension contributions and employee contributions to unemployment insurance are also deducted.

Alimony paid to the ex-spouse is also tax deductible.

Self-employed are entitled to self-employment deduction (*tinta00_s*). Amounts and thresholds:

Table 2.25 Parameters self-employment deduction

	2021	2022	2023	2024
amt_1	6,670	6,310	5,030	3,750
Starters	2,123	2,123	2,123	2,123
Above state pension age	50%	50%	50%	50%
Rate	14%	14%	14%	13,31%

Notably, the self-employed in question needs to have worked a minimum number of hours in his/her own firm: more than 1,225 hours per year and more than 50% of the total time worked[17]. Starters get an extra deduction during the first three years of self-employment. This starter deduction is not implemented in EUROMOD because of missing information on when employment spells start.

From 2012, the amount of self-employment deduction is no longer income dependent. Instead it is a fixed amount (but not higher than the self-employment income).

In addition, recipients of self-employment income are allowed an additional deduction of 14% on self-employment income minus the self-employment deduction (the so-called *mkb-vrijstelling* (= tax allowance for medium and small firms)).

Starting in 2020, the self-employment deduction (including the tax allowance for medium and small firms) is reduced for tax payers in the highest tax bracket. This reduction is similar to the reduction in the tax deduction of mortgage interest payments for tax payers in the highest tax bracket (see 2.7.4)

2.7.4 Tax base

The tax base for the income taxation is divided in three components (boxes).

Box 1. Income from work and house (including benefits)

Box 2. Income from substantial interest (income received by shareholders owning more than 5% of the shares in a company) (ignored in EUROMOD)

Box 3. Income from saving and investment

Box 1.

Included in the income tax base are personal income components such as earnings from labour, (earnings replacing) benefits and pensions. If an employee drives a car provided by the employer, a percentage of the catalogue value of the car is to be added. The percentage depends on the fuel type and the CO_2 emission per kilometer. This component of taxable income is not modelled within EUROMOD, but read directly from the data (variable *kfb*).

Income from abroad is also included in the tax base, but usually to the extent that it had not been taxed abroad.

[17] This hours criterion was not implemented in the earliest versions of EUROMOD. In the current version we approximate it by the condition that self-employment income makes up more than 60% of income from work and the number of hours worked exceeds 23 hours per week.

Alimony received from the ex-spouse (not: alimony paid for the maintenance of children) is taxable as well.

Next to these personal income components, the tax base also includes imputed income from owner occupied housing, and some categories of allowances from life insurances. Imputed income from owner occupied housing (per year) is calculated as a percentage (in most cases 0.7%) of the value of the house as determined by the Act on Immovable Objects (WOZ)[18].

Table 2.26 Parameters calculation of taxable imputed income from owner occupied housing

	2021	2022	2023	2024
WOZ value < €12,500	0	0	0	0
€12,500-€25,000	0.20%	0.15%	0.1%	0.1%
€25,000-€50,000	0.30%	0.25%	0.2%	0.2%
€50,000-€75,000	0.40%	0.35%	0.35%	0,25%
€75,000-villa threshold	0.50%	0.45%	0.35%	0,35%
villa threshold	1,110,000	1,130,000	1,200,000	1,310,000
WOZ > villa threshold: A + B* (WOZ – villa threshold) A	5,550	5,085	4,200	4,585
B	2.35%	2.35%	2.35%	2,35%

To the extent that the imputed income from owner occupied housing exceeds the mortgage interest tax allowance, it is exempt from taxation. As a result, home owners with low or zero mortgage interest payments do not pay income tax on the imputed income from owner occupied housing. Notably, starting in 2019, the exemption of imputed income from owner occupied housing for home owners with low or zero mortgage interest payments will gradually be abolished (over a period of 30 years). In 2019, 3.33% of the (positive) difference between imputed income from owner occupied housing and mortgage interest payments is added to taxable income (2021: 10%, 2022: 13.33%, 2023: 16,67%, 2024:).

Starting in 2014, the tax deduction of mortgage interest payments is reduced with 0.5% per year for tax payers in the highest income tax bracket. In 2020, instead of 49.5%, their income tax is reduced with at most 46% of their mortgage interest payments. In 2041, the maximum mortgage interest deduction was scheduled to reach 38%. Starting in 2021, the reduction of the tax deduction of mortgage interest payments has been speeded up to 3% per year.

- ***EUROMOD modelling***

In EUROMOD, the reduction of the tax deduction of mortgage interest payments in the highest income tax bracket is implemented by an additional tax on mortgage interest payments (2% in 2017, 2.45% in 2018, 2.75% in 2019, 3.5% in 2020, 6.5% in 2021, 9.5% in 2022, 12.45% in 2023). As a result, the effective income tax deduction of mortgage interest payments in the highest income tax bracket amounts to (52 – 2 =) 50% in 2017, (51.95 – 2.45 =) 49.5% in 2018, (51.75 – 2.75 =) 49% in 2019, (49.5 – 3.5 =) 46% in 2020,(49.5 – 6.5 =) 43% in 2021, (49.5 – 9.5 =) 40% in 2022 and (49.5 - 12.45)=37.05% in 2023.

[18] In earlier versions of EUROMOD, the imputed income from owner occupied housing was read directly from the data (variable *kivho*). However, this variable overestimated the taxable imputed income. Therefore we have chosen to simulate the taxable imputed income from owner occupied housing (*kivhooo_s*) on the basis of (approximations of) the WOZ value of the owned accommodation.

2.7.5 Tax schedule

Box 1

The income tax schedule, applied to taxable income minus all deductions in Box 1, is as follows:

Table 2.27 Parameters income tax schedule

	2021	2022	2023	2024
tax_rate1	9.45%	9.42%	9.28%	9,32%
tax_rate2	9.45%	9.42%	9.28%	9,54%
tax_rate3	37.1%	37.07%	36.93%	36,97%
tax_rate4	49.5%	49.5%	49.5%	49,50%
band1 up to	20,384	20,384	20,384	20,384
band2 up to	35,130	35,473	37,149	38,098
band2 (born before 1-1-1946)	35,942	36,410	38,703	40,021
band3 up to	68,507	69,399	73,031	75,518

Hence for a tax payer born after 1-1-1946 in 2020:

Tax band		Per year	Per month		Tax-rate
1	0	20,384	1,698.67	*tax_band1*	*tax_rate1*: 9.7%
2	20,384	34,713	2,892.75	*tax_band2*	*tax_rate2:* 9.7%
3	34, 713	68,507	5,708.91	*tax_band3*	*tax_rate3*: 37.35%
nbands: 4	68,507			*tax_band4*	*tax_rate4*: 49.5%

Box 2

Income from substantial interest is taxed with a flat rate of 26.25% (2021, 2022, 2023: 26.9%, in 2024 24.5% upto € 67,000 taxable income and 33% above € 67,000). In EUROMOD, information on this income component is not available.

Box 3

Income from capital is generally taxed in Box 3. For that purpose assets (*afc*) (savings, shares, value of 2nd accommodation etc) minus max (0, debts[19] minus €3,000) are calculated on 1st January. (Mortgages on owned (1st) accommodation are excluded from debts but mortgage interest is taken into account in Box 1). From this taxable asset base a tax free asset allowance is deducted. The remaining taxable amount (if positive) is assumed to have generated taxable income, with a tax rate of 30% (2021, 2022: 31%, 2023: 32%, 2024: 36%).

[19] Notably, in EUROMOD, debts are not taken into account.

The general tax free asset allowance is €30,846 per person. Couples may choose which part of their assets is reported by which spouse. They can also transfer the full amount of tax free asset allowance to their spouse.

From 2012, the asset allowance for minor children is abolished. Starting in 2016, the additional asset allowance for persons above the state pension age on 31st December has been abolished.

Table 2.28 Parameters tax free allowance

	2021	2022	2023	2024
Debts ignored	3,200	3,200	3,400	3,400
General t.f.a.	50,000	50,650	57,000	57,000

Starting in 2017, the income assumed to be generated from the taxable amount in Box 3 is differentiated[20]. In 2019, the first € 71,650 is assumed to generate 1.935%, the next € 918,086 generates 4.451%, and the amounts exceeding € 989,736 generate 5.6%. The tax levied on this income remained constant at 30% upto 2020 and was increased to 31% in 2021.

Table 2.29 Thresholds and parameters differentiated income from Box 3

	2021	2022	2023	2024
Income in Band1 up to	50,000	50,651		
generates an income of	1.898%	1.818		
Income in Band2 up to	950,000	962,351		
generates an income of	4.501%	4.366%		
Remainder generates an income of	5.69%	5.53%		
Savings generate an income of			0.35%	0,92%
Other investments generate an income of			6.17%	6,17%
Tax rate	31%	31%	32%	36%

Notably, until 2023, the calculated taxable income in Box 3 is based on an assumed division between savings and other assets giving rise to different rates of return. In 2022, a court ruled that this way of calculating income tax is illegal. Tax payers who objected to their income tax assessment pertaining to 2017 and later years in time were compensated. In addition, the final income tax assessment for 2021 has been calculated on the basis of the actual division between savings and other assets of the individual tax payer. Due to data limitations, this could not be taken into account in EUROMOD.

2.7.6 Tax credits (*tintc_nl)*

The amount resulting from adding all taxable income components and subtracting all deductions described in the first part of section 2.7.4 is taxable income in Box 1 (*il_taxabley_box1*), upon which the tax schedule as described in section 2.7.5 is applied. In addition, (imputed) taxable income from saving and investing (Box 3) (*temp_taxbase_box3*) is taxed with a constant rate of 30%. However, tax credits are deducted from the full amount of taxes and peoples' insurance contributions (in proportion to the rates on the lowest tax bracket in Box 1).

The tax credits may consist of several components:

a) general tax credit (*tintc00_s*)

[20] Before 2017, every euro of the taxable amount in Box 3 was assumed to generate 4% of income.

All tax payers receive a general tax credit of at most €2,837 per year or €236.42 per month (*amount1*). For persons aged above the state pension age, the general tax credit is at most €1,469 per year (€122.42 per month). In principle, tax credits are not transferable between spouses. However, the general tax credit is also paid to a spouse with a low (or zero) income if his/her spouse pays income tax and peoples' insurance contributions. In that case the tax credit is not higher than the amount of income tax and peoples' insurance contributions paid by the spouse (after deducting his/her own tax credits): total tax/contributions paid by a couple is never negative.

Starting in 2009, the payment of the general tax credit to a spouse with a low or zero income is being reduced to zero in 15 years (i.e. by 6.67% per year). In 2020, the payment of the general tax credit to a spouse with low or zero income is reduced by 80% of the maximum general tax credit.

Starting in 2014, a reduction of the general tax credit is applied when taxable income in Box 1 exceeds a threshold. From 2016 the general tax credit is fully income dependent and it reduces to zero for high incomes. In 2020, the reduction amounted to 5.98% of taxable income above €21,053 with a maximum of €2,837 per year (see Table 2.30 for more details).

b) work credit (*tintcee_s*)

Tax credit on income from work (*il_taxabley_work*) (including self-employment income): normally, at most €4,205 per year (above state pension age: €2,178per year).

