EUROMOD
COUNTRY REPORT

SWEDEN (SE)
2018-2022

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EUROMOD version I5.0+

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). 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 Sweden. 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 I5.0+. 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.

For more information see https://euromod-web.jrc.ec.europa.eu/

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1. BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The tax-benefit system is largely a unified, national system.[1] Income tax is paid to the state, municipalities and county councils. Tax rates for the municipalities and county councils vary.
- The tax system generally changes in January each year. Main benefit changes happen at the same time, but may also be implemented in July. Both taxes and benefits can at rare occasions be changed at any month during the year.
- State pension age is flexible and varies from 61-67 years of age. 65 is the most common pensioning age.
- Minimum school leaving age is 16; dependent children are defined as aged under 16 or under 20 and in full-time upper secondary education.
- The income tax system is an individual system, with the spouses being assessed independently.
- 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.
- Social contributions and state benefits and pensions are usually assessed and delivered on a monthly basis. Amounts are referred to in monthly terms. The exception is income tax, where liability is based on annual income and allowances and thresholds are referred to in annual terms. Incomes related to means-tested systems are often defined in annual terms.
- Income tax withholdings are collected on a cumulative basis, i.e., the system tries to ensure withholding the exact amount due in the financial year. Most people however have to fill in an income tax return, which however can be very simple when the amounts are known by the tax authority. Wages and interests are normally pre-printed on the income tax return.

1.1.1 Policy changes for 2022

Besides general changes of already existing policies (i.e., increase or decrease of benefit amounts, changed threshold amounts, and changes of allocation/eligibility criteria), the only major change of whole policies in 2022 was the abolishment of COVID-19 related benefits. Following COVID-19 policies were changed:

Constants (ConstDef_se): The constant for COVID-19 wage compensation schemes and policies (3.7) is switched off.

Wage Compensation Scheme COVID-19 (yemcomp_se): The policy is switched off as a whole.

Employer Insurance Contribution (tscer_se): All part of the insurance that were changed due to COVID-19 are switched off.

Self-employed Social Insurance Contribution (tscse_se): All part of the insurance that were changed due to COVID-19 are switched off.

[1] The way it operates in practice may vary across regions and by other characteristics.

1.2 Social Benefits

1.2.1 Simulated Social Benefits.

Child benefit (Barnbidrag) is received for each child until 16 years. Child 2, 3, etc. gets extra benefit. If the child is in primary school, the child benefit is prolonged. If the child is in secondary school, he/she can get financial help during 10 months/ a year until 20 years of age with the same amount as the child benefit. The benefit is not taxable.

Housing allowance (Bostadsbidrag) can be given to families with children and to single and married/cohabiting families where all family members are 18-29 years old without children. The maximum allowance depends on the number of children and the housing cost (within certain limits). If the size of the dwelling exceeds a certain area, the accepted housing cost is proportionally reduced to match the maximum accepted area.

Housing allowance for pensioners (Bostadstillägg, BT) can be given to old-age pensioners and persons with disability pension. It is considered to be a part of the pension system. From the age of 65 you can get age allowance and for younger persons you can get disability allowance. The benefit is not taxable.

Social assistance (Ekonomiskt bistånd) is the ultimate and last part of the social safety net. It can be paid out if the family has temporary financial problems, or if the disposable income/month is too low. Two important conditions to get social assistance are that the family doesn't have any wealth and is willing to take a job if this is offered. The income limits for getting the benefit are based on the normative costs for a basket of commodities needed to get a reasonable standard of living. The income limits depend on the age of children, single or cohabitant couple, and the number of individuals in the family. Housing costs, and costs for health, dentist, furniture, local commuting, insurance and child care costs are not included in the normative costs. Actual costs are used instead. The benefit is not taxable.

Maintenance support for elderly (Äldreförsörjningsstöd) can be given to old individuals (>= 65 years) if their disposable income is below the limits for reasonable level of living. Normative rules are used for calculating the income. This benefit is valid for e.g. immigrants who don't have earned Swedish pension rights. The benefit is not taxable. The rules are similar to Social assistance and hence the Maintenance support will be simulated as part of the Social assistance.

Unemployment insurance benefit (Arbetslöshetsförsäkring) consists of a mandatory part (basic insurance) and a voluntary income related insurance. Membership of an unemployment insurance fund is voluntary. However, eligibility for unemployment insurance benefits requires membership for 12 months prior to the first day of unemployment. If a person is not a member of unemployment insurance fund the daily allowance is 223 SEK. However, if the person is not enrolled in the unemployment insurance fund but has worked for at least 60 hours per month during at least 6 months in the past 12 months, or for at least 40 hours per month for six consecutive months in the past 12 months. Then the person is entitled to up to 11,220 SEK per month. These are temporary eligibility rules in place until 31 December 2022. The benefit is taxable.

Parental leave insurance (Föräldraförsäkringen) consists of parental benefit (simulated for some years and switched off in the baseline), temporary parental benefit (not simulated), pregnancy benefit (not simulated), and special days for the other parent (simulated for some years and switched off in the baseline). All parts are taxable benefits.

Parental benefit (**Föräldrapenning**) is the biggest part of the parental leave insurance and which all parents are eligible to. For each birth the parents receive 480 days with parental benefit. Of these days the benefit for 390 days is based on the parent's income and 90 days are on a basic level. The days can be used from 60 days before the expected birth. If the child was born in 2013

or earlier, the days can be used until the day when the child is 8 years old, or has passed the first year at school. If the child was born in 2014 or later, the days can be used until the day when the child is 12 years old, or has passed the fifth year at school, but 80 percent of the days must be used before the child becomes four years old. Both parents have the right to half of the days, but can give up all days (up to 90) to the other parent. It is possible to get the benefit full time or part time. If the parents get twins they receive 180 days extra, 90 days with benefit based on their income and 90 days according to the basic level.

Special days for the other parent (10-dagar vid barns födelse). The parent who is not pregnant has the right to temporary parental benefit for 10 days when the baby is born or adopted. The days have to be used within 60 days after the child's arrival at home. The benefit rules are the same as for the temporary parental benefit.

1.2.2 Non-simulated social benefits

Sickness benefit (Sjukpenning) Sickness insurance provides compensation in the event of sickness that reduces work capacity by at least one-quarter. Sickness benefit is based on the sickness benefit qualifying annual income (SGI). In principle, the income is supposed to correspond to the annual income before tax, non-monetary taxable benefits should not be included. The SGI is determined by the Social Insurance Agency. Sick pay is paid by the employer for the first 14 days period and thereafter the Social Insurance Agency pays sickness benefit. No compensation is paid on the first day (the qualifying day). If an individual is unemployed the maximum benefit is the same as the unemployment insurance. The benefit is taxable.

As of January 1 2020, the government gives a compensation with a maximum daily amount of 1027 SEK.

Temporary parental benefit. For children under the age of 12 (and in certain cases under 16) temporary parental benefit can be paid. The benefit can be paid for 60 (+ 60 additional days) working days per year, when a parent needs to stay away from work. Parents of a seriously sick child can get an unlimited number of days until the age of 18. It is possible to get the benefit full time or part time.

Pregnancy benefit. If the work conditions make it impossible to work, a pregnant woman can apply for pregnancy benefit during maximum 50 days. The benefit rules are the same as for the sickness benefit.

Special housing allowance for pensioners (SBT, Särskilt Bostadstillägg) can be paid out if the disposable income is low and the housing cost is high. The amounts vary with age, disability and marital status (single/married). The benefit is not taxable.

Old age pension (Ålderspensionen). The mandatory parts of the age-pension are under the process of changing from the old system (born 1937 or earlier) to the new system which started in 2003. Pensioners born in 1938 or later are gradually subject to a new system. From age class 1954 the new system is fully implemented. For age classes 1938-1953 the benefits are partly from the old system and partly from the new system. If born in 1953, 1/20 comes from the old system and if born in 1938 16/20 comes from the old system.

The old system consists of a supplementary pension and a guarantee pension. The supplementary pension is based on the average of the 15 years with the highest work income. Only incomes up to 7.5 income base amounts/year (7.5*64,400 SEK in 2019) are included. The supplementary pension is indexed with the average salary minus 1.6 percentage points.

If the supplementary pension is low, guarantee pension can be achieved. For a single pensioner the maximum guarantee is 2.17 price basic amounts/year and is reduced with increased supplementary pension. For a married pensioner the maximum is 1.935 price basic amounts.

In the new system income related pension can be earned during the whole lifetime. 18.5% of the earnings finance the earned pension rights (up to 7.5 income base amounts). 16% are going to public funds, which you cannot handle yourself. 2.5% goes to private funds, where you can decide how it should be composed. Over time the pension funds rise with the average wage in the whole economy. The earliest pensionable age is 61 years, but there is no last pension age, even if traditionally many retire at the age of 65. You also have legal right to work until the end of the month of your 67th birthday. At the age for retirement the pension is determined by the total pension rights divided with the expected number of remaining years to live. After retirement the pension is indexed with the average salary minus 1.6 percentage points.

If the related income is too low, guarantee pension can be achieved from the age of 65. The maximum value is 2.13 price base amounts for unmarried and 1.90 for married people.

Both in the old and new system, not only earnings but also insurance benefits like sickness, unemployment and parental leave benefits give pension rights.