Starting in 2020, a third band was introduced in the calculation of the work credit. In 2021 the work credit amounts to 4.581% (*band_rate 1*) on the first €10,108(*band_uplim 1*) of income from work plus 28.771% (*band_rate 2*) of income between €10,108and €28,771 (*band_uplim2*) plus 2.663% of the remainder; the maximum amount being €4,205 (*uplim*). Income from work (*il_taxabley_work*) includes: employment income (*yem*), self-employment income (*yse*), income from employer provided car, minus the occupational pension contributions (*tpcpe*) and minus the unemployment insurance contribution paid by the employee (*tsceeui_s*). Sickness benefits (*bhl*) should also be counted as income from work.

For persons aged above the state pension age, the work credit is 2.371.% on the first €10,108 of income from work plus 14.89% of income between €10,108and €28,771 plus 1.378% of the remainder, with a maximum of €2,178.For persons with income from work higher than €35,652, the work credit is reduced by 6% of the income above €35,652 with a maximum of €4,205 (above state pension age: 3.105%, with a maximum of €2,178).

c) child credit (*tintcch_s*)

As of 2008, the child credit was replaced by an income related child allowance, renamed child related budget in 2009 (see section 2.5.8).

d) supplementary child credit

The supplementary child credit had already been abolished before 2006.

e) income related combination credit (*tintcch00_s*) @tothier

As of 2009, the earlier combination credit and supplementary combination credit were replaced by the income related combination credit. In 2021, the income related combination credit amounts to €0.1145*(income from work – 5,153) with a maximum of €2,815. It is received if earnings from paid employment exceed €5,153 and a child under 12 is present. In the case of a couple it is received only by the lower earning spouse. If the earnings of both spouses are equal, only the older spouse receives the credit. For persons above the state pension age, the amount is € 0.05926*(income from work – 5,153) with a maximum of €1,458 per year.

f) single parent credit (*tintclp_s*)

The single parent credit was abolished in 2015. As a compensation, single parents were entitled to a supplement to child related budget (see section 2.5.8).

g) supplementary single parent credit (*tintclp00_s*)

The supplementary single parent credit was also abolished in 2015.

h) old age credit (*temp_tcOA*)

Tax payers aged above the state pension age (*$PenAge)* on 31/12/2020 are entitled to an additional tax credit: €1,703 per year if total taxable income ('verzamelinkomen') from Box 1, 2 and 3 net of all deductions is lower than € 37,970 per year. Starting in 2019, the old age credit is gradually reduced to zero (by 15% of taxable income) above the threshold of €37,372.

i) old age credit single persons (*temp_SuppOA*)

Tax payers entitled to an old age credit and to the state pension for single persons or single parents (section 2.1.3) with total taxable income below € 37,970 obtain the old age credit for single persons of €443 per year next to the old age credit.

j) temporary credit early retirement (from 2013 to 2015: *temp_ERtc*)

This temporary credit has been abolished from 2016.

Table 2.30 Parameters tax credits

	2021	2022	2023	2024
general tax credit	2,837	2,888	3,070	3,362
reduction: threshold	21,053	21,318	22,661	24,813
reduction: rate	5.977%	6.007%	6.095%	6.630%
reduction: maximum	2,837	2,888	3,070	3,362
above state pension age	1,469	1,494	1,583	1,735
reduction: rate	3.093%	3.106%	3.141%	3.421%
reduction: maximum	1,469	1,494	1,583	1,735
work credit:				
band_rate 1	4.581%	4.541%	8.231%	8.425%
band_uplim 1	10,108	10,351	10,740	11,491
band_rate 2	28.771 %	28.461 %	29.861 %	31.433 %
band_uplim 2	21,835	22,357	23.201	24,821
band_rate 3	2.663%	2.61%	3.085%	2,471%
Uplim	4,205	4,260	5,052	5,158
reduction %	6%	5.86%	6.51%	6.51%
Max	4,205	4,260	5,052	5,532
From	35,652	36,649	37,691	39,957
Work credit s.p.a.[1]+:				
band_rate 1 s.p.a.+	2.371%	2.348%	4.241%	4.346%
band_rate 2 s.p.a.+	14.89%	14.718 %	15.388 %	16.214 %
band_rate 3 s.p.a.+	1.378%	1.349%	1.589%	1,275%

	2021	2022	2023	2024
uplim s.p.a.+	2,178	2,204	2,604	2,662
reduction %	3.105%	3.03%	3.355%	3.358%
max	2,178	2,204	2,604	2,854
from	35,652	36,650	37,691	39,958
Income related Combination credit				
Earnings threshold	5,153	5,220	5,547	6,073
Minimum	0	0	0	0
Rate	11.45%	11.45%	11.45%	11.45%
Maximum	2,815	2,535	2,694	2,950
Max inc	29,738	27,350	29,076	31,838
Minimum s.p.a.+	0	0	0	0
Rate s.p.a.+	5.926%	5.921%	5.9%	5.9%
Max s.p.a.+	1,458	1,311	1,389	1,521
Old age credit	1,703	1,726	1,835	2.010
threshold	37,970	38,465	40,889	44,771
reduction %	15%	15%	15%	15%
Upto	49,323	49,972	53,122	58,170
Higher income credit	0	0	0	
Single persons	443	449	478	524

[1]s.p.a. = state pension age

As mentioned earlier, tax credits are not transferable between spouses and the amount of income tax and peoples' insurance contributions paid cannot be negative. However, some tax credits are also paid to a spouse with a low (or zero) income if his/her spouse pays income tax and peoples' insurance contributions. In that case the tax credit is not higher than the amount of income tax and peoples' insurance contributions paid by the spouse (after deducting his/her own tax credits): total tax/contributions paid by a couple is never negative. The tax credits for which this holds are: the general tax credit, work credit and (supplementary) combination credit.

- ***EUROMOD modelling***

In EUROMOD simulated values for income tax and peoples' insurance contributions may be negative at the individual level as long as the total amount for the couple is not negative.

Tax credits not taken into account in EUROMOD

a) young disabled credit

Persons receiving the benefit for young disabled persons 'Wajong' are entitled to the young disabled credit of €761 per year.

b) parental leave credit

From 2015, the parental leave credit has been abolished

c) credit for investment in venture capital, and green/ethical investment funds

Some categories of investments which are normally subject to the capital gains taxation (Box 3) are tax exempt up to certain limits.

- ***EUROMOD modelling***

As mentioned above, starting in 2009, the payment of the general tax credit to a spouse with a low or zero income is to be reduced to zero in 15 years (i.e. by 6.67% per year). Initially, this reduction did not hold if the spouse in question was born before 1st January 1972 or had a child living at home who was younger than 6 years at 31st December 2008. In previous EUROMOD versions this reduction was not implemented before 2011. In that year the reduction amounted to 20%. By 2012 the reduction was 26.66% for persons born after 1st January 1972 without a child younger than 6 years living at home, and 13.33% for persons born between 1st January 1963 and 1st January 1972 and for persons born after 1st January 1972 with a child younger than 6 years living at home. In 2013, these percentages were increased to 33.33% and 26.66%, respectively. In 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021 and 2022 the reduction was further increased (to 40%, 46.66%, 53.33%, 60%, 66.67%, 73.33%, 80%, 86.67% and 93.33%) for persons born after 1962.In 2023, the payment of tax credits to a spouse with low or zero income ceased altogether for persons born after 1962.

EUROMOD does not take into account a number of possible tax allowances, such as public transportation costs (home-work), gifts to charities, specific health care expenditures, and study costs.

EUROMOD initially calculates gross income tax on income from Box 1 (work and house) net of social assistance (*tingt_s)* in *tin_nl.* Income tax on income from Box 3 (saving and employment) is calculated in *tinkt_nl.* After the calculation of tax credits in *tintc_nl* and social assistance by *bsanet_nl*, EUROMOD computes the final income tax liability (*tin_s*) in *bsagross_nl* – in combination with the peoples' insurance contributions (*tsceepi_s*, section 2.6.4).

2.8 Consumption taxes

Consumption taxes simulated in EUROMOD can be divided in two groups: VAT (value added tax) and excises (additional duties paid over consumption, typically on energy, alcoholic beverages, and tobacco).

Simulated consumption tax liabilities paid by households depend on the tax rules (e.g. the VAT rate) and on the tax base (consumption expenditures or quantities). This is why, to simulate consumption taxes in EUROMOD, the input data must contain information on household expenditures. The expenditures matched in the EUROMOD input files based on SILC are reported directly by households in the HBS surveys at purchasing prices. Therefore, they already include the consumption taxes paid.

i) **VAT** (il_tva variable in EUROMOD) is the value-added tax. The model also simulates at high disaggregation level the VAT liabilities paid for each consumption category (output variables are tva01111, tva01112, and so on and so forth, corresponding to COICOP codes 01111 and 01112, etc.)

ii) **Excises** (il_tx variable in EUROMOD) are additional duties paid over consumption and can be classified in two groups: ad-valorem excises (il_txv) that depend on producer prices, and of specific or ad-quantum excises (il_txa) that depend on consumed quantities.

Since consumption data from HBS refers to expenditures (price times quantity), for the simulation of specific excises information on consumption prices are needed.

2.8.1 VAT (il_tva)

To extract the baseline VAT embedded in the expenditure consumption reported by households we only need the VAT rate of the policy system year. VAT rates usually do not vary too much across product, and are typically three rates (standard, reduced and zero), although in some countries there are more.

Table 2.31 VAT rates [2021-2024]

	Products	2021	2022	2023	2024
Standard		21%	21%	21%	21%
Reduced	Mainly applies to food, books and magazines, art objects, medicines and some specified services (shoe repair, tailor) .	9%	9%	9%	9%
Zero	Mainly applies to product services related to cross-border transactions, such as services for the international carriage of goods or work on goods that are exported to countries outside the EU. The 0% tariff also applies to the international transport of passengers., ….	0%	0%	0%	0%
Exempted[21]	The following goods and services are exempted from VAT: - letting or selling immovable property for a longer period of time - education - healthcare services - sports organisations and sports clubs - services supplied by socio-cultural institutions - financial services and insurances - childcare - care services and home care - services supplied by composers, writers and journalists - fundraising activities	-	-	-	-

2.8.2 Ad-valorem excises (il_txv)

Ad-valorem excises cover cigarettes and cigars.

[21] Here a list of all the industries and businesses activities that are exempted from consumption tax in the NL: investment gold, collective advocacy composers, writers, cartoonists and journalists, financial services and insurance, fundraising activities healthcare, youth work, games of chance, canteens, childcare, delivery of movable assets, lectures, excursions and tours, education, immovable property, postal services, radio and television, partnerships (umbrella exemption), socio-cultural institutions, sports organisations and sports clubs, funeral directors.

Table 2.32 Ad-valorem excise rates [2021-2024]

Products	2021	2022	2023	2024
Cigarettes	0.05%	0.05%	0.05%	0.05%
Cigars	0.09%	0.10%	0.11%	0.11%

2.8.3 Specific excises (il_txa)

Specific excises apply to tobacco products, alcoholic beverages and energy products. In this case, we collect both tax parameters and consumer prices, to allow the model to estimate the implicit quantities behind the reported household consumption expenditure amounts.