In the new system you also get pension rights when studying, doing military (duty) service or taking care of small children (up to 4 years of age).

In addition to the mandatory pension most employees have occupational pensions, with different rules for different sectors of the labour market. Typically, the employers pay a fee between about 3,5% and 4.5% of the salary. For all contracting parties, except private and cooperative workers, the employers also give an extra compensation for income shares above the income ceiling for the mandatory pensions.

All pensions are taxable. It is possible to retire full-time or part-time.

Disability pension (Sjukersättning/aktivitetsersättning). If disabled or so sick or so injured, that you cannot work any longer, you can get disability pension in the form of *sjukersättning* (if aged 30-64) or *aktivitetsersättning* (if aged 19- 29). The benefit is taxable.

Disability pension (Sjukersättning (aged 30-64 during 2016 and aged 19-64 from 2017). The benefit can be income related or a guarantee benefit. The income related benefit is 64.7 percent of an expected income up to a certain level, as if the ability to work had not decreased. The assumed forecasted income is based on the average of the 3 highest annual incomes within a number of years before the person became sick. The number of years depends on the age of the person. The guarantee benefit is age-dependent, ranging from 2.48 price base amounts for those under 21 to 2.78 price base amounts for those aged 30 or above in 2022.

Disability pension (Aktivitetsersättning (aged 19-29 years)). They can only get time-limited benefit. The assumed income can be based on the 2 highest annual incomes if that gives a higher assumed income. The income related benefit is the same as for older persons but the guarantee benefit is 2.48-2.78price base amounts (2022) depending on the age of the person.

Introductory compensation to refugees and certain other foreign nationals (Etablerings-ersättning) is a compensation that a newly arrived refugee can receive if an establishment plan is created. The compensation is paid for a maximum of five days per week if the refugee has an establishment plan. The compensation is 231 SEK per day during the preparation of the plan, and 308 SEK per day when participating in activities that are a part of the plan.

When participating in activities part time, the compensation is reduced to the same extent.

Supplementary introduction benefit (Etableringstillägg) is a supplementary benefit that a refugee that is already receiving *introductory compensation to refugees and certain other foreign nationals* can apply for if he or she has children living in the household. The supplementary benefit is paid monthly, 800 SEK per child that hasn't turned 11 years old yet and 1500 SEK per child that has turned 11 but is not yet 20 years old. The supplementary benefit is paid for a

maximum of three children. If there are more than three children in the household the benefit is paid for the three oldest children.

If a refugee receives *maintenance support* for three children, then the benefit is only paid for the two oldest children. If a refugee receives *maintenance support* for four to five children, then the benefit is only paid for the oldest child. If a refugee receives *maintenance support* for six or more children, then the benefit is not paid at all.

Housing allowance to refugees and certain other foreign nationals (Bostadsersättning) is an allowance that a refugee that is entitled to *supplementary introduction benefit* and is single and without children registered as living in the household. If the refugee has an establishment plan according to law (2010:197), housing allowance can be paid for the part of the living cost per month that is between 1800 SEK and 5700 SEK. Depending on what ratio the establishment plan is (full-time, part-time etc.) the housing allowance is paid in the same extent.

Activity and development grant (Aktivitetsstöd och utvecklingsersättning). If an individual is unemployed and participating in a policy program one can receive an activity or a development grant. If the individual is over 25 years old or meet the conditions for unemployment benefits the individual get an activity grant. The grant is at the minimum level of 365 SEK per day, and at the most 910 SEK per day if the policy program is full time. The number of days receiving the grant is contracted from the days with unemployment benefit.

If the individual does not meet the requirements for unemployment benefits and is at least 25 years old the individual receives 223 SEK per day.

If the individual is not yet 25 years old and doesn't meet the conditions for unemployment benefits the individual gets a development grant. The grant is 142 SEK per day if the individual finished high school.

If the individual did not finish high school the grant is 48 SEK per day until the individual turns 20 years old, after that the grant is 142 SEK per day. The development grant is non-taxable.

Not strictly benefits

Maintenance support (Underhållsstöd). When a child lives with only one parent, the other parent must pay child support (underhållsbidrag). If child support is not received, the child may be entitled to maintenance support. This is a benefit for children whose parents do not live together. The size of the maintenance support is depending of the age of the child. It is at most SEK 1673-2223 (2022) per child and month, and is paid to the parent with whom the child lives

Childcare allowance (Vårdbidrag) Parents taking care of a sick child or a child with a disability can obtain childcare allowance. The child must need special supervision and care for at least six months. The childcare allowance can also be obtained by families having large additional expenses due to the child's disability or illness. The childcare allowance can be obtained from the time of the child's birth until the month of June in the year the child attains the age of 19.

Student aid (studiemedel) Students attending a college or university can apply for student aid. Student aid includes both grants and loans. The student can chose between applying only for the grant or applying for both grant and loan. The loan has to be paid back during a number of years after the studies are finished. The amount of student aid received depends on the number of weeks of studying and if full-time or part-time studies.

1.3 Social contributions

Social contributions refer to health insurance, parental insurance, occupational injuries, old age pension, survivors' pension, labour market, general wage fee and a special wage tax (for persons older than 65 years).

Employees pay a general old age pension contribution, approximately 7.0 % of the gross salary.

The employer pays social contributions as a proportion of the gross salary. The total contribution is 31.42% of the gross salary.

Farmers and self-employed also pay social contributions but as proportion of the net income. The proportion varies with age. Persons below 66 years of age pay all social contributions, summing up at 28.97%. Persons aged 66 years or older age either pay special wage tax for elderly (6.15%) if born 1937 or earlier or special wage tax for elderly (6.15%) plus old age pensions contributions (10.21%). The special wage tax for elderly is only paid up until 30 June 2019.

For the period of 1 March 30 to 1 June 2020 the social security contributions was reduced. For employers, the proportion of the gross salary to be paid was reduced from 31.42% to 10.21% (thus only paying only the old-age pension contribution). The reduction was valid for up to 30 employees and for salaries up to SEK 25 000. For further employees and for salaries above this amount no reduction was available. For farmers and self-employed the proportion of net income to be paid was reduced from 28.97% to 10.21% (thus only paying the old-age pension contribution). The reduction was valid for net income up to SEK 100 000.

1.4 Taxes

The Swedish system for direct taxes includes income taxes, capital tax and tax on real estate. The sum of taxes cannot be negative.

Indirect taxes The VAT is 25 % as the normal level, but lower for some goods (i.e. food at 12 %, books and newspapers at 6 %).

There are taxes on alcohol, tobacco, traffic, and a number of energy related taxes.

1.4.1 Simulated taxes

Income tax (Inkomstskatt) is assessed individually. Earnings, insurance benefits like sickness benefit, pensions etc. are included in the tax base. Costs for work to a limited amount and private premiums to a limited amount for retirement are deducted from the tax base. The result is called assessed income. From the assessed income the basic allowance is deducted according to a rather complex formula. The result is called taxable income, on which the tax schedule is applied. All amounts are expressed in annual terms.

The national income tax is only paid on taxable incomes above a certain amount (20.421 SEK annually for 2022) and there are two tax rates. Local taxes are assessed at municipality and county level. All municipalities (about 300) and county councils (about 25) have taxation rights. The tax is proportional to the taxable income.

Everybody pays a funeral fee which is used for the care of cemeteries and premises for funeral ceremonies. It is not connected to individual's funerals.

Capital tax (Kapitalskatt) is a national individual tax. The tax base consists of capital income and is separate from the national income tax. The general tax rate is 30%, but special rules in specific parts lead to different (lower) tax rates than the general one. If the taxable income is negative this leads to tax reduction on the final tax (sum of local tax and national tax). It is especially common for loans on owned houses.

The tax base consists of interests, cost of interest, interests on bonds, shares, funds etc., capital gains and capital losses on shares, funds, real estate.

1.4.2 Non simulated taxes

Tax on real estate. As from 2008 government property tax on dwellings was abolished and replaced by a municipal property charge. Tax on real estate is included in the SILC data (EUROMOD variable: tpr).

2. SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

Table 2.1 and Table 2.2 show respectively the benefits and taxes and contributions which are included (i.e. not simulated but included using the value recorded in the survey) or simulated in EUROMOD.

Table 2.1 Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in EUROMOD				Why not fully simulated?
		2019	2020	2021	2022	
Unemployment benefit	bunct	PS	PS	PS	PS	Unemployment benefit is not simulated in the baseline year and is set to toggle as it is not possible to define contribution record and past earnings.
Unemployment benefit	bunnc	I	I	I	I	
Parents' allowance	bpl	I	I	I	I	
Sickness benefit	bhl	I	I	I	I	
Education related allowance	bed	I	I	I	I	Lack of info in input data.
Disability benefits	pdi	I	I	I	I	
Old age pensions	poa	I	I	I	I	
Survivors' pensions	psu	I	I	I	I	
Child benefit	bch_s	S	S	S	S	
Housing allowance	bho_s	S	S	S	S	
Housing allowance for pensioners	bhope_s	S	S	S	S	
Social Assistance	bsamt_s	S	S	S	S	
Social Assistance	bsanm_s	I	I	I	I	Lack of info in input data.
Short-term work allowance (paid by state)	bwkmcee_s		S	S		

Short-term work allowance (paid by firms)	yemmc_s	S	S	

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.