Table 2.33 Specific (ad-quantum) excise rates

Products	2021	2022	2023	2024
Wine	0.883 EUR/l	0.883 EUR/l	0.883 EUR/l	0.9596 EUR/l
Wine from other fruits	0.883 EUR/l	0.883 EUR/ l	0.883 EUR/l	0.9596 EUR/l
Fortified wines	1.493 EUR/l	1.493 EUR/ l	1.493 EUR/l	1.618 EUR/l
Beer	0.2849 EUR/l	0.2849 EUR/ l	0.2849 EUR/l	0.2613 EUR/l
Cigarettes	223.82 EUR/1000 pcs	223.82 EUR/1000 pcs	223.82 EUR/1000 pcs	362.12 EUR/1000 pcs
Cigars	0 EUR/1000 pcs	0 EUR/1000 pcs	0 EUR/1000 pcs	0 EUR/1000 pcs
Electricity	124.28 EUR Per Mwh	67.29 EUR Per Mwh	125.99 EUR Per Mwh	108.8 EUR Per Mwh
Natural Gas	12.3304 EUR Per GJ	12.7870 EUR Per GJ	13.9266 EUR Per GJ	16.5700 EUR Per GJ
LPG	355.23 EUR Per 1000 kg	284.29 EUR Per 1000 kg	284.29 EUR Per 1000 kg	344.74 EUR Per 1000 kg
Gas Oil	521.68 EUR Per 1000 l	417.46 EUR Per 1000 l	417.46 EUR Per 1000 l	516.25 EUR Per 1000 l

Table 2.34 Consumer Prices of Excise products

Products	2021	2022	2023	2024
Wine	6.12 EUR/l	6.346.90 EUR/l	6.707.93 EUR/l	6.93 EUR/l
Wine from other fruits	6.12 EUR/l	6.346.90 EUR/l	6.70 7.93 EUR/l	6.93 EUR/l
Fortified wines	9.11 EUR/l	9.549.33 EUR/l	10.149.70 EUR/l	10.88 EUR/l
Beer	2.23 EUR/l	2.47 EUR/l	2.70 EUR/l	2.83 EUR/l
Cigarettes	378.19 EUR/1000 pcs	410.00 EUR/1000 pcs	555.00 410 EUR/1000 pcs	614.97 EUR/1000 pcs
Cigars	262.63 EUR/1000 pcs	424.38 EUR/1000 pcs	441.75 EUR/1000 pcs	470.05 EUR/1000 pcs
Electricity	130.2 EUR Per Mwh	51.7 EUR Per Mwh	319.40 EUR Per Mwh	278.05 EUR Per Mwh

Natural Gas	28.40 EUR Per GJ	40.94 EUR Per GJ	56.89 EUR Per GJ	62.50 EUR Per GJ
LPG	2261.38 EUR Per 1000 kg	5046.306095.28 EUR Per 1000 kg	3830.413804.95 EUR Per 1000 kg	4180.30 EUR Per 1000 kg
Gas Oil	1289.18 EUR Per 1000 l	1844.53 EUR Per 1000 l	1902.00 EUR Per 1000 l	1832.98 EUR Per 1000 l

Consumer prices of goods subject to excise duties are nowcasted for the most recent years if they are not available yet. To do so, we follow a procedure similarly to what the model does to update non-simulated incomes from SILC. We combine the latest available data from the following sources:

- Latest available consumer prices per product (usually from the previous to last year, but in some cases such as for fuel prices, we may use more recent informationwhen available).
- Inflation: Harmonised Index of Consumer Prices (HICP, Eurostat) at COICOP 5 digits.
- Inflation quarter-on-quarter forecasts (DG ECFIN, confidential) by HICP main groups (Unprocessed food, Processed food including alcohol and tobacco, Non-energy industrial goods, Energy, Services - overall index excluding goods) of quarters 2, 3 and 4, as needed for each release.

- **EUROMOD modelling**

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

2.9 Extraordinary measures

2.9.1 COVID-19: summary policies, 2020-2022

In order to mitigate the economic impact of the COVID-19 crisis, the Dutch government implemented a series of policy measures. The first set of measures was presented on 17 March 2020, and the second set of measures was presented on 20 May 2020. A third set of measures was presented on 30 September 2020. The first set of measures covered three months (March, April and May, 2020), and the second set of measures covered four months (June, July, August and

September, 2020). The third set of measures covers three periods of three months (until 30 June 2021). Most of these measures were extended to 30 September 2021 and some of them to 31 March 2022. As of 1 April 2022, all these COVID-19 policies were abolished.

NOW (*Noodmaatregel Overbrugging Werkgelegenheid,* Emergency measure bridging employment) subsidizes 90% of the wage cost of employers in case of loss of revenue of more than 20%. In phase 1, recipients of NOW had to reimburse 150% of the subsidy if employees were laid off. In phase 2, the NOW subsidy is reduced proportionally to the number of lay-offs. In case more than 20 employees are laid off without agreement with the trade unions and without mediation, the NOW subsidy is reduced with 5%. Employers are assumed to continue to pay 100% of the wages. In phase 3, employers are allowed to reduce their wage cost, whilst the subsidy percentage has been reduced to 80% for the last three months of 2020 (Phase 3.1) and to 85% for the first six months of 2021 (Phase 3.2 and 3.3). The same subsidy percentage (85%) held for phase 4 (1 July 2021 – 30 September 2021), phase 5 (1 November 2021 – 31 December 2021) and phase 6 (1 January 2022 – 31 March 2022).

TOZO (*Tijdelijke Overbruggingsregeling Zelfstandige Ondernemers,* Temporary bridging arrangement independent entrepreneurs) supplements the income of self-employed to social assistance level, in case it drops below this threshold as a result of the COVID-19 crisis. In contrast with general social assistance, no asset test is performed. In phase 1, the income of the spouse was not taken into account in the calculation of the benefit, but in phase 2, the income of the spouse is taken into account. An asset test, announced for phase 3, was postponed.. In addition, TOZO includes loans to firms suffering from loss of revenues. TOZO was abolished as of 1 October 2021. Instead, a temporary extension (without asset test) of the regular social assistance arrangement for self-employed was introduced by 1 October 2021 which lasted until 31 March 2022.

TOGS (*Tegemoetkoming Ondernemers Getroffen Sectoren,* Allowance for entrepreneurs in the affected sectors) is an allowance of € 4,000 for entrepreneurs in the affected sectors, to cover fixed costs in the case of loss of revenu of more than € 4,000. In phase 2, TOGS was replaced by TVL (*Tegemoetkoming Vaste Lasten,* Allowance for fixed costs). This allowance is meant to cover fixed costs and consists of an amount between € 1,000 and € 50,000, dependent on the loss of revenue (more than 30%) and the amount of fixed costs. In a number of respects, TVL has been adjusted in phase 3. In the fourth quarter of 2020, in all four quarters of 2021 and in the first quarter of 2022 it was available to firms suffering loss of revenue in almost all sectors.

3. DATA

3.1 General description

The Dutch database consists of the Dutch part of the European Union Statistics on Income and Living Conditions (EU-SILC). This is a rotating panel survey (4 rotational groups), aimed to be representative of the Dutch population in private households. The sampling frame is the Dutch Population register (*Basisregistratie Personen* (BRP)). The sampling design can be classified as a stratified random sampling design. The unit of assessment is the household. The data consist of register data, supplemented by interview data (CATI/CAWI). Notably, although the original data is a panel, the User Data Base is not. This means that it is not possible for users to follow the same people over time.

From 2021 onwards, a new database prepared by Eurostat - EUROMOD SILC database (EMSD) - is used to to derive EUROMOD input dataset. The EMSD includes:

- all UDB (User Database) variables (each variable is described in the doc 65 (DocSILC065) available online);
- national data supplied by the National Statistical Institute (NSI);
- EUROMOD variables created and imputed inside Eurostat because of restricted data access or knowledge in-house.

Based on the EMSD, the national team derives additional variables requiring a deep understanding of country specificities (for instance national tax-benefit rules). The final EUROMOD input dataset is therefore made of variables created by both Eurostat and the national team.

Some of the EUROMOD variables produced by Eurostat are created and/or imputed with PDB (Production Database) variables. The reason being that the modalities of the PDB variables are more detailed than in UDB. According to the agreement between the NSI and Eurostat, the national team is allowed to use the more detailed information coming from the PDB to derive some EUROMOD variables or to use them as intermediate variable to impute other EUROMOD variables.

However, in the final EUROMOD input dataset, the same disclosure rules as in the UDB are applied. Nevertheless, when imputing variables, these disclosure rules are not applied, so the values might still differ from the one that a user could obtain when replicating the imputation based on the UDB data set.

Table 3.1 EUROMOD database description

EUROMOD database	
Original name	EU-SILC UDB
Provider	Eurostat
Year of collection	2022
Period of collection	February-June
Income reference period	2021
Sample size	14,356 hh
Response rate	65%

Table 3.1 presents some information from the report on EU-SILC 2021, published in the series of National Quality Reports on EU-SILC by the European Commission[22]. The household response rate of EU-SILC 2022 is 62%. In order to improve the timeliness and the oncoming revision of EU-SILC, Statistics Netherlands has redesigned the data collection in the first wave. From 2016 onwards, the first wave was conducted as a stand-alone survey with a new sampling design and mixed mode data collection (CAWI and CATI) as a main feature. Sampled persons were invited to fill in the questionnaire by means of CAWI. Subsequently, non-respondents had been contacted by phone to conduct the interview by means of CATI. The timeliness of the data transmissions was also taken into account in the redesign, as the starting date of the field work changed from July to March.

[22] https://ec.europa.eu/eurostat/web/income-and-living-conditions/quality

The sampling frame is the Dutch Population register (*Basisregistratie Personen* - BRP). The sampling design can be classified as a stratified random sampling design. In the new sampling design for the first wave in 2016, a stratified sampling frame of persons aged 16 and over was constructed. Sample persons were divided into 21 strata. These strata were defined on the basis of household income, age and number of household members. For a detailed description we refer to the Quality Report.

Cross-sectional weights were calculated in compliance with the Eurostat recommendations for these calculations. The final cross-sectional weights were obtained by a calibration of the joint cross-sectional and longitudinal sample. The following variables were included in the calibration scheme: sex, age, household size, region, tenure status, disposable income, low income category, at risk of poverty rate, ethnic background, degree of urbanisation, activity status, household income decile.

As income data are based on register information most income variables do not suffer from item non-response. Only the inter-household transfers (paid and received) and the income from rental of a property or land are partly derived from the EU-SILC questionnaire. Notably, part of the labour market information, such as the number of years worked, is asked from the selected household member only. As a result, this information suffers from considerable item non-response.

3.2 Data adjustment

In order to guarantee consistency between demographic variables and income variables, which refer to the previous year (and on which EUROMOD simulation are based), all children born between the end of the income reference period and the date of interview (47 children) have been dropped from the sample. The final sample includes 32,567 individuals in 15,242 households.

Except for a very small number of corrections of negative income components, no further adjustments to variables have been made.

3.3 Imputations and assumptions

3.3.1 Time period

The EU-SILC information on demographic variables mainly refers to the time of data collection (February-June 2021). However, some information also indicates the status quo at the end of the income reference period (2020). If possible, the demographic, labour and socio-economic information in the EUROMOD dataset was based on the EU-SILC variables referring to the income reference period.

The EU-SILC UDB information on incomes refers to the calendar year of 2021, based on a 12 months receipt period. All monetary incomes in the EUROMOD database are converted into monthly terms. In most of the EUROMOD calculations it is implicitly assumed that income is received at the same rate throughout the year.

3.3.2 Gross incomes

Only gross incomes are available in the EU-SILC UDB database. Therefore, no net to gross imputations have been made.

3.3.3 Disaggregation of harmonized variables

The following imputations of key variables (not available in the EU-SILC UDB survey) are produced:

- Financial capital is imputed, assuming that investment income reflects the annual rates of return on capital amounts exceeding the tax free allowance in Box 3 of € 30,846 implicit in the tax schedule in Box 3 (see Table 2.28) and 0.1% on capital amounts below this threshold.
- Pension income is disaggregated into state pension and complementary pension income, by using additional information provided by Statistics Netherlands.
- Social assistance is disaggregated into general social assistance and other social assistance by using additional information provided by Statistics Netherlands
- Unemployment benefits are disaggregated into contributory unemployment benefits and non-contributory unemployment benefits by using additional information provided by Statistics Netherlands.
- Employee (occupational) pension contributions are determined using additional information provided by Statistics Netherlands.

As noted in section 3.1, part of the labour market information in the Dutch EU-SILC UDB databases suffers from considerable item non-response. One key variable used in the simulation of unemployment benefits is the labour market history: the number of years in paid employment (*liwwh*). In cases where this variable is missing, an imputation procedure is used, in which the number of years in paid employment is based on a regression with age, gender and household composition as explanatory variables.

3.4 Updating

To account for any time inconsistencies between the input dataset and the policy year, uprating factors are used. Each monetary variable (i.e. each income component) is updated so as to account for changes in the non-simulated variables that have taken place between the year of the data and the year of the simulated tax-benefit system. Uprating factors are generally based on changes in the average value of an income component between the year of the data and the policy year.

As a rule, uprating factors are provided both for simulated and non-simulated income components present in the input dataset. Note however that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the updated original variables in the dataset. Uprating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable. The list of uprating factors as well as the sources used to derive them can be found in Annex 1.

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

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

Table 3.2 summarizes the major features of the most recent database used to be run with the policy systems of 2021-2024.

Table 3.2 Extended EUROMOD database description

Extended EUROMOD database for the simulation of consumption taxes	**SILC 2022 – Income year 2021 – Expenditures from HBS 2015**
EUROMOD database	NL_2022_b1_2015_03_e2
Year of collection (HBS) and source	HBS 2015 – EU
Year of collection (SILC) and source	SILC 2022 – EU
Coverage and sample size	14,356 hh
Share of households with negative incomes excluded from the matching procedure	0.4%

These extended EUROMOD files contain all the variables included in the standard EUROMOD input files plus the income shares of each consumption category included in HBS. For example, for countries with consumption disaggregation at 4 COICOP level (5 digits), there will be close to 200 additional variables, each one with the income shares of expenditure (household level) for that particular consumption category (e.g. starting from the income share of rice consumption: xs_01111; bread: xs_01112, and so on and so forth). The number of additional variables depends on the granularity available in HBS. Please note that, due to the lack of information in the HBS files distributed by Eurostat, there is no consumption reported at 5-digit COICOP level for the following 3-digit codes: CP022, CP063, CP103 and CP127. Positive consumption might exist for 3-digit or 4-digit levels, but EUROMOD uses only 5-digit values.

For the case of the Netherlands, data NL_2022_b1_2015_03_e2, the number of variables included (income shares of expenditures, xs_*) are 193, corresponding to the harmonized consumption categories defined at COICOP 2013 level 4 (five digits)

In Figure 3.1 we present the share of households' consumption expenditures by product captured in our matched databases (extended EM input files) with respect to the original reported expenditures in HBS. The column that refers to the same year (in this case, HBS 2015 with Extended EM Input 2015) directly depends on the quality of the imputation procedure, while the comparison across different years is influenced not only by the matching noise but also by the changes in population characteristics and in the underlining distribution of income.

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

The HBS data for NL underreports expenditures compared to National Accounts (NA) on average by11%. Exceptions are spending on CP04 (Housing, water, electricity, gas and other fuels) which

are overreported by 30% and CP10 (Education), over-reported by 67%. Matching enhances coverage of NA expenditures (average underreporting estimated to 2% compared to NA). Spending on CP04 and CP10 are also a bit higher in the matched SILC compared to original HBS, which means they overestimate NA significantly. The matched SILC+HBS figures tend to overestimate consumption relative to the original HBS figures by about 11%.
The matching performs well also at 3-digit COICOP level: it replicates closely HBS coverage with an average overestimation of 13%. When comparing to the NA, expenditures in matched SILC slightly overestimate aggregate consumption on average by 8%. Although most deviation from NA represent underestimation, some categories are severely overestimated following over-reporting in HBS. Such groups are CP043 (55%) CP044 (almost triple compared to NA, but only 6% higher in matched SILC than HBS), CP104 and CP105 (similar to HBS, but much higher than NA).

Figure 3.1 – Comparing extended EUROMOD input SILC+HBS with original EU-HBS aggregate expenditure at COICOP level 1

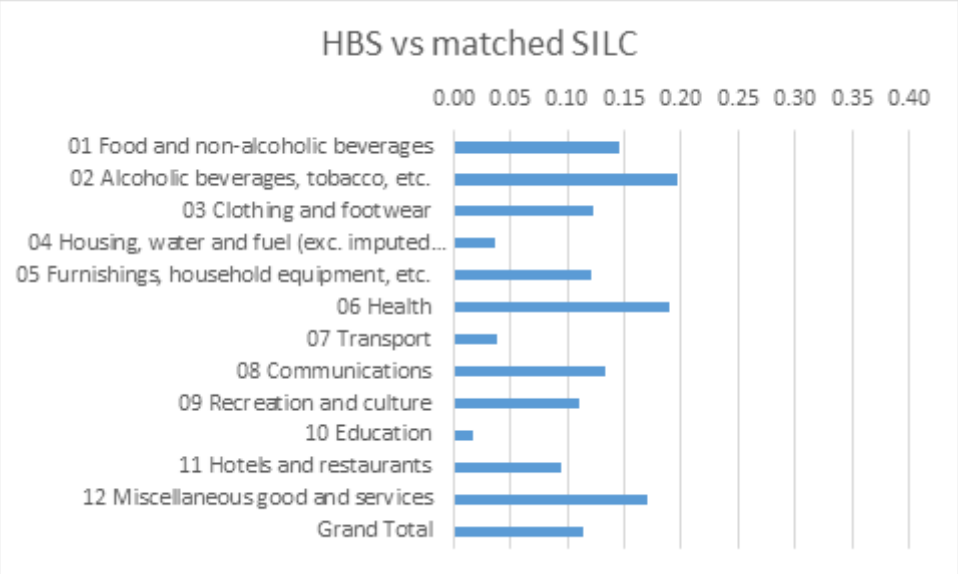
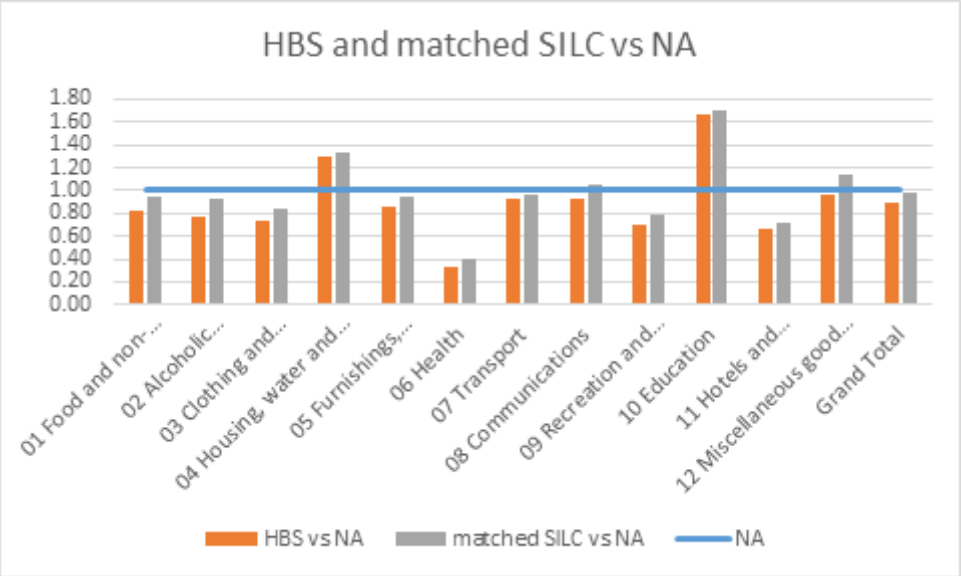


Figure 3.2 – Validating extended EUROMOD input data and original HBS against National Accounts


HBS and matched SILC vs NA
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
01 Food and non-...
02 Alcoholic...
03 Clothing and...
04 Housing, water and...
05 Furnishings,...
06 Health
07 Transport
08 Communications
09 Recreation and...
10 Education
11 Hotels and...
12 Miscellaneous good...
Grand Total
HBS vs NA
matched SILC vs NA
NA

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 3. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against external data. The main discrepancies between EUROMOD results and external benchmarks are discussed in the following subsections. Factors that may explain the observed differences are also discussed.

4.1.1 Components of disposable income

Table 4.1 compares the definition of disposable income in EUROMOD with the definition of the disposable income variable HY020 in EU-SILC. The EUROMOD definition does not include non-cash components such as the company car, and it does not include tax adjustments pertaining to tax years other than the reference year.

Table 4.1 Components of disposable income

	EUROMOD 2021-2024	EU-SILC 2024
	ils_dispy	HY022
Employee cash or near cash income	+	+
Employer's social insurance contribution		0
Company car		+
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		+

Notes: Some variables in EUROMOD are aggregate variables. They consist of several components, some of which have been simulated in EUROMOD and some not.

4.1.2 Validation of market incomes

a) Number of recipients of various types of market income

Table A3.1 compares the numbers of recipients of various components of market income as derived from EU-SILC and used in EUROMOD with external statistics.

All in all, the number of recipients of employment income in EU-SILC (households) exceeds the external statistics by about 3%, whilst the number of recipients of self-employment income appears to be underestimated by about 10%.

The number of households reporting investment income in EU-SILC in 2021 is about 14% higher than the figures reported by Statistics Netherlands and the number of households reporting property income in EUROMOD in 2021 is about 33% higher than the official figure. One possible explanation for these results is that the definition of self-employment income used by EU-SILC is somehow narrower than the definition used by Statistics Netherlands, whilst the definitions of property and investment income is broader.