Table 2.2 Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in EUROMOD					Why not fully simulated?
		2018	2019	2020	2021	2022	
Employee social contributions	tscee_s	S	S	S	S	S	
Employer social contributions	ils_sicer	S	S	S	S	S	
Self-employed social contributions	ils_sicse	S	S	S	S	S	
Personal income tax	tin_s	S	S	S	S	S	
Tax on capital income	tinkt_s	S	S	S	S	S	
Tax on real estate	tpr	I	I	I	I	I	Lack of info in input data. This includes repayment of student loan

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; "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 Order of simulation and interdependencies

Social contributions are simulated first, in order to allow the employee social insurance contributions to be subtracted from the income tax. Then, the income tax is simulated in all its components followed by the tax on capital income. The simulation of the non-taxable benefits follow: child benefit, housing allowance and housing allowance for pensioners. The social assistance is the last benefit simulated because it includes all previous simulated benefits and taxes in its means-test.

In the simulation of the tax benefit system, the price base amount is used repeatedly and in one case also the income base amount. They are defined as "constants" in the policy sheet ConstDef. The price base amount (XBASM) is an amount established by the government for one year at a time and adjusted annually. It is used for calculations of pensions, sickness benefit and allowances for example. The income base amount (XBASMI) is linked to the "income index" and was introduced in connection with the pension reform. The income index measures the average income change in Sweden.

Table 2.3 EUROMOD Spine: order of simulation

Policy	SE_2018	SE_2019	SE_2020	SE_2021	SE_2022	Comment
setdefault_se	on	on	on	on	on	DEF: SET DEFAULT
uprate_se	on	on	on	on	on	DEF: UPRATING FACTORS
ConstDef_se	on	on	on	on	on	DEF: CONSTANTS
ilsdef_se	on	on	on	on	on	DEF: INCOME CONCEPTS (standardized)
ilsUDBdef_se	on	on	on	on	on	DEF: INCOME CONCEPTS (UDB)
ildef_se	on	on	on	on	on	DEF: INCOME CONCEPTS (non-standardized)
random_se	n/a	n/a	on	on	on	DEF: Random assignment
transLMA_se	n/a	n/a	off	off	off	DEF: Simulation of labour market transitions
tudef_se	on	on	on	on	on	DEF: ASSESSMENT UNITS
yem_se	off	off	off	off	off	DEF: minimum wage
neg_se	on	on	on	on	on	DEF: recode negative self-employment income to zero
yemcomp_se	n/a	n/a	on	on	off	BEN: wage compensation scheme COVID-19
bunct_se	off	off	off	off	off	BEN: Unemployment benefit
bfapl_se	switch	switch	switch	switch	switch	BEN: Parental leave benefit
bpa_se	switch	switch	switch	switch	switch	BEN: Paternity leave (10 days)
tscee_se	on	on	on	on	on	SIC: Employee Social Insurance contribution
tscer_se	on	on	on	on	on	SIC: Employer Social Insurance contribution
tscse_se	on	on	on	on	on	SIC: Self-employed Social Insurance contribution
tin_se	on	on	on	on	on	TAX: Personal Income tax
tinkt_se	on	on	on	on	on	TAX: Tax on Capital Income
bch_se	on	on	on	on	on	BEN: Child benefit
bho_se	on	on	on	on	on	BEN: Housing allowance
bhope_se	on	on	on	on	on	BEN: Housing allowance for pensioners
bsamt_se	on	on	on	on	on	BEN: Social Assistance
output_std_se	on	on	on	on	on	DEF: STANDARD OUTPUT INDIVIDUAL LEVEL
output_std_hh_se	off	off	off	off	off	DEF: STANDARD OUTPUT HOUSEHOLD LEVEL

Table 2.4 Annual Base amounts

	2016	2017	2018	2019	2020	2021	2022

XBASM	44,300	44,800	45,500	46,500	47,300	47,600	48,300
XBASMI	59,300	61,500	62,500	64,400	66,800	68,200	71,000

Notes. XBASM: price base amount. XBASMI: income base amount

2.3 Policy extensions

There is one extension defined in the Swedish model:[2]

- Parental Benefits Extension (PBE) – to choose between observed (extension *off*) and simulated (extension *on*) values of maternity benefit and parental benefit

2.4 Social benefits

2.4.1 Unemployment insurance benefit (bunct_s)

- ***Definitions***

Unemployment insurance benefit consists of a mandatory part (*basic insurance*) and a *voluntary income related insurance*. Membership to an unemployment insurance (UI) fund is voluntary. The daily allowance, paid five days a week, is based on the income received the 12 months before the unemployment (the amount received is equal to the basic amount or 80% of previous gross earnings with a maximum limit).

- ***Eligibility conditions***

Eligibility for unemployment insurance benefits requires membership to an unemployment insurance fund for 12 months prior to the first day of unemployment and having worked for at least 80 hours per month during at least 6 months during the last 12 months. In the recent past, most of the Swedes were members of an unemployment insurance fund (in the simulation, we will assume that such an eligibility condition is satisfied).

If a person is not a member of unemployment insurance fund, instead of the basic amount she receives a daily allowance (5 days per week) equal to 223 SEK. However, if the person is not enrolled in the unemployment insurance fund, but has worked for at least 60 hours per month during at least 6 of the past 12 months. Or if the person has worked at least 420 hours during a cohesive period of 6 months and worked at least 40 hours during each one of these months, then is entitled to receive between 255 and 510 SEK per day[3].

It is possible to get the benefit full-time or part-time. No compensation is paid in the first seven days (the qualifying days). From 1 July 2018 no compensation is paid for the first six days (the qualifying days). The self-employed are also eligible to the benefit in case their business closes down. The benefit is taxable.

[2] Policy switches are denoted with 'switch' in the policy spine (for a given policy year), while their default values (*on* or *off*) are set in a separate dialogue box in the model.
[3] From second of January 2023, the minimum required working hours will be increased to 80 and the minimum hours to 480 with a requirement of 50 hours of work each month.

- ***Income test***

The daily allowance, paid five days a week, is based on the income received the 12 months before unemployment, until 31th of December 2022 the required period of employment history is lowered to 6 months (the amount received is equal to the basic amount or 80% of previous income with a maximum limit).

- ***Benefit amount***

The benefit is calculated according to the rules summarized in the table below.

Table 2.5 Unemployment benefits 2017-2022

Labour days	Basic amount SEK/day	Compensation (as a share of previous income)	Upper limit SEK/day
Year 2017-2020 (12 april) (parent with child)			
1-100	365	0.8	910
101-200	365	0.8	760
201-450	365	0.7	760
450*-	365	0.65	760
Year 2017-2020 (12 april) (other)			
1-100	365	0.8	910
101-200	365	0.8	760
201-300	365	0.7	760
301*-	365	0.65	760
2020 (13 April)-2021 (parent with child)			
1-100	510	0.8	1200
101-200	510	0.8	1000
201-450	510	0.7	1000
450*-	510	0.65	1000
2020 (13 April) – 2021 (other)			
1-100	510	0.8	1200
101-200	510	0.8	1000
201-300	510	0.7	1000
301*-	510	0.65	1000
2021 - 2022 (parent with child)			
1-100	510	0.8	1200
101-200	510	0.8	1000
201-450	510	0.7	1000
450*-	510	0.65	1000
2021-2022 (other)			
1-100	510	0.8	1200
101-200	510	0.8	1000
201-300	510	0.7	1000
301*-	510	0.65	1000

Notes: *Individuals participating in a public employment service program receive a special unemployment

benefit (activity grant), which they can receive as long as you are taking part in the program, i.e. more than 450 days (parents with children) or more than 300 days (if no children).

The following table summarises the main characteristics of unemployment insurance benefit in Sweden.

Table 2.6 Characteristics of the unemployment benefit

		2018	2019	2020[b]	2021	2022
Eligibility	Contribution period	6 out of 12 last months	6 out of 12 last months	6 out of 12 last months	6 out of 12 last months?	6 out of 12 last months?
	Other conditions	Membership to UI fund	Membership to UI fund	Membership to UI fund	Membership to UI fund	Membership to UI fund
	Eligibility of self-employed	Yes	Yes	Yes	Yes	Yes
Payment	Contribution base	Gross earnings (12 months before)	Gross earnings (12 months before)	Gross earnings (12 months before)	Gross earnings (12 months before)	Gross earnings (12 months before)
	Basic amount	365 SEK/day or 80% of previous earnings (decreasing to 65%)	365 SEK/day or 80% of previous earnings (decreasing to 65%)	510 SEK/day or 80% of previous earnings (decreasing to 65%)	510 SEK/day or 80% of previous earnings (decreasing to 65%)	510[4] SEK/day or 80% of previous earnings (decreasing to 65%)
	Additional amount	N/A	N/A	N/A	N/A	N/A
	Floor[a]	365 SEK/day	365 SEK/day	510 SEK/day	510 SEK/day	510 SEK/day
	Ceiling[a]	910 SEK/day	910 SEK/day	1200 SEK/day	1200 SEK/day	1200 SEK/day
Duration	Standard (in labour days)	300	300	300	300	300
	Special cases (in labour days)	450 (parent with child)	450 (parent with child)	450 (parent with child)	450 (parent with child)	450 (parent with child)
Subject to	Taxes	Yes	Yes	Yes	Yes	Yes
	SIC	Yes	Yes	Yes	Yes	Yes

Notes: [a] The floor and ceiling are defined for full-time workers. For individuals working less than fulltime, the floor and ceiling are scaled down in proportion to their working time.
[b] Temporary rules for the period 20200413-20201231.
c Temporary rules for the period 2020-April-13 – 2022-December-31.