The number of recipients of complementary pensions in 2021 exceeds the external statistics by about 3%.

b) Amounts of various types of market income

Total employment income in 2021 as derived from EU-SILC is about 3% below the external statistics, as may be inferred from Table A3.2 in Annex 3. Self-employment income in EUROMOD falls below external statistics by about 22%. The degree of underestimation is clearly higher than the underestimation of the number of self-employed. This confirms the conclusion that the definitions in both sources may be different: it appears that EUROMOD counts relatively more persons with low self-employment incomes. Total property income in 2021 in EUROMOD is about 25% below the external statistics, which implies that in EU-SILC households with low property incomes are overrepresented. Investment income in EUROMOD in 2021 overestimates the amounts published by Statistics Netherlands by more than 200%. EUROMOD does not simulate investment income (it only uprates the monetary value observed in EU-SILC); hence, the input data are driving these differences between aggregate amounts and external statistics. We have no clear indication about the cause of the differences, but one possibility is that investment income in EU-SILC includes so-called income from substantial interest (Box 2 income, see section 2.7.4). Notably, a substantial share of the total investment income in EU-SILC is received by a small number of recipients.

4.1.3 Validation of taxes and social insurance contributions

a) Number of payers

Table A3.3 presents the numbers of income tax and social insurance contributions payers as simulated by EUROMOD, and compares them with available external statistics. We find that EUROMOD overestimates the number of occupational pension contribution payers by about 4%, whilst it underestimates the number of unemployment insurance by about 1% and disability insurance contributions payers by about 2%.

b) Amounts

Income tax payments are underestimated by 4% in 2021 and 2% in 2022, but overestimated by 4% in 2023. Peoples' insurance contributions are overestimated by 8% in 2021,by 2% in 2022 and by 7% in 2023 (table A3.4). It should be noted that some differences are to be expected because the external statistics on income tax payments reflect actual amounts paid in the calendar year, while EUROMOD estimates the income tax due on income received in the calendar year. In addition, the external statistics include an amount for dividend taxation which residents can deduct from their income tax liability but which is partly borne by foreign residents and companies. Moreover, the external statistics include income tax on Box 2 income (see section 2.7.4), not taken into account in EUROMOD.

Employer social insurance contributions for unemployment are overestimated by 42% in 2021, underestimated by only 1% in 2022 and overestimated by only 1% in 2023. The overestimation in 2021 is probably due to the fact that EUROMOD estimates the tax and benefit system at the 30th of June of each year to derive average annual amounts. This means that a reduction of the insurance contribution rate for the period August – December 2021 - which is accounted for in the external statistics - is not taken into account by EUROMOD results. Employer social insurance contributions for disability are overestimated by about 4% in 2021, whilst they are underestimated by about 5% in 2022 and by about 8% in 2023.

The total amount of health insurance contributions also appears to be replicated quite well in EUROMOD. Notably, the quality of the external statistics for these amounts is subject to some doubt[23].

[23] The external statistics include the sum of all payments of health insurance contributions made to private health insurance companies which appear to be based on fairly rough estimates.

4.1.4 Validation of benefits

a) Number of recipients of various types of benefits

Table A3.5 shows that the number of recipients of the state pension in EUROMOD is overestimated by 3% in 2021 and by 1% in 2022, but underestimated by 1% in 2023 . This is a result of the fact that EUROMOD does not take into account structural changes, such as increases in the number of persons that have reached the state pension age. The number of recipients of the care allowance is overestimated by 6% in 2021 and 2022 and by 13% in 2023, whilst the number of recipients of the rent allowance in EUROMOD is overestimated by 16% in 2021 and by 15% in 2022. Part of this discrepancy may be caused by non-take up of the rent allowance, in particular in cases where the expected benefit amount is low. Non-take up may also be one of the explanations for the even larger overestimation of the number of households entitled to social assistance (about 40% on average).

Notably, the external statistics on the number of recipients of care allowance are subject to revision because the final decisions of the tax authorities on awarding care allowance may differ from the initial eligibility decisions, on the basis of the final assessment of taxable income for the calendar year in question. This phenomenon may also affect the number of recipients of rent allowance for which reliable recent external statistics are hard to find anyway.

The number of recipients of education benefits in EUROMOD is about 36% below the external statistics, possibly because the EU-SILC definition of education benefits does not include payments for public transport subscriptions for students whilst the external statistics include all students for whom government makes payments to public transport companies. The number of recipients of 'other social assistance benefits' appears to be overestimated by 32% in 2021 and 2022. Here, the benefits counted as 'other social assistance benefits' in EU-SILC probably include benefits paid to self-employed to cover the loss of income caused by COVID-19. With respect to the survivor benefits, the number of recipients in EUROMOD is underestimated by about 37% in 2021, 40% in 2022 and 34% in 2023. Notably, the number of beneficiaries is so low that a difference of 1(,000) equals 4%.

The number of recipients of the (means tested) child allowance is underestimated by EUROMOD by about 18% in 2021, by 17% in 2022 and by 4% in 2023.

The number of recipients of family benefits is underestimated by about 4% in 2021 and 2023, and by 3% in 2022. The number of unemployment benefit recipients the degree of underestimation is 17% in 2021. In 2022, there is an overestimation of 14% and in 2023 by 20%. By contrast, the number of recipients of disability benefits shows a overestimation of 3% in 2021, decreasing to 1% in 2022 and 2023.

d) Amounts of various types of benefits

In table A3.6 we see that in 2021, the amount of state pensions is overestimated by EUROMOD by about 6%. In view of the slight overestimation of the number of recipients and the fact that EUROMOD does not take into account that recipients may not be entitled to the full state pension, as a result of having lived abroad during their working life, this degree of overestimation is unexpectedly low.

The extent to which the total amount of care allowance appears to be underestimated in EUROMOD is larger than that of the number of recipients. This raises the suspicion that the number of recipients per household may be overestimated due to insufficient information to identify allowance partners. Some degree of underestimation is also, again, to be expected because the external statistics include payments which after the final assessment may have to be adjusted. The latter phenomenon is also likely to play a role with the rent allowance, which is underestimated by about 3% in 2021, but overestimated by 7% in 2022 and 20% in 2023.

The overestimation of the number of recipients of social assistance benefits is accompanied by a considerable underestimation of the amounts of 15% in 2021. This suggests that benefit units entitled to the full social assistance benefit, i.e., with no other sources of income, are underrepresented in the data.

The total amount of education benefits in EUROMOD in 2021 is 60% lower than the amount derived from the external statistics. As mentioned above, this may at least partly be attributed to the fact that the amounts paid for public transport included in the education benefits are probably not included in the EU-SILC definition of education benefits.

The aggregate amount of 'other social assistance benefits' is underestimated by 2% in 2021 and accurately replicated in 2022 and 2023.

On average, the extent to which the amount of survival benefits is underestimated is somewhat larger than the extent to which the number of recipients is underestimated, possibly because some widows receive a more generous survivor benefit than taken into account in EUROMOD because they were widowed before the most recent reforms.

The child allowance as simulated in EUROMOD appears to be underestimated by about 36% in 2021 and 2022, and by 29% in 2023. At least partly, the difference with the external statistics can be explained by the fact that these statistics include a non-negligible amount that will have to be paid back to the tax authorities once the final assessment of taxable income has been completed. Notably, the degree of underestimation of the amounts is clearly larger than the degree of underestimation of the numbers of recipients. Currently, we have no plausible explanation for this result.

In contrast to the means tested child allowance, the amounts of non-means tested family benefits are replicated more accurately, with a degree of underestimation of 5% in 2021, 11% in 2022 and 4% in 2023.

The fact that developments after 2021 are not captured by the uprating factors applied is illustrated by comparing the simulated amounts of unemployment benefits with the external statistics: unemployment does not change in EUROMOD, and as a result, the simulated amounts of unemployment benefits do not reflect the lower amounts as derived from the external statistics. Interestingly, the amounts for 2021 already overestimate the external statistics by 6% despite the fact that the number of recipients of unemployment benefits is overestimated.

The amount of disability benefits in EUROMOD differs between 0 and 2% from the external statistics.

4.1.5 Validation of simulated consumption taxes

Table A3.9 and A3.10 show the validation of consumption taxes related amounts. The top part of table A3.9 compares expenditures aggregated amount from EUROMOD simulations with National Account (NA) external statistics as reported by EUROSTAT.

Most non-calibrated expenditures are slightly underestimated in 2021, such as "01 Food and non-alcoholic beverages", "02 Alcoholic beverages, tobacco, etc.", "03 Clothing and footwear (il_x03)", "09 Recreation and culture" and "11 Hotels and restaurants". Expenditures on "05 Furnishings, household equipment, etc." are more underestimated (by 19%), while the expenditures on health are severely underestimated (by 56%).

The second part of Table A3.9 compares aggregate revenues from consumption taxes (i.e. VAT and total excises) to external statistics from EUROSTAT. Then the bottom part of the table shows simulated aggregate revenue for some categories of interest such as alcoholic drinks, tobacco and energy products. For the Netherlands, external statistics for total excises are not yet available from 2021. When looking at specific categories, revenue from excises are mostly undersimulated, except for tobacco (overestimation of 53%).

Table A3.10 compares annual Government revenue from consumption taxes after applying calibration to NA. In the top part of table 3.10 we show that consumption tax revenues simulated in the Netherlands for private households sum up to 32,894 billion euro for VAT and 18,718 billion euro for excises. As a result about 50% of aggregate VAT revenues are simulated in Euromod,.. There might be various reasons for these discrepancies. The major one being that among the several groups that pay significant amounts of VAT only households are covered by EUROMOD using data from SILC+HBS.

When looking at specific items at lower coicop details, the calibration also slightly improves the estimation of government revenue although some differences with respect to official statistics remain higher than 25%.

4.2 Income distribution

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

4.2.1 Income inequality

Table A3.7 in Annex 3 presents a number of indicators of the income distribution and compares them to Eurostat figures on the basis of EU-SILC data on disposable income of the calendar year in question. Given that the data sources are the same, it is encouraging that the distributions of measured and simulated income in 2021 do not differ very much. As far as the income shares are concerned, the biggest difference is found in the share of the lowest decile, which in 2021 is overestimated by EUROMOD by about 18%. It is likely that this is mainly caused by the fact that EUROMOD assumes 100% take-up of benefits such as social assistance on the one hand, and 100% entitlement to (and take-up of) the state pension on the other. In 2021, EUROMOD overestimates median income by 1%, whilst the mean income is underestimated by about 6%, the Gini indicator by about 5% and the S80/S20 indicator by about 9%.

4.2.2 Poverty rates

Comparing the at-risk-of-poverty rates resulting from EUROMOD with the Eurostat figures (Table A3.8 in Annex 3) we find that in 2021, EUROMOD underestimates extreme poverty (drawing the poverty line at 40% of median equivalized income) by about 33%. When the poverty line is drawn at a higher percentage of median equivalized income, poverty is also underestimated, albeit to a much lesser extent (12%). Differentiated by age group we see that using the 60%

threshold poverty is overestimated by 1% in the 0-15 age group, by 8% in the 16-24 age group, by 5% in the 25-49 age group, and underestimated by 1% in the 50-64 age group and by 34% among the elderly. Once again, this may at least partly be attributed to the fact that EUROMOD assumes 100% take-up of social assistance and 100% entitlement to the state pension.

4.3 Summary of "health warnings"

- Care should be taken in interpreting results for small sub-groups.
- No adjustments are made for structural changes in the characteristics of the population between the data year (2021) and the simulation years.
- Non-takeup of benefits is not modelled. This has the effect of (a) inflating the simulated incomes of households who do not take up these benefits in reality and, possibly, reducing the number of people in very poor households, (b) inflating the cost of benefits and the cost of making them more generous, (c) diminishing the relative impact of benefits that do not have problems of non-takeup. In particular, means-tested benefits such as housing benefits and social assistance are likely to be affected by non-takeup, for example when the entitlements would be small.
- The quality of the rent variable used to simulate entitlement to housing benefit is subject to doubt.
- Childcare allowance is not modelled.
- A number of potential income tax deductions is not taken into account. Potential deductions include specific health care costs, study costs and gifts to charities.
- Uprating factors for 2023 and 2023 are still provisional.
- No account has been taken of the increase of the state pension age between 2020 and 2024. Instead, the state pension age is 66 in all the simulation results presented in this report.
- Pregnancy and childbirth allowance are simulated but switched off for policy years 2015-2024.
- The simulation of monetary compensation schemes for Covid-19 (bmcer_s) in 2021 is triggered by the simulation of labour market transitions defined in policy TransLMA_nl. 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.

5. REFERENCES

Verbist, G. (2004) "Redistributive effect and progressivity of taxes An International Comparison across the EU using EUROMOD", EUROMOD Working Paper No. EM5/04.

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

General sources for tax-benefit descriptions/rules

In Dutch: Kluwer Fiscale encyclopedie De Vakstudie; Kluwer Encyclopedie Sociale Verzekeringen; Kluwer Encyclopedie Sociale Voorzieningen; www.belastingdienst.nl; www.st-ab.nl; www.svb.nl; www.uwv.nl; wetten.overheid.nl

In English: www.svb.nl

ANNEX 1. UPRATING FACTORS

Table 1. Uprating factors

Index	Income Source/index type	2020-2021	2021-2022	2021-2023	2021-2024
default	Annual average inflation	1.028	1.1164	1.1621	1.1989
yem	INCOME : Employment	1.0265	1.0398	1.1046	1.1693
yfb	INCOME : Fringe Benefits				
yiy	INCOME : Investment		see yem		
ypr	INCOME : Property		see yem		
ypt	INCOME : Private Transfers	1.0300	1.019	1.0537	1.1189
yse	INCOME : Self Employment		see yem		
bed	BENEFIT/PENSION : Education	1.0263	1.0127	1.0399	0.9799
bfa	BENEFIT/PENSION : Family	1.0084	1.0067	1.2077	1.2512
bho	BENEFIT/PENSION : Housing	-			
bsa	BENEFIT/PENSION : Social Assistance		see bun		
bun	BENEFIT/PENSION : Unemployment	1.0189	1.0239	1.1479	1.2664
pdi	BENEFIT/PENSION : Disability	1.0189	1.0239	1.1479	1.2664
phl	BENEFIT/PENSION : Health				
poa00	BENEFIT/PENSION : State pension	1.0275	1.0168	1.1012	1.1856
psu	BENEFIT/PENSION : Survivors	1.0109	1.0135	1.1167	1.1935
tpcpe	TAX/CONTR : Occ. pension contr. employees		see yem		

Notes: source: inflation: Eurostat (AMECO); yem: statline.cbs.nl; ypt: www.alimentatiewijzer.nl, bed, bun, pdi: www.overheid.nl, bfa, poa00, psu: www.svb.nl.

ANNEX 2. POLICY EFFECTS IN 2023-24

Table 1 and Figure 1 show the effect of 2024 policies on mean equivalised household disposable income by components of income and income decile group. This effect is estimated as the difference between simulated household net income under the 2024 tax-benefit policies (deflating monetary parameters by Eurostat's Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2023 policies, as a percentage of mean equivalised household disposable income in 2023.

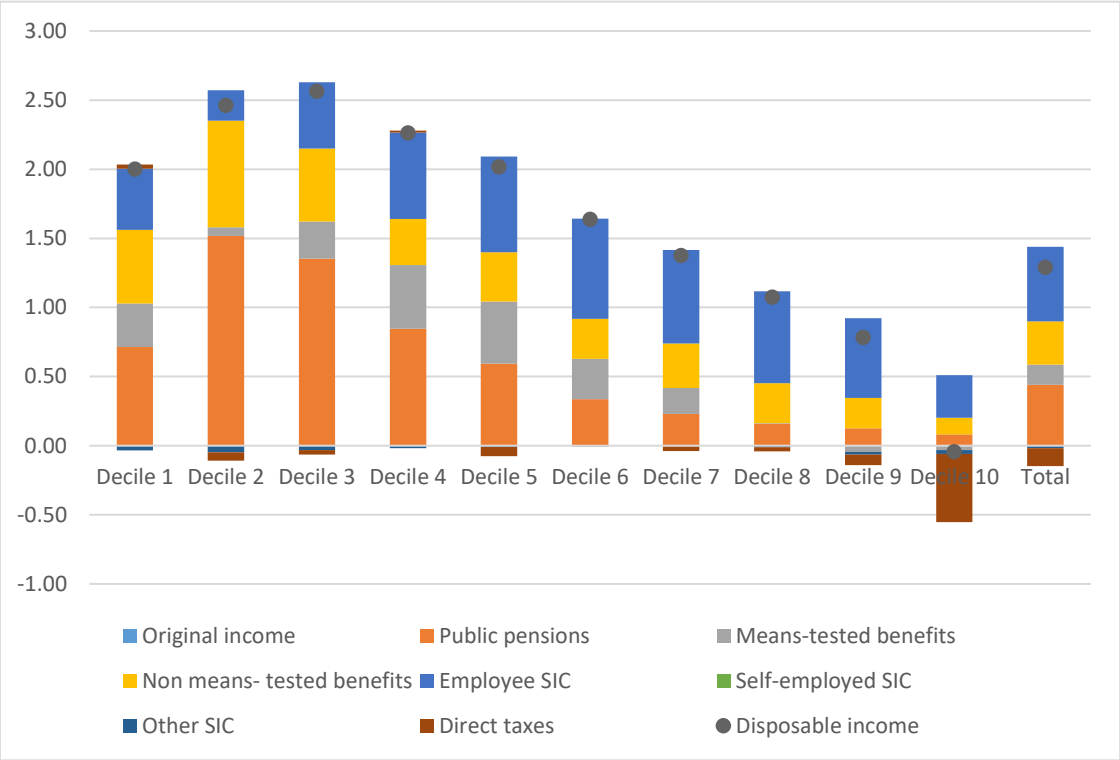
The total effect of (deflated) 2024 policies is an increase in disposable income of 1.29%. The main driver of this overall effect is an increase in employee SIC that increases household income on average by 0.54%. However, the overall effect hides significant different effects across the income distribution: although the policy effect across the income distribution is positive for almost all decile groups, the increase in disposable income varies in a range between -0.04% and 2.56%. The increase in disposable income is the highest in decile group 2 and 3 and shrinks with every higher decile group. Only in the highest decile group there is a decrease of the disposable income in real terms (-0.04%). For the lower decile groups, the average increase in disposable household income is mainly the result of increased public pensions. For higher decile groups (5 to 9), this increase can be attributed in a larger extent to lower employee SIC. . These is because benefits have increased more than the cost of living in real terms (as measured by the HICP) and social insurance contributions results lower in real terms because the maximum threshold has increased more than earnings, implying that some employees ended up paying SIC simply because their earnings have not grown as much.[24]

Table 1: Policy effects in 2023-2024, using the CPI-indexation, %

Decile group	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-empl. SIC	Other SIC	Direct taxes	Dispo-sable income
1	0.00	0.71	0.32	0.53	0.44	0.00	-0.03	0.03	2.00
2	0.00	1.52	0.06	0.77	0.22	0.00	-0.05	-0.06	2.46
3	0.00	1.35	0.27	0.53	0.48	0.00	-0.03	-0.03	2.56
4	0.00	0.85	0.46	0.33	0.63	0.00	-0.02	0.01	2.26
5	0.00	0.59	0.45	0.36	0.69	0.00	-0.01	-0.07	2.02
6	0.00	0.34	0.29	0.29	0.72	0.00	0.00	0.00	1.64
7	0.00	0.23	0.19	0.32	0.68	0.00	0.00	-0.04	1.38
8	0.00	0.16	0.00	0.29	0.67	0.00	-0.01	-0.03	1.08
9	0.00	0.13	-0.05	0.22	0.58	0.00	-0.02	-0.08	0.78
10	0.00	0.08	-0.03	0.12	0.31	0.00	-0.03	-0.49	-0.04
Total	0.00	0.44	0.15	0.31	0.54	0.00	-0.02	-0.13	1.29

[24] Although there were no specific changes to employees' social insurance contribution between 2023 and 2024, the maximum threshold has increased by 7% while employment earnings have grown by 5.9%. Hence in real terms some employees gained from paying lower SIC simply because their earnings remained below the threshold.

Figure 1: Policy effects in 2023-2024, using the CPI [1.0251154] indexation, %



ANNEX 3. VALIDATION TABLES

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earns)													
income : employment (yem)	N	5,283	5,283	5,283	5,283	5,113	5,209	NaN	NaN	1.03	1.01	NaN	NaN
income : self employment (yse)	N	1,887	1,887	1,887	1,887	2,090	2,168	2,248	NaN	0.90	0.87	0.84	NaN
Other original income (ils_origy - ils_earns)													
income : investment (yiy)	N	4,709	4,709	4,709	4,709	4,114	4,065	NaN	NaN	1.14	1.16	NaN	NaN
income : private pension (ypp)	N	7	7	7	7	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : property (ypr)	N	743	743	743	743	561	557	NaN	NaN	1.33	1.33	NaN	NaN
income : private transfers (ypt)	N	608	608	608	608	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : other (yot)	N	219	219	219	219	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : old age : complement (poacm)	N	3,676	3,676	3,676	3,676	3,583	3,568	NaN	NaN	1.03	1.03	NaN	NaN
expenditure : maintenance payment (xmp)	N	854	854	854	854	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Earnings (ils_earns)		
income : employment (yem)	statlinc cbs: beloning en arbeidsvolume van werknemers	numbers: statline inkomen van huishoudens
income : self employment (yse)	statline cbs: zelfstandigen: inkomen, vermogen, kenmerken	-
Other original income (ils_origy - ils_earns)		
income : investment (yiy)	statline cbs: inkomen van huishoudens	-
income : private pension (ypp)	-	-
income : property (ypr)	statline cbs: inkomen van huishoudens	-
income : private transfers (ypt)	-	-
income : other (yot)	-	-
pension : old age : complement (poacm)	statline cbs: inkomen van personen	-
expenditure : maintenance payment (xmp)	-	-