[4] 510 SEK for 12 months of full-time employment, for part-time employment a minimum of 255 SEK is applied.

EUROMOD notes

Effectively, this benefit is only partly simulated using the information about actual receipt and it is switched off in the baseline. Rather than only using the observed receipt as part of the eligibility criteria, all eligibility rules in full detail are covered. However, as not all required information (e.g. work history) is available several assumptions are made, including considering some rules automatically fulfilled for those observed in receipt of this benefit. This approach is chosen so that the benefit can be also modelled for those currently employed if needed (e.g. to simulate their entitlement if they become unemployed, for replacement rates calculations).

Unemployment duration (lunmy_s) is set equal to the minimum between the maximum duration according to the national rules and, the maximum of observed unemployment duration (lunmy) and observed benefit receipt (bunmy). If modelling unemployment benefit for those currently employed, unemployment duration is set equal to the minimum between the maximum duration according to the national rules or the reported number of months in employment in the current year (liwmy), once contribution history (see the next step) is modelled. It is effectively also assumed that unemployment spells start in the reference year.

Modelled contribution history is based on the reported number of months in employment (liwmy), controlling for the total number of months in work (liwwh).

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

At this point, people who are unemployed (lunmy_s > 0), have not reached retirement age yet and have sufficient contribution history are considered eligible. In our simulations we assume that all employees fulfil the eligibility condition of being a member of an unemployment insurance fund for at least 12 months. On the contrary, it is assumed that the self-employed are not members of an unemployment insurance fund and are therefore entitled only to the daily allowance. Part-time benefit is not simulated as no information about whether part-timers are seeking for full-time work or not is available.

Benefit duration (bunmy_s) is simply set equal to the unemployment duration (lunmy_s) as long as this is smaller than the maximum duration according to the national rules. The standard maximum duration is 300 (labour) days but in case of parents with children it is 450 (labour) days.

Benefit entitlement is calculated based on the variable previous earnings, which is equal to current earnings for those in work and which is obtained by reverse engineering starting from the unemployment benefit amount for the unemployed.

The benefit is calculated as an average over the applicable parameters over the year (assuming that all spells started at the beginning of the year).

COVID-19 Notes

Due to the Covid-19 pandemic the government has temporarily changed the eligibility conditions of the unemployment insurance benefit. From 13 April 2020 the eligibility conditions were temporarily eased and the six qualifying days are temporarily removed. Individuals fulfilling the

requirements, but without membership of an unemployment insurance fund, receive a daily allowance (5 days a week) equal to 510 SEK. Individuals without a membership and without enough hours worked to be eligible for unemployment insurance benefit, receive a daily allowance (5 days a week) equal to 255 SEK.

From 31 March 2020 to 31 December 2022 the (non-simulated) requirement for membership to an unemployment insurance fund are lowered to 3 months and the number of hours worked has been lowered to 60 hours per month during at least 6 months during the last 12 months.

2.4.2 Child benefit (bch_s)

- ***Definitions***

The child benefit is a universal benefit received by legal guardians of children aged 0-15 years or until 18 years if in upper secondary school.

- ***Eligibility conditions***

If having children aged 0-15 years or until 18 years if in upper secondary school the family receives this benefit.

The assessment unit is the nuclear family (tu_bch_se), including cohabiting partners and children aged below 16 years or until 18 years if in upper secondary school.

Children, who are themselves parents, count as children as well.

- ***Income test***

Not applicable.

- ***Benefit amount***

Child benefit's basic amount is for each child until 16 years of age. From the second child on, there is an extra benefit in addition to the basic amount. If the child is a student in a lower secondary school (dec =3), the child benefit is prolonged until he completes compulsory education (grade 9) . The child benefit is received 12 months a year.

Children aged 16-20 years and studying in upper secondary school (dec= 4) receive the basic amount of the child benefit (i.e. study allowance) 10 months a year. The extra amount is paid 12 months per year.

The extra amount is based on the number of children receiving child benefit and study allowance.

The benefit is not taxable.

Table 2.7 Child benefit monthly amounts – 2017-2022

Child number	Basic amount		Extra amount
	2017	2018-2022[a]	2017-2022
1	1,050	1,250	0
2	1,050	1,250	150
3	1,050	1,250	580

4	1,050	1,250	1,010
5	1,050	1,250	1,250
Next child	1,050	1,250	1,250

Notes: [a] The increase was introduced in 1/3 2018

- ***Allocation of the benefit within the family***

The benefit (basic and extra amount) for children until 18 years is by default split evenly between the legal guardians if they have joint custody and the child was born after 1 March 2014 otherwise it is paid to the legal guardian with sole custody. For children born before 1 March 2014, the benefit is paid to one legal guardian by default. The basic amount for children older than 18 years is paid directly to the child. The extra amount (12 months per year) is always received by the parents.

EUROMOD Notes

The child benefit Allocate function (22.6) has been implemented incorrectly from 2014 and onwards. CURRENTLY, the policy is implemented as if the child benefit is split between parents with joint custody in relation to all children, when this is only the case for children born after 1 March 2014. It needs to be separated into two groups of children – born before 2014 and born after 2014.

2.4.3 Housing allowance (bho_s)

- ***Definitions***

The unit of assessment is the family.

- ***Eligibility conditions***

Housing allowance can be given to families (tu_bho_se) with children (up to 18 years old, or aged under 20 and receiving the basic amount of child benefit (dec = 4)) and to single and married/cohabiting couples without children where at least one family member is 18-29 years old. The maximum allowance depends on the composition of the household, the housing cost, the income of the household, and thesize of the dwelling. If the household exceeds certain income thresholds, the allowance is reduced (see table x.x below). The eligibility criteria are active regardless of whether the person owns or rents the residence.

In multi-family households, the housing allowance is given only to the main family unit (responsible for the house, i.e. xhc >0).

Housing allowance below 100 SEK/month is not paid out. The benefit is not taxable.

- ***Income test***

For higher incomes exceeding specific thresholds, the allowance is reduced; 20% of annual income for parents and lone parents, and 33% of annual income for lone youngsters and young couples with children.

Table 2.8 Housing allowance – Thresholds 2018-2022

Year	Cohabiting Parents		Lone Parents		Young Couples without Children		Lone Youth	
	Threshold (for each parent)	Rate	Threshold	Rate	Threshold	Rate	Threshold	Rate
2018	67,500	20%	135,000	20%	58,000	33%	41,000	33%
2019	71,000	20%	142,000	20%	58,000	33%	41,000	33%
2020	74,000	20%	148,000	20%	58,000	33%	41,000	33%
2021	75,000	20%	150,000	20%	58,000	33%	41,000	33%
2022	75,000	20%	150,000	20%	58,000	33%	41,000	33%

The wealth of the family (property excluded) exceeding 100,000 SEK is added to the income by 15 % (afc00_s).

For calculating the housing allowance the following individual income concept for each adult in the family is considered:

Income (il_means_bho) = (Employment income (yem) + fringe benefits (kfb) + Private pensions (ypp) + Unemployment benefits (bunct + bunnc) + Old age pension (poa) + Survivor' pension (psu) + Sickness benefit (bhl) + Disability benefit (pdi) + property income (ypr) + investment income (yiy) + self-employment income (yse) + maintenance payments received (ypt) + 34% of education allowances (bed) + parents' allowance (bpl) + 15% of wealth (afc00_s, divided by two if there are two partners)

Losses due to self-employment are set to 0.

EUROMOD notes

For housing cost the variable xhc is used, which is a proxy of the housing cost considered in the assessment of the allowance.

In the system there are limitations on size in m^2 for the flat; those limitations cannot be simulated.

Currently, BenCalc functions 23.6 and 23.7 calculate the reduction for cohabiting parents separately, referring to these as dgn=0, 'female partner' and dgn=1, 'male partner'. Consider making these variables gender neutral so as to include same-sex parents. These functions could likely also be combined into one function.

- ***Benefit amount***

Families with children:

The housing allowance is calculated as the sum of a *special component* for families with children and a *rent component*:

- The special component consists of a special component for children who live permanently at the household (sin01_s) and a special component for children with alternating households. It is assumed that all children live permanently at households because there is no variable to distinguish them from those with alternating household. Both components are given by the table below.

- If there are children with both permanent household and alternating households in the same family the special component for the permanent children is paid out first and the alternating children is given a special component according to the table below.