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earns)													
income : employment (yem)	N	337,766	351,209	373,101	394,961	328,443	351,575	NaN	NaN	1.03	1.00	NaN	NaN
income : self employment (yse)	N	53,410	55,536	58,998	62,454	68,343	74,996	80,235	NaN	0.78	0.74	0.74	NaN
Other original income (ils_origy - ils_earns)													
income : investment (yiy)	N	8,051	8,372	8,894	9,415	2,511	2,671	NaN	NaN	3.21	3.13	NaN	NaN
income : private pension (ypp)	N	71	71	71	71	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : property (ypr)	N	4,005	4,164	4,423	4,683	5,340	5,352	NaN	NaN	0.75	0.78	NaN	NaN
income : private transfers (ypt)	N	2,115	2,155	2,229	2,367	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : other (yot)	N	217	226	240	254	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : old age : complement (poacm)	N	54,591	54,591	54,591	54,591	51,137	51,079	NaN	NaN	1.07	1.07	NaN	NaN
expenditure : maintenance payment (xmp)	N	3,196	3,568	3,714	3,831	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
tax : income tax : simulated (tin_s)	Y	11,804	11,677	11,166	10,950	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property tax (tpr)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
tax : comp prvt ctrb : pensioner (tpcpe)	N	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	1.00	1.00	1.00	1.00	6,082	6,362	NaN	NaN	1.04	0.99	NaN	NaN
tax : sic : employee : unemployment insurance : simulated (tsceeui_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
tax : sic : employee : pension insurance : simulated (tsceepi_s)	Y	11,779	11,652	11,139	10,843	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Self-employed Social Insurance Contributions (ils_sicse) (NOTE: some components are hidden!)																					
Employer Social Insurance Contributions (ils_sicer) (NOTE: some components are hidden!)																					
tax : sic : employer : unemployment insurance : simulated (tscerui_s)	Y	8,677	8,677	8,677	8,677	0	0	0	0	0.00	0.00	0.00	0.00	8,756	8,930	NaN	NaN	0.99	0.97	NaN	NaN
tax : sic : employer : disability insurance : simulated (tscerdi_s)	Y	8,677	8,677	8,677	8,677	0	0	0	0	0.00	0.00	0.00	0.00	8,824	8,985	NaN	NaN	0.98	0.97	NaN	NaN
Credited Contributions (ils_sicct) (NOTE: some components are hidden!)																					
Other Contributions (ils_sicot) (NOTE: some components are hidden!)																					
Fixed health insurance contribution (tschlfx_s)	Y	14,036	14,036	14,036	14,036	0	0	0	0	0.00	0.00	0.00	0.00	13,918	14,041	14,237	NaN	1.01	1.00	0.99	NaN
Other external statistics (ils_extstat_other) (NOTE: some components are hidden!)																					
(tschl_s)	Y	14,344	14,344	14,344	14,344	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Direct taxes (ils_tax)		
tax : income tax : simulated (tin_s)	financieel jaarverslag rijk	incometax + dividend tax
property tax (tpr)	-	-

Continued...

	Source	Comments
Employee Social Insurance Contributions (ils_sicee)		
tax : comp prvt ctrb : pensioner (tpcpe)	statline cbs: inkomen van personen	-
tax : sic : employee : unemployment insurance : simulated (tsceeui_s)	-	-
tax : sic : employee : pension insurance : simulated (tsceepi_s)	financieel jaarverslag rijk	-
Self-employed Social Insurance Contributions (ils_sicse) (NOTE: some components are hidden!)		
Employer Social Insurance Contributions (ils_sicer) (NOTE: some components are hidden!)		
tax : sic : employer : unemployment insurance : simulated (tscerui_s)	uwv: januarinota awf + ufo	numbers: statline
tax : sic : employer : disability insurance : simulated (tscerdi_s)	uwv: januarinota aof + whk	numbers: statline
Credited Contributions (ils_sicct) (NOTE: some components are hidden!)		
Other Contributions (ils_sicot) (NOTE: some components are hidden!)		
Fixed health insurance contribution (tschlfx_s)	jaarverslag vws	nom pr/e.r./e.b - e.b.
Other external statistics (ils_extstat_other) (NOTE: some components are hidden!)		
(tschl_s)	-	-

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
tax : income tax : simulated (tin_s)	Y	74,258	78,411	83,558	91,176	0	0	0	0	0.00	0.00	0.00	0.00	77,500	80,000	98,700	NaN	0.96	0.98	0.85	NaN
property tax (tpr)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
tax : comp prvt ctrb : pensioner (tpcpe)	N	14,975	15,571	16,541	17,510	14,975	14,975	14,975	14,975	1.00	1.04	1.10	1.17	13,604	15,544	NaN	NaN	1.10	1.00	NaN	NaN
tax : sic : employee : unemployment insurance : simulated (tsceeui_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
tax : sic : employee : pension insurance : simulated (tsceepi_s)	Y	41,664	42,849	42,972	42,361	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	38,700	41,900	40,200	NaN	1.08	1.02	1.07	NaN
Self-employed Social Insurance Contributions (ils_sicse) (NOTE: some components are hidden!)																					
Employer Social Insurance Contributions (ils_sicer) (NOTE: some components are hidden!)																					
tax : sic : employer : unemployment insurance : simulated (tscerui_s)	Y	9,074	9,388	9,959	12,903	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	6,407	9,472	9,829	NaN	1.42	0.99	1.01	NaN
tax : sic : employer : disability insurance : simulated (tscerdi_s)	Y	21,806	20,537	22,354	25,308	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	21,019	21,621	24,203	NaN	1.04	0.95	0.92	NaN
Credited Contributions (ils_sicct) (NOTE: some components are hidden!)																					
Other Contributions (ils_sicot) (NOTE: some components are hidden!)																					
Fixed health insurance contribution (tschlfx_s)	Y	20,986	21,180	23,341	23,972	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	20,800	21,600	23,500	NaN	1.01	0.98	0.99	NaN
Other external statistics (ils_extstat_other) (NOTE: some components are hidden!)																					
(tschl_s)	Y	49,431	49,327	53,348	55,210	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	47,600	49,700	NaN	NaN	1.04	0.99	NaN	NaN

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
pension : old age : main/basic : simulated (poa00_s)	Y	3,210	3,210	3,210	3,210	3,152	3,152	3,152	3,152	1.02	1.02	1.02	1.02	3,119	3,181	3,247	NaN	1.03	1.01	0.99	NaN
Means-tested benefits (ils_benmt)																					
benefit : health : means-tested : simulated (bhlmt_s)	Y	4,452	4,457	4,972	4,612	0	0	0	0	0.00	0.00	0.00	0.00	4,200	4,200	4,400	NaN	1.06	1.06	1.13	NaN
benefit : housing : simulated (bho_s)	Y	1,709	1,696	1,845	1,997	1,792	1,792	1,792	1,792	0.95	0.95	1.03	1.11	1,475	1,475	NaN	NaN	1.16	1.15	NaN	NaN
benefit : social assistance : main/basic : simulated (bsa00_s)	Y	531	535	535	528	468	468	468	468	1.13	1.14	1.14	1.13	412	392	390	NaN	1.29	1.36	1.37	NaN
benefit : social assistance : self-employed, simulated (covid) (bsase00_s)	Y	67	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : education (bed)	N	515	515	515	515	515	515	515	515	1.00	1.00	1.00	1.00	804	835	795	NaN	0.64	0.62	0.65	NaN
benefit : child : education (bched)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : social assistance : other (bsaot)	N	474	474	474	474	474	474	474	474	1.00	1.00	1.00	1.00	358	346	358	NaN	1.32	1.37	1.32	NaN
pension : survivors : simulated (psu_s)	Y	14	14	14	14	35	35	35	35	0.39	0.39	0.39	0.39	22	23	21	NaN	0.63	0.60	0.66	NaN
benefit : child : simulated (bch_s)	Y	775	761	942	1,056	735	735	735	735	1.05	1.04	1.28	1.44	944	919	977	NaN	0.82	0.83	0.96	NaN
Non-means-tested benefits (ils_bennt)																					
benefit : family : simulated (bfa_s)	Y	1,807	1,807	1,807	1,807	1,812	1,812	1,812	1,812	1.00	1.00	1.00	1.00	1,874	1,870	1,874	NaN	0.96	0.97	0.96	NaN
benefit : unemployment : contributory : simulated (bunct_s)	Y	478	478	478	478	481	481	481	481	0.99	0.99	0.99	0.99	578	420	398	NaN	0.83	1.14	1.20	NaN
benefit : unemployment : short term (bunst)	N	3	3	3	3	3	3	3	3	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : disability (pdi)	N	592	592	592	592	592	592	592	592	1.00	1.00	1.00	1.00	577	583	588	NaN	1.03	1.01	1.01	NaN
benefit : health (bhl)	N	233	233	233	233	233	233	233	233	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit: maternity (pregnancy) (bcbma01)	N	135	135	135	135	135	135	135	135	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit: maternity (child birth) (bcbma02)	N	135	135	135	135	135	135	135	135	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maternity allowance (PARBEN) (bma_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Pensions (ils_pen)		
pension : old age : main/basic : simulated (poa00_s)	jaarverslag szw	amounts: 92% (domestic recipients), numbers: statline 66+
Means-tested benefits (ils_benmt)		
benefit : health : means-tested : simulated (bhlmt_s)	jaarverslag vws	-
benefit : housing : simulated (bho_s)	jaarverslag bzk	numbers: statline particuliere huurwoningen met huurtoeslag
benefit : social assistance : main/basic : simulated (bsa00_s)	jaarverslag szw	numbers: statline
benefit : social assistance : self-employed, simulated (covid) (bsase00_s)	-	-
benefit : education (bed)	jaarverslag ocw	-
benefit : child : education (bched)	-	-
benefit : social assistance : other (bsaot)	januarinota uwv, jaarverslag szw	wajong ioaw toeslagenwet
pension : survivors : simulated (psu_s)	jaarverslag szw	-
benefit : child : simulated (bch_s)	jaarverslag szw	-
Non-means-tested benefits (ils_bennt)		
benefit : family : simulated (bfa_s)	jaarverslag szw	-
benefit : unemployment : contributory : simulated (bunct_s)	januarinota uwv	-
benefit : unemployment : short term (bunst)	-	-
pension : disability (pdi)	januarinota uwv	-
benefit : health (bhl)	-	-
benefit: maternity (pregnancy) (bcbma01)	-	-
benefit: maternity (child birth) (bcbma02)	-	-
maternity allowance (PARBEN) (bma_s)	-	-

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
pension : old age : main/basic : simulated (poa00_s)	Y	41,760	42,469	45,850	49,300	38,470	38,470	38,470	38,470	1.09	1.10	1.19	1.28	39,520	40,508	47,738	NaN	1.06	1.05	0.96	NaN
Means-tested benefits (ils_benmt)																					
benefit : health : means-tested : simulated (bhlmt_s)	Y	5,259	5,444	8,201	6,416	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	5,940	6,288	8,391	NaN	0.89	0.87	0.98	NaN
benefit : housing : simulated (bho_s)	Y	4,171	4,609	5,493	6,268	3,803	3,803	3,803	3,803	1.10	1.21	1.44	1.65	4,312	4,299	4,592	NaN	0.97	1.07	1.20	NaN
benefit : social assistance : main/basic : simulated (bsa00_s)	Y	5,041	5,181	5,653	5,548	4,978	4,978	4,978	4,978	1.01	1.04	1.14	1.11	5,931	5,349	NaN	NaN	0.85	0.97	NaN	NaN
benefit : social assistance : self-employed, simulated (covid) (bsase00_s)	Y	482	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : education (bed)	N	1,136	1,150	1,181	1,113	1,136	1,136	1,136	1,136	1.00	1.01	1.04	0.98	2,840	2,339	2,336	NaN	0.40	0.49	0.51	NaN
benefit : child : education (bched)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : social assistance : other (bsaot)	N	3,845	3,937	4,414	4,869	3,845	3,845	3,845	3,845	1.00	1.02	1.15	1.27	3,923	3,933	4,435	NaN	0.98	1.00	1.00	NaN
pension : survivors : simulated (psu_s)	Y	212	214	237	254	433	433	433	433	0.49	0.49	0.55	0.59	317	309	337	NaN	0.67	0.69	0.70	NaN
benefit : child : simulated (bch_s)	Y	1,815	1,857	2,721	3,975	1,713	1,713	1,713	1,713	1.06	1.08	1.59	2.32	2,842	2,909	3,825	NaN	0.64	0.64	0.71	NaN
Non-means-tested benefits (ils_bennt)																					
benefit : family : simulated (bfa_s)	Y	3,486	3,510	4,211	4,362	3,470	3,470	3,470	3,470	1.00	1.01	1.21	1.26	3,679	3,935	4,369	NaN	0.95	0.89	0.96	NaN
benefit : unemployment : contributory : simulated (bunct_s)	Y	3,756	3,846	4,312	4,749	3,807	3,807	3,807	3,807	0.99	1.01	1.13	1.25	3,542	2,552	2,732	NaN	1.06	1.51	1.58	NaN
benefit : unemployment : short term (bunst)	N	96	98	110	121	96	96	96	96	1.00	1.02	1.15	1.27	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : disability (pdi)	N	10,515	10,766	12,071	13,316	10,515	10,515	10,515	10,515	1.00	1.02	1.15	1.27	10,503	10,908	12,320	NaN	1.00	0.99	0.98	NaN
benefit : health (bhl)	N	1,465	1,523	1,618	1,713	1,465	1,465	1,465	1,465	1.00	1.04	1.10	1.17	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit: maternity (pregnancy) (bcbma01)	N	352	366	389	412	352	352	352	352	1.00	1.04	1.10	1.17	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit: maternity (child birth) (bcbma02)	N	1,056	1,098	1,166	1,235	1,056	1,056	1,056	1,056	1.00	1.04	1.10	1.17	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maternity allowance (PARBEN) (bma_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Table A3.7. Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Decile 1	3.89	3.83	4.01	3.98	3.30	3.60	NaN	NaN	1.18	1.06	NaN	NaN
Decile 2	5.71	5.72	5.87	5.88	5.60	5.60	NaN	NaN	1.02	1.02	NaN	NaN
Decile 3	6.76	6.78	6.88	6.91	6.60	6.70	NaN	NaN	1.02	1.01	NaN	NaN
Decile 4	7.76	7.74	7.83	7.87	7.70	7.60	NaN	NaN	1.01	1.02	NaN	NaN
Decile 5	8.84	8.83	8.84	8.88	8.80	8.60	NaN	NaN	1.00	1.03	NaN	NaN
Decile 6	9.78	9.79	9.78	9.80	9.80	9.50	NaN	NaN	1.00	1.03	NaN	NaN
Decile 7	10.71	10.73	10.70	10.74	10.80	10.70	NaN	NaN	0.99	1.00	NaN	NaN
Decile 8	12.01	11.99	11.96	11.98	12.00	12.00	NaN	NaN	1.00	1.00	NaN	NaN
Decile 9	13.79	13.82	13.72	13.70	13.90	14.00	NaN	NaN	0.99	0.99	NaN	NaN
Decile 10	20.75	20.80	20.40	20.26	21.30	21.70	NaN	NaN	0.97	0.96	NaN	NaN
Median	29,894	30,813	33,071	35,049	29,537	29,249	NaN	NaN	1.01	1.05	NaN	NaN
Mean	29,962	30,838	33,144	34,944	31,806	32,569	NaN	NaN	0.94	0.95	NaN	NaN
Gini	24.99	25.13	24.29	24.16	26.30	26.50	NaN	NaN	0.95	0.95	NaN	NaN
S80/20	3.60	3.63	3.45	3.44	3.94	3.87	NaN	NaN	0.91	0.94	NaN	NaN

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

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
40% median HDI by sex												
Total	3.09	3.36	2.99	2.82	4.60	3.50	NaN	NaN	0.67	0.96	NaN	NaN
Males	3.10	3.53	3.17	2.99	4.40	3.50	NaN	NaN	0.70	1.01	NaN	NaN
Females	3.08	3.18	2.82	2.65	4.90	3.40	NaN	NaN	0.63	0.94	NaN	NaN
50% median HDI by sex												
Total	6.86	6.90	6.32	6.26	7.80	6.60	NaN	NaN	0.88	1.04	NaN	NaN
Males	6.85	6.87	6.27	6.30	7.80	6.60	NaN	NaN	0.88	1.04	NaN	NaN
Females	6.88	6.92	6.38	6.23	7.90	6.60	NaN	NaN	0.87	1.05	NaN	NaN
60% median HDI by sex												
Total	13.69	13.77	12.67	12.69	14.50	13.00	NaN	NaN	0.94	1.06	NaN	NaN
Males	13.18	13.17	12.35	12.37	14.00	12.80	NaN	NaN	0.94	1.03	NaN	NaN
Females	14.20	14.37	12.99	13.01	15.00	13.20	NaN	NaN	0.95	1.09	NaN	NaN
70% median HDI by sex												
Total	22.38	22.65	21.14	21.20	23.70	21.40	NaN	NaN	0.94	1.06	NaN	NaN
Males	20.64	20.94	19.40	19.48	22.00	20.70	NaN	NaN	0.94	1.01	NaN	NaN
Females	24.11	24.35	22.86	22.90	25.30	22.20	NaN	NaN	0.95	1.10	NaN	NaN
60% median HDI by age group												
0-15 years	12.65	12.63	11.68	11.21	12.50	13.80	NaN	NaN	1.01	0.92	NaN	NaN
16-24 years	22.57	22.53	21.04	21.02	20.90	20.00	NaN	NaN	1.08	1.13	NaN	NaN
25-49 years	12.18	12.18	11.22	11.06	11.60	10.40	NaN	NaN	1.05	1.17	NaN	NaN
50-64 years	14.27	14.08	13.02	13.24	14.40	12.20	NaN	NaN	0.99	1.15	NaN	NaN
65+ years	11.25	11.90	10.63	11.17	17.10	12.60	NaN	NaN	0.66	0.94	NaN	NaN

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics non-calibrated (ils_extstat_ittncal)													
Aggregate expenditures non-calibrated (ils_extstat_ittncal_il_itt_expnc)													
01 Food and non-alcoholic beverages (il_x01)	Y	42,192	43,321	46,782	49,313	45,076	47,169	47,169	47,169	0.94	0.92	0.99	1.05
02 Alcoholic beverages, tobacco, etc. (il_x02)	Y	11,919	12,214	13,188	13,905	12,127	12,324	12,324	12,324	0.98	0.99	1.07	1.13
03 Clothing and footwear (il_x03)	Y	17,516	17,995	19,403	20,474	17,735	20,783	20,783	20,783	0.99	0.87	0.93	0.99
04 Housing, water and fuel (exc. imputed rent) (il_x04)	Y	58,306	59,940	65,234	68,617	39,636	42,011	42,011	42,011	1.47	1.43	1.55	1.63
05 Furnishings, household equipment, etc. (il_x05)	Y	19,719	20,260	21,753	22,926	24,335	26,108	26,108	26,108	0.81	0.78	0.83	0.88
06 Health (il_x06)	Y	5,373	5,513	5,933	6,259	12,213	13,253	13,253	13,253	0.44	0.42	0.45	0.47
07 Transport (il_x07)	Y	44,465	45,760	49,180	51,891	40,991	49,036	49,036	49,036	1.08	0.93	1.00	1.06
08 Communications (il_x08)	Y	12,659	13,008	14,074	14,838	8,723	8,884	8,884	8,884	1.45	1.46	1.58	1.67
09 Recreation and culture (il_x09)	Y	30,637	31,369	33,760	35,559	31,253	38,781	38,781	38,781	0.98	0.81	0.87	0.92
10 Education (il_x10)	Y	4,823	4,968	5,446	5,693	2,256	2,374	2,374	2,374	2.14	2.09	2.29	2.40
11 Hotels and restaurants (il_x11)	Y	21,586	22,214	23,924	25,197	23,253	37,170	37,170	37,170	0.93	0.60	0.64	0.68
12 Miscellaneous good and services (il_x12)	Y	56,771	58,318	62,932	66,327	46,682	54,046	54,046	54,046	1.22	1.08	1.16	1.23
Revenue from indirect taxes (non calibrated) (ils_extstat_ittncal_il_itt_revnc)													
VAT Total Revenue (il_tva)	Y	34,374	35,301	38,038	40,090	65,400	70,458	75,920	NaN	0.53	0.50	0.50	NaN
Excises Total Revenue (il_tx)	Y	16,611	14,075	16,627	20,285	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Total excises (non calibrated) (ils_extstat_ittncal_il_itt_excnc)													
Revenues Excises 0211 - Spirits (il_tx0211)	Y	264	270	277	298	359	NaN	NaN	NaN	0.73	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121)	Y	289	284	288	317	352	NaN	NaN	NaN	0.82	NaN	NaN	NaN

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Revenues Excises 02122 - Sparkling Wine (il_tx02122)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213)	Y	282	260	259	238	387	NaN	NaN	NaN	0.73	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022)	Y	3,961	3,575	2,871	4,306	2,591	NaN	NaN	NaN	1.53	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045)	Y	4,952	3,653	5,893	6,454	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451)	Y	0	0	2,793	2,920	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521)	Y	4,942	3,648	3,094	3,527	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072)	Y	11,789	9,661	12,907	15,097	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics calibrated (ils_extstat_ittcal)													
Revenue from indirect taxes (calibrated) (il_itt_revc)													
VAT Total Revenue (il_tva_na)	Y	32,894	37,913	39,435	40,423	65,400	70,458	75,920	NaN	0.50	0.54	0.52	NaN
Excises Total Revenue (il_tx_na)	Y	14,576	13,452	14,849	17,839	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Total excises (calibrated) (il_itt_excc)													
Revenues Excises 0211 - Spirits (il_tx0211_na)	Y	268	272	269	282	359	NaN	NaN	NaN	0.75	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121_na)	Y	294	286	280	300	352	NaN	NaN	NaN	0.84	NaN	NaN	NaN
Revenues Excises 02122 - Sparkling Wine (il_tx02122_na)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213_na)	Y	287	262	252	226	387	NaN	NaN	NaN	0.74	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022_na)	Y	4,030	3,607	2,793	4,073	2,591	NaN	NaN	NaN	1.56	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045_na)	Y	3,366	2,561	3,950	4,217	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451_na)	Y	0	0	1,872	1,908	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521_na)	Y	3,359	2,557	2,074	2,304	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072_na)	Y	9,669	8,999	11,231	12,932	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

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