- The rent component (sin02_s) is calculated as follows:

Rent component = (min(xhc , upper level) – lower level)*0.5

according to the lower and upper values reported in the following table:

Table 2.9 Housing allowance parameters – Families with children – 2017- 2022

	Rent component		Special component, permanent households	Special component, alternating households
Number of children	**Lower level SEK/month**	**Upper level SEK/month**	**SEK/month**	**SEK/month**
1	1,400	5,300	1,500	1,300
2	1,400	5,900	2,000	1,600
3 and more	1,400	6,600	2,650	2,100

Table 2.10 Housing allowance parameters – Families with children with both permanent and alternating housholds– 2020-2022

Number of permanent children	Number of alternating children	Special component for the children(s) SEK/month
1	1	300
2	1	500
1	2	800

The housing allowance is reduced following the equation below with the parameters of the valid year (i.e., 2022 as in the equation below), which vary according to the typology of the recipient. Thus, the equation is similar for every year, but with the annual values from table x.x. added:

- Married or cohabiting partner (the following applies to each partner separately, yearly amounts – sin05_s):
Final Housing allowance = Housing allowance – 0.20(max((il_means_bho – 75,000), 0))

- Lone parents (yearly incomes, sin06_s):
Final Housing allowance = Housing allowance – 0.20(max((il_means_bho – 150,000), 0))

COVID-19 Notes

During 2020, from July 1 until December 31, a temporary supplement to housing allowance was introduced for families with children. The temporary supplement amounted to a 25% increase in the allowance and was granted without the need of application. This supplement was later on extended to the period from the July 1 2021 to December 31 2021, and July 1 2022 to December 31 2022.

Young families below the age of 29 without children

.
The rent component (sin07_s) is calculated as reported in the following table:

Table 2.11 Housing allowance parameters – Young couples without children – 2016- 2022

Housing cost (xhc) SEK / month	Rent component
< 1,800	0
1,800 – 2,600	(xhc - 1,800) * 0.90)
2,600 – 3,600	(2,600 - 1,800) * 0.90 + (3,600 - xhc) * 0.65
>= 3,600	(2,600 - 1,800) * 0.90+(3,600 - 2,600) * 0.65

The housing allowance is then reduced according to the typology of the recipient:
-singles (yearly incomes, sin08_s):
Final Housing allowance = Housing allowance – 0.33(max((il_means_bho– 41,000), 0))

-married or cohabiting (the following applies to each partner separately, yearly amount, sin12_s):
Final Housing allowance = Housing allowance – 0.33(max((il_means_bho – 58,000), 0))

2.4.4 Housing allowance for pensioners (bhope_s)

- ***Definitions***

The unit of analysis is the nuclear family (tu_bho_se), including the cohabiting partners and children up to 18 years old, or aged under 20 and receiving the basic amount of child benefit (dec =4). In multi-family households, the housing allowance is given only to the family who is responsible for the house (xhc > 0).

- ***Eligibility conditions***

Housing allowance for pensioners can be given to age pensioners or disable pensioners (persons aged 19-64 who are permanently unable to work due to a disability). It is considered to be part of the pension system.

Families with persons older than 65 years or families with persons receiving disability pension (pdi) can receive this allowance (age allowance and disability allowance). The benefit is not taxable.

- ***Income test***

The allowance is diminished with the income over certain income limits, which are dependent of the recipients being married/cohabitants (94,233 SEK) or single (105,342 SEK). Labour income is weighted less than pension income. Additionally,15% of the wealth (afc) of the family (divided by two if there are two partners) over 100,000 SEK for single and 200,000 SEK for cohabiting partner is considered as income.

For calculating the housing allowance for pensioners the following individual income concept ("reserved amount") for each elderly or disabled adult (if a child is living with his parents only the parents can receive the allowance) in the family is calculated for all years 2009-2020 and deducted from the means:

Table 2.12 Housing allowance for pensioners – Reserved amount – 2016-2022

Condition	Reserved amount 2016-2017	Reserved amount 2018-2019	Reserved amount 2020-2021	Reserved amount 2022
pdi>0 and age<= 20	2.1*XBASM	2.23*XBASM	2.23*XBASM	2.48*XBASM
pdi>0 and 20< age <= 22	2.15*XBASM	2.28*XBASM	2.28*XBASM	2.53*XBASM
pdi>0 and 22< age <= 24	2.2*XBASM	2.33*XBASM	2.33*XBASM	2.58*XBASM
pdi>0 and 24< age <= 26	2.25*XBASM	2.38*XBASM	2.38*XBASM	2.63*XBASM
pdi> 0 and 26< age <= 28	2.3*XBASM	2.43*XBASM	2.43*XBASM	2.68*XBASM
pdi> 0 and 28< age <= 29	2.35*XBASM	2.48*XBASM	2.48*XBASM	2.73*XBASM
pdi> 0 and age>= 30	2.4*XBASM	2.53*XBASM	2.53*XBASM	2.78*XBASM
Single, age>65 and pdi=0	2.17*XBASM	2.17*XBASM	2.181*XBASM	2.181*XBASM
Married or cohabiting, age > 65 and pdi=0	1.935*XBASM	1.935*XBASM	1.951*XBASM	1.951*XBASM

Note: [a] The increase was introduced in 1/7 2018

For person younger than 65 years
Income (il_means_bhope) = Old age pension (poa) + Disability benefit (pdi) + investment income (yiy) + 0.8*(Private pensions (ypp) + fringe benefits (kfb) + Unemployment benefits (bunct + bunnc) + Sickness benefit (bhl) + parents' allowance (bpl)+ Survivor' pension (psu)) + property income (ypr) + 0.5 * (Employment income (yem) + self-employment income (yse)) + 0.15*(wealth (afc00_s, divided by two if there are two partners) – 100 000) – reserved amount (ydg01_s).

For persons older than 64 years
Income (il_means_bhope) = Old age pension (poa) + Disability benefit (pdi) + investment income (yiy) + 0.8*(Private pensions (ypp) + fringe benefits (kfb) + Unemployment benefits (bunct + bunnc) + Sickness benefit (bhl) + parents' allowance (bpl) + Survivor' pension (psu)) + property income (ypr) + 0.5 *max((Employment income (yem)+ self-employment income (yse))-24000,0) + 0.15*(wealth (afc00_s, divided by two if there are two partners) – 100 000) – reserved amount (ydg01_s).

For persons older than 64 years from 2020 and onwards
Income (il_means_bhope) = 0.93 * Income related pension (proxied by poa) +

Guarantee pension (not included as already in poa) + Widow's pension (proxied by psu) + investment income (yiy) + property income (ypr) + 0.15*(wealth (afc00_s, divided by two if there are two partners) – 100 000) + 0.93 *max((Employment income (yem)+ self-employment income (yse))-24000,0) + 0.93 *(Private pensions (ypp) + fringe benefits (kfb) + Unemployment benefits (bunct + bunnc) + Sickness benefit (bhl) + parents' allowance (bpl) + other survivor pensions (not included as already in psu)) – reserved amount (ydg01_s)

The proxies and omissions are used because it is not possible to separate some benefits within variables in the data. We believe that the misclassified benefits are smaller compared to the other benefits included in those aggregated variables. With respect to Incomes related pension, its components should only be Income pension, Supplementary pension and Premium pension.

This Income is calculated independently for each partner. If married or cohabiting then Income (sin02_s) = (Income_male + Income_female)/2

- ***Benefit amount***

The maximum housing allowance (sin01_s) is calculated as follows per each entitled individual:

For 2016
- persons younger than 66 years and receiving disability pensions: 0.93* min((xhc-bho_s), upper level)
- persons older than 65 years and married: 0.95* min((xhc-bho_s) , upper level) +12*170
- persons older than 65 years and single: 0.95* min((xhc-bho_s) , upper level) +12*340

For 2017
- persons younger than 66 years and receiving disability pensions: 0.95* min((xhc-bho_s), upper level)
- persons older than 65 years and married: 0.95* min((xhc-bho_s) , upper level) +12*170
- persons older than 65 years and single: 0.95* min((xhc-bho_s) , upper level) +12*340

For 2018
- persons younger than 66 years and receiving disability pensions: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))
- persons older than 65 years and married: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))+12*170
- persons older than 65 years and single: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))+12*340

For 2020
- persons younger than 66 years and receiving disability pensions: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))
- persons older than 65 years and married: 1.0* min((xhc-bho_s), 3000)+0.96*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0))+12*170
- persons older than 65 years and single: 1.0* min((xhc-bho_s), 3000)+0.96*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0))+12*340

For 2021
- persons younger than 66 years and receiving disability pensions: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))
- persons older than 65 years and married: 1.0* min((xhc-bho_s), 3000)+0.9*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0))+12*170

- persons older than 65 years and single: 1.0* min((xhc-bho_s), 3000)+0.90*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0))+12*340

For 2022
- persons younger than 66 years and receiving disability pensions: 0.96* min((xhc-bho_s), 5000)+0.7*(MAX(MIN(xhc-bho_s,5600)-5000,0))
- persons older than 65 years and married: 1.0* min((xhc-bho_s), 3000)+0.9*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0)+0.5*(MAX(MIN(xhc-bho_s),7500)-7000,0))+)+12*270
- persons older than 65 years and single: 1.0* min((xhc-bho_s), 3000)+0.9*(MAX(MIN(xhc-bho_s,5000)-3000,0)+0.7*(MAX(MIN(xhc-bho_s,7000)-5000,0)+0.5*(MAX(MIN(xhc-bho_s),7500)-7000,0))+12*540

Housing costs and Housing allowance are always considered at family level. If it is a cohabiting couple then the maximum allowance is divided by 2 (even in case only one partner is entitled to the allowance because each partner is expected to pay their part of the housing cost).

The upper levels of housing costs are reported in the following table:

Table 2.13 Housing allowance for pensioners – Housing costs limits – 2016-2022

Year	Upper level housing cost Disability pens. SEK/month	Per cent benefit Disability pens.	Upper level housing cost Age pensioners SEK/month	Per cent benefit Age pensioners
2016	5,000	93	5,000	95
2017	5,000	95	5,000	95
2018	5,000	96	5,000	96
2018	5,600	70	5,600	70
2019	5,000	96	5,000	96
2019	5,600	70	5,600	70
2020	5,600	70	7,000	70
2021	5600	70	7000	70
2022	6550	87.3	6990	93.2

Table 2.14 Housing allowance for pensioners – Thresholds and coverage – 2022

Disability Pension		Old-Age Pension	
Housing Cost Threshold	Benefit Coverage (%-rate)	Housing Cost Threshold	Benefit Coverage (%-rate)
5000	96	3000	100
7500	70	5000	90
		7000	70
		7500	50

The housing allowance for pensioners is then calculated for all persons in the family who are entitled (older than 65 or receiving disability benefit) according to the following rules:

Table 2.15 Housing allowance for pensioners – Amounts – 2016-2019

Condition	Amount
per capita income (sin02_s) < XBASM	max((Indiv. maximum allowance - (sin02_s*0.62)), 0)
per capita income (sin02_s) >= XBASM	max((Indiv. maximum allowance - (XBASM*0.62) – ((sin02_s - XBASM)*0.5)), 0)

* The maximum housing allowance is calculated at individual level (sin01_s).

Table 2.16 Housing allowance for disable pensioners – Amounts – 2020-

Condition	Amount
per capita income (sin02_s) < XBASM	max((Indiv. maximum allowance - (sin02_s*0.62)), 0)
per capita income (sin02_s) >= XBASM	max((Indiv. maximum allowance - (XBASM*0.62) – ((sin02_s - XBASM)*0.5)), 0)

Table 2. 17 Housing allowance for old-age pensioners – Amounts – 2020-

Condition	Amount
N/A	max((Indiv. maximum allowance - (sin02_s*0.62)), 0)

The total housing allowance for pensioners is given by the sum received by both partners (if entitled).

2.4.5 Social assistance (bsamt_s)

- ***Definitions***

The unit of analysis is the nuclear family (tu_bho_se), including the cohabiting partners and children up to 18 years old, or aged under 20 and receiving the basic amount of child benefit (dec =4). In multi-family households, the social assistance is given to the family who is responsible for the hosing cost.

- ***Eligibility conditions***

Social assistance is the ultimate and last part of the social safety net. It can be paid out if the family has temporary financial problems, or if the disposable income/month is too low. Two conditions to get social assistance are that the family doesn't have any wealth (afc= 0) and is willing to take a job if offered. The income limits for getting the benefit are based on the normative costs for a basket of commodities needed to get a reasonable standard of living. The income limits depend on the age of children, single or cohabitant couple, and the number of individuals in the family. Housing costs, and costs for health, dentist, furniture, local commuting, insurance and child care costs are not included in the normative costs. Actual costs (xhc) are used instead. Income losses for self-employment income are not considered (i.e. set to 0). The benefit is not taxable.

- ***Income test***

The family's needs are calculated as common needs plus personal needs depending of the age of the children and if the head of the family is single or not. For example, a married couple with 2 children aged 4 and 8 years old have the following needs in 2019:

2,120 (Child age 4) + 2,990 (child age 8) + 5,570 (Married couple) + 1,0 (family size=4)

The family's consumption needs are calculated according to the rules reported in the following tables:

Table 2.18 Personal needs – Monthly amounts (SEK) – 2016-2022

Year\Age	0	1-2	3	4-6	7-10	11-14	15-18	19-20	Single	Married/ cohabiting
2016	1,710	1,900	1,650	1,830	2,660	3,090	3,500	3530	2,950	5,320
2017	1,730	1,920	1,670	1,850	2,690	3,120	3,540	3570	2,980	5,370
2018	1,960	2,150	1,900	2,080	2,930	3,370	3,800	3830	3,030	5,460
2019	2,000	2,190	1,940	2,120	2,990	3,440	3,880	3910	3,090	5,570
2020	2040	2230	1980	2160	3050	3510	3950	3980	3150	5680
2021	2050	2240	1990	2170	3060	3520	3970	4000	3160	5700
2022	2090	2280	2030	2210	3110	3580	4040	4070	3210	5800

Table 2. 19 Common needs – Monthly amounts (SEK) – 2016-2022

Number of family members	1	2	3	4	5	6	7+
2016	940	1,050	1,320	1,500	1,720	1,960	2,130
2017	950	1,060	1,330	1,520	1,740	1,980	2,150
2018	970	1,080	1,350	1,540	1,770	2,010	2,180

2019	990	1,100	1,380	1,570	1,810	2,050	2,220
2020	1010	1120	1410	1600	1850	2090	2260
2021	1020	1130	1420	1610	1860	2100	2270
2022	1040	1150	1450	1640	1890	2140	2310

- ***Benefit amount***

Final amount of social assistance is given by the following formula:

If the household have had social assistance for 6 months or more when calculating net income, only 75% of the employment income (yem) is deducted (i.e. the household can keep 25% of employment income).

Personal needs + Common needs + housing cost (xhc) – net income (il_means_bsa)

2.4.6 Parental benefit (bfapl_s)

- ***Definitions***

It is a benefit to all parents that provide care for children. The benefit can be used from 60 days before the expected birth until the child has finished their first year in compulsory school if the child is born before 1 January 2014. For children born on or after 1 January 2014, the benefit can be used until the child's 12th birthday/at the end of primary 5.

- ***Eligibility conditions***

A parent to the child or the person who has the custody of the child is entitled to parental benefit. The child must be resident in Sweden or within the EU / EEA or Switzerland.

- ***Benefit duration***

Parental benefit covers a total of 480 days, 240 days for each parent. Twin and triplet parents receive an additional 180 and 360 days respectively. In the case of two parents, both can stay home at the same time for maximum 30 days (this counts as 60 days of parental leave). A single parent is entitled to all days.

It is possible for the parents to divide the days by transferring days to each other. But for parents to children born in 2016 or later, 90 days are personal and cannot be transferred to the other parent (60 days in 2015). The remaining 300 days, or 150 each, can be transferred. It is thus possible for a parent couple to divide the days so that one gets 90 and the other 390 days.

The days can be used from 60 days before the expected birth until the child has finished their first year in compulsory school. If the child becomes 8 years old after school termination, parental benefit can be paid until the child reaches the age of 8 years.

If the child is born in 2014 or later, the custodian may take out parental benefit until the child reaches the age of 12 or when the child ends grade 5 of the compulsory school. However, from the child's 4th birthday, only 96 days can be saved. If you have twins, you can save 132 days in total.

- ***Benefit amount***

For 390 of days, the remuneration is based on SGI (yearly income from work without deductions from any absence, i.e. monthly income * 12) (for people with both employment and self-employment income, only the former is considered in the simulation). For these days parents receive 80% of the income up to 10 price base amounts. The resulting amount is reduced to 97%. The 90 (60 in 2015) personal days are paid at this rate. The minimum benefit (e.g. for parents with low or missing SGI) during these 390 days starting in 2016 is SEK 250 per day (225 in 2015). For the remaining 90 days the compensation is SEK 180 per day.

The first 180 days taken for the child must be based on SGI. This also includes days of parental benefit taken before the birth of the child.

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

The benefit is taxable.

- ***Take up***

In 2010 (there aren't more recent figures), 12% of female parents did not use parental benefit days, while this was 68% for male parents.

- ***EUROMOD notes***

This benefit and the following one are switched off in the baseline (therefore, those observed in the data are used). We assume that duration of the parental leave depends on the month of birth of a child. The month of birth is assumed to be equal to the middle month of the quarter of birth reported in SILC. If child's month of birth is unavailable, the assumption is that the child is born on June 30 (6^{th} month of the year). Mother is assumed to be the main carer. Where mothers absent, fathers are assumed to receive the allowance for the same duration as mothers.

We assume that all women with eligible child have taken 60 days of parental leave before childbirth and all transferable days (390) right after the childbirth. For single parents this is extended to 480 days (including 60 days before childbirth). The families with twins get additional 180 days on top of that. The partners of main carers thus are eligible for 90 days. We assume that these 90 days are also taken in the first year of a child's life. We assume that the main carer gets max 300 days at the high replacement rate (80%), which means that the partner gets his/her 90 days at this rate too.

Consider allocating the parental benefit to the mother instead of the head of the tax unit.

2.4.7 Special days for the other parent (bpa_s)

- ***Definitions***

The parent who is not pregnant (mostly and assumed male) has the right to temporary parental benefit for 10 days when the child is born.

- ***Eligibility conditions***

Parent to the child or the person who has the custody of the child is entitled to the benefit. The child must be resident in Sweden or within the EU / EEA or Switzerland

- ***Income test***

There is no income test

- ***Benefit duration***

The parent can receive the benefit for 10 days. These days must be taken within 60 days after the child has returned home

- ***Benefit amount***

The amount is based on SGI. The remuneration is 80% of the income. The resulting amount is reduced to 97%. The maximum amount is 7.5 price base amounts.

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

The benefit is taxable.

- ***Take up***

N/A

2.5 Social contributions

2.5.1 Employee social contributions(tscee_s)

- ***Liability to contributions***

All individual residents in Sweden and born after 1937 with employment income (yem), fringe benefits (kfb), sickness benefit (bhl) or unemployment benefit (bunct + bunnc) larger than 1000 SEK per year have to pay the general social security contributions.

- ***Income base used to calculate contributions***

The contribution base is calculated as follows:

- Initial Contribution base = (yem+kfb+bhl+bunct+bunnc)*12. This is rounded down to the nearest hundred SEK.
- Final Contribution base = min(Initial Contribution base , 8.07*XBASMI). This is rounded down to the nearest hundred SEK.

- ***Contribution rates***

If the Final Contribution base is larger than XBASM * 0.423, then the Social contribution is 7% of the Final Contribution base. Otherwise no contribution is paid. The Social contribution is then rounded down to the nearest hundred SEK (tscee_s).

2.5.2 Employer social contributions (ils_sicer)

- ***Liability to contributions***

All employers are liable to pay social contributions based on employment income (yem) and fringe benefits (kfb), if the annual amount is greater than 1,000 SEK.

- ***Income base used to calculate contributions***

The employer social contributions are based on employment income (yem) and fringe benefits (kfb), if the annual amount is greater than 1,000 SEK.

- ***Contribution rates***

There are 8 different employer social contributions: health insurance, parental insurance, occupational injuries, old age pension, survivors pension, labour market, general wage fee and a special wage tax(for persons older than 65 years).The rates are specified in the following tables.

In 2021, reduced social contributions rates was introduced for employers hiring young workers. Two age cohorts are eligible for the reduced rates; 15- to 18-year-olds and 19- to 23-year-olds. The reduced rates are only applicable if the employee earns less than 25 000 SEK per month. For the youngest age-cohort, the employer pays the old age pension social contribution at 10.21% only, and for the older cohort, the employer pays all types of social contributions but at a reduced total rate of 19.73% (instead of 31.42%). During the 3 summer months (June, July and August), the rate of the older age group is reduced to the same rate as the younger group.

Table 2. 20 Employer social contributions – Persons younger than 66 years old

	2016	2017	2018	2019	2020	2021	2022
Health insurance (tscersi_s)	0.0485	0.0435	0.0435	0.0355	0.0354	0.0355	0.0355
Old age pension (tscerpi_s)	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021
Survivors pension (tscerci_s)	0.0117	0.0070	0.0070	0.0060	0.0060	0.0060	0.0060
Occupational injuries (tscerac_s)	0.0030	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Labour market (tscerir_s)	0.0264	0.0264	0.0264	0.0264	0.0264	0.0264	0.0264
General wage fee (tscerot_s)	0.0965	0.1072	0.1072	0.1162	0.1162	0.1162	0.1162
Parental insurance (tscerml_s)	0.0260	0.0260	0.0260	0.0260	0.0260	0.0260	0.0260

Table 2.21 Employer social contributions – Persons older than 65 and born after 1937

Year	2016	2017	2018	2019	2020	2021	2022
Old age pension (tscerpi_s)	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021

Table 2.22 Employer social contributions – Persons born in 1937 or before

Year	2016	2017	2018	2019	2020	2021	2022

Special wage tax for elderly	0.0615	0.0615	0.0615	0.03075	0	0	0

Table 2.23 Employer social contributions – Persons aged between 15 and 23

Year	2020	2021	2022
Social Contribution Rate for 15-18 Year Olds	0	0.1021	0.1021
Social Contribution Rate for 19-23 Year Olds	0	0.1973	0.1973
Social Contribution Rate for 19-23 Year Olds (during summer)	0	0.1021	0.1021

Self-employed social contributions(ils_sicse)

- ***Liability to contributions***

The self-employed (lse > 0) pay social contributions.

- ***Income base used to calculate contributions***

The social contribution is based on total self-employment income (yse) if the annual amount is greater than 1,000 SEK (if below no contribution is paid).

- ***Contribution rates***

There are 8 different self-employed social contributions: health insurance, parental insurance, occupational injuries, old age pension, survivors pension, labour market, general wage fee and a special wage tax (for persons older than 65 years) .The rates are specified in the following tables.

Table 2.24 Self-employed social contributions – Persons 0-65 years of age

Year	2016	2017	2018	2019	2020	2021	2022
Health insurance (tscsesi_s)	0.0494	0.0444	0.0444	0.0364	0.0364	0.0364	0.0364
Old age pension (tscsepi_s)	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021
Survivors pension (tscseci_s)	0.0117	0.0070	0.0070	0.0060	0.0060	0.0060	0.0060
Occupational injuries (tscseac_s)	0.0030	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Labour market (tscseir_s)	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010

General wage fee (tscseot_s)	0.0965	0.1072	0.1072	0.1162	0.1162	0.1162	0.1162
Parental insurance (tscseml_s)	0.0260	0.0260	0.0260	0.0260	0.0260	0.0260	0.0260

Table 2.25 Self-employed contributions – Persons older than 65 and born after 1937

Year	2016	2017	2018	2019	2020	2021	2022
Age	66- 77	66 – 78	66 – 79	66-80	66-81	66-82	66-83
Special wage tax (tscseot_s)	0	0	0	0	0	0	0
Old age pension (tscsepi_s)	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021	0.1021

Table 2.26 Self-employed contributions – Persons older than 65 years

Year	2016	2017	2018	2019	2020	2021	2022
Special wage tax for elderly	0.0615	0.0615	0.0615	0.03075	0.0	0.0	0.0

EUROMOD Notes

A special wage tax should be paid by persons older than 65 year, but the base which is a small part of self-employment income (yse) cannot be created in EUROMOD.

COVID-19 Notes

For farmers and self-employed the proportion of net income to be paid as social contribution fee will be reduced for 2020 from 28.97% to 10.21% (they will only pay the old age pension contribution). The reduction is valid for net income up to SEK 100 000. Thus, for net income up to SEK 100 000 the social contribution percentage will be 10.21% and for net income above SEK 100 000 the full social contribution fee will be paid.

2.6 Personal income tax

The main tax simulated for Sweden is the personal income tax which is divided into four parts: a government tax, a county council tax, a municipality tax and a funeral tax. All individuals earning above 20,431 SEK annually pay taxes.

2.6.1 Tax unit

Personal income tax is assessed at individual level.

2.6.2 Exemptions

Child benefits, social assistance, housing allowance, housing allowance for pensioners and social assistance for elderly are exempted from income tax. Those who earn less than SEK 20,431 per year are exempt from paying income tax.

2.6.3 Taxable income

The taxable income (il_taxabley) includes: employment income (yem), fringe benefits (kfb), self-employment income (yse), parental leave benefit (bpl – parent's allowance at birth), income received by children (yot), Private pensions (ypp), Unemployment benefits (bunct + bunnc), Old age pension (poa), Disability benefit (pdi), Sickness benefit (bhl) and Survivor' pension (psu).

There exist, however, additional minor tax-related incomes not simulated in Euromod. For example, emoluments (*arvoden*), taxable student aid, annuity, and taxable car and housing benefits.

2.6.4 Tax allowances

Two tax allowances are simulated.

Allowance for voluntary Private Pension contributions (tintapv_s).

From 2016 and onwards, the allowance for voluntary private pension contributions are only for self-employed.

EUROMOD Notes

Due to lack of data, we do not simulate those rules which anyway affect only 3 percent of those claiming the allowance (i.e. having a higher value).

Basic allowance (tinta00_s)

The basic allowance (tinta00_s) is based on taxable income minus the allowance for voluntary Private Pension (il_taxabley_ppta).

Table 2.27 Basic Allowance - 2016-2022

Taxable income minus allowance for Private pension		Allowance
Lower level	**Upper level**	
0	0.99*XBASM	min (il_taxabley_ppta, 0.423*XBASM)
0.99*XBASM	2.72*XBASM	0.423*XBASM+0.2*(il_taxabley_ppta -0.99*XBASM)
2.72*XBASM	3.11*XBASM	0.77*XBASM
3.11*XBASM	7.88*XBASM	0.77*XBASM-0.1*(il_taxabley_ppta -3.11*XBASM)
7.88*XBASM		0.293*XBASM

There is also an additional basic allowance for pensioners (over 65 years) (tintape_s):

Table 2. 28 Additional Basic Allowance for pensioners (over 65 years) – 2016-2022

Taxable income minus allowance for Private pension	Allowance

Lower level	Upper level	
	2016-2017	
0	0.99*XBASM	min (il_taxabley_ppta, 0.687*XBASM)
0.99*XBASM	1.1*XBASM	0.885*XBASM-0.2* il_taxabley_ppta
1.1*XBASM	2.72*XBASM	0.609*XBASM+0.049* il_taxabley_ppta
2.72*XBASM	3.11*XBASM	0.741*XBASM+0* il_taxabley_ppta
3.11*XBASM	3.77*XBASM	0.430*XBASM+0.1* il_taxabley_ppta
3.77*XBASM	5.4*XBASM	0.807*XBASM+0* il_taxabley_ppta
5.4*XBASM	7.88*XBASM	0.753*XBASM+0.01* il_taxabley_ppta
7.88*XBASM	12.43*XBASM	1.541*XBASM-0.09* il_taxabley_ppta
12.43*XBASM		0.422*XBASM
	2018	
0	0.99*XBASM	min (il_taxabley_ppta, 0.687*XBASM)
0.99*XBASM	1.11*XBASM	0.885*XBASM-0.2* il_taxabley_ppta
1.11*XBASM	2.72*XBASM	0.609*XBASM+0.049* il_taxabley_ppta
2.72*XBASM	2.94*XBASM	-0.162*XBASM+0.332* il_taxabley_ppta
2.94*XBASM	3.11*XBASM	0.482*XBASM+0.113* il_taxabley_ppta
3.11*XBASM	4.45*XBASM	0.171*XBASM+0.213* il_taxabley_ppta
4.45*XBASM	7.88*XBASM	1.376*XBASM-0.058* il_taxabley_ppta
7.88*XBASM	9.15*XBASM	2.164*XBASM-0.158* il_taxabley_ppta
9.15*XBASM	12.43*XBASM	1.541*XBASM-0.09* il_taxabley_ppta
12.43*XBASM		0.422*XBASM
	2019	
0	0.99*XBASM	min (il_taxabley_ppta, 0.687*XBASM)
0.99*XBASM	1.11*XBASM	0.885*XBASM-0.2* il_taxabley_ppta
1.11*XBASM	2.72*XBASM	0.600*XBASM+0.057* il_taxabley_ppta
2.72*XBASM	3.11*XBASM	-0.169*XBASM+0.34* il_taxabley_ppta
3.11*XBASM	3.21*XBASM	-0.48*XBASM+0.44* il_taxabley_ppta
3.21*XBASM	4.45*XBASM	0.207*XBASM+0.228* il_taxabley_ppta
4.45*XBASM	5.31*XBASM	1.397*XBASM-0.039* il_taxabley_ppta
5.31*XBASM	7.88*XBASM	0.763*XBASM+0.08* il_taxabley_ppta
7.88*XBASM	8.08*XBASM	1.551*XBASM-0.02* il_taxabley_ppta
8.08*XBASM	13.54*XBASM	2.399*XBASM-0.125* il_taxabley_ppta
13.54*XBASM	34.00*XBASM	1.031*XBASM-0.024* il_taxabley_ppta

34.00*XBASM		0.215*XBASM
2020		
0	0.99*XBASM	min (il_taxabley_ppta, 0.687*XBASM)
0.99*XBASM	1.11*XBASM	0.885*XBASM-0.2* il_taxabley_ppta
1.11*XBASM	2.72*XBASM	0.600*XBASM+0.057* il_taxabley_ppta
2.72*XBASM	3.11*XBASM	-0.169*XBASM+0.34* il_taxabley_ppta
3.11*XBASM	3.21*XBASM	-0.480*XBASM+0.44* il_taxabley_ppta
3.21*XBASM	4.45*XBASM	0.207*XBASM+0.228* il_taxabley_ppta
4.45*XBASM	7.88*XBASM	0.488*XBASM+0.165* il_taxabley_ppta
7.88*XBASM	8.08*XBASM	1.276*XBASM+0.065* il_taxabley_ppta
8.08*XBASM	11.06*XBASM	2.205*XBASM-0.05* il_taxabley_ppta
11.06*XBASM	12.15*XBASM	7.182*XBASM-0.05* il_taxabley_ppta
12.15*XBASM	29.65*XBASM	1.654*XBASM-0.045* il_taxabley_ppta
29.65*XBASM	34.00*XBASM	1.031*XBASM-0.024* il_taxabley_ppta
34.00*XBASM		0.215*XBASM
2021-2022		
0	0.99*XBASM	min (il_taxabley_ppta, 0.687*XBASM)
0.99*XBASM	1.11*XBASM	0.885*XBASM-0.2* il_taxabley_ppta
1.11*XBASM	2.72*XBASM	0.600*XBASM+0.057* il_taxabley_ppta
2.72*XBASM	3.11*XBASM	-0.169*XBASM+0.34* il_taxabley_ppta
3.11*XBASM	3.21*XBASM	-0.480*XBASM+0.44* il_taxabley_ppta
3.21*XBASM	7.88*XBASM	0.207*XBASM+0.228* il_taxabley_ppta
7.88*XBASM	8.08*XBASM	0.995*XBASM+0.128* il_taxabley_ppta
8.08*XBASM	11.28*XBASM	2.029*XBASM
11.28*XBASM	12.53*XBASM	9.023*XBASM-0.62* il_taxabley_ppta
12.53*XBASM	13.54*XBASM	1.253*XBASM
13.54*XBASM	35.36*XBASM	2.03*XBASM-0.0574* il_taxabley_ppta
35.36*XBASM		0

2.6.5 Tax base

The tax base (il_taxbase) is defined as taxable income minus the allowance for voluntary private pension and the basic allowance.

2.6.6 Tax schedule

The tax schedule for government tax (tinna_s), county council tax (tinrg_s), municipality tax (tinmu_s) and funeral tax (tinfu_s) applies to the same tax base (il_taxbase).

Tax rates differ by region in Sweden. In 2022 the county council tax rate varies between 10.83% and 12.08 % of the tax base, the municipality tax rate varies between 16.90 % and 23.80 % of the tax base. The funeral tax rate is common to all municipalities since 2017, except for Stockholm and Tranås, which have 0.065 % and 0.14 % of the tax base in 2022, respectively.

Since information on the region persons are living in is not included in EUROMOD, the taxes are simulated according to the average value for Sweden, as reported in the following table.

Table 2.29 Income tax rates – 2016-2022

Year	Municipality tax	County council tax	Funeral tax
2016	20.75 %	11.35 %	0.22 %
2017	20.75 %	11.36 %	0.23 %
2018	20.74%	11.39%	0.22%
2019	20.70%	11.49%	0.23%
2020	20.72%	11.56%	0.250%
2021	20.71%	11.56%	0.253%
2022	20.67%	11.56%	0.261%

The government income tax schedule is based on three income bands as reported in the following table. From 2020 the government income tax only has two income bands, as seen below.

Table 2.30 Government income tax schedule – 2016-2020

Band	Tax rate	2016	2017	2018	2019	2020	2021	
1st	0 %	0-430,199	0 – 438,899	0-455,299	0-490,699	0-509,299	0-537,200	0-540,700
2nd	20 %	430,200-625,799	438,900 – 638,499	455,300-662,299	490,700-689,299	509,300-	537,200-	540,701-
3rd	25 %	625,800	638,500-	662,300-	689,300-	N/A	N/A	N/A

2.6.7 Tax credits

There are eight different non-refundable tax credits in the Swedish tax system (the final tax liability cannot be negative). Here we report on those we are able to simulate or impute. Five of the tax credits cannot be simulated due to lack of data but are also presented below.

Tax credit for general social security contributions

The general social security contribution (see 2.3.1 – tscee_s) is 100 % deductable from income tax.

Tax credit for negative capital income

This can be simulated for those who have a negative capital income (i.e. the interests paid minus the sum of income from rent and capital incomes, if the difference is positive) because of mortgage on their house. All negative capital income due to other forms of mortgage cannot be simulated. The annual amount of the tax credit (tintcmi_s) is:

0.30* negative capital income *12 if negative capital income *12 < 100,000

0.30*100,000 + 0.21*(negative capital income *12-100,000) if negative capital income *12 >= 100 000

Earned Income Tax credit

Depending on the age there are two different scales for the tax credit.

In both cases it is based on the income (tintc00_s) defined as follows:
tintc00_s = yem + yse + kfb .

Table 2.31 Earned Income Tax credit – 2016-2018

Persons younger than 66 years		
Annual Income base for tax credit		
Lower level	**Upper level**	**Tax credit**
0	0.91*XBASM	(tintc00_s –BA)*MT
0.91*XBASM	2.94*XBASM	(0.91*XBASM+0.332*(tintc00_s -0.91*XBASM)-BA)*MT
2.94*XBASM	8.08*XBASM	(1.584*XBASM+0.111*(tintc00_s -2.94*XBASM)-BA)*MT
8.08*XBASM	13.54*XBASM	((2.155*XBASM)-BA)*MT
13.54*XBASM		(((2.155*XBASM)-BA)*MT)-0.03*(tintc00_s-13.54*XBASM)

Persons 66 years and older		
Annual Income base for tax credit		
Lower level	**Upper level**	**Tax credit**
0	100,000 SEK	0.2* tintc00_s
100,000 SEK	300,000 SEK	15,000+0.05* tintc00_s
300,000 SEK	600,000 SEK	30,000
600,000 SEK		30,000-0.03*(* tintc00_s-600,000)

BA = Basic Allowance, see chapter 2.4.4.2
MT = Municipality tax rate and County council tax rate

Table 2.32 Earned Income Tax credit – 2019- 2022

Persons younger than 66 years		
Annual Income base for tax credit		
Lower level	**Upper level**	**Tax credit**
0	0.91*XBASM	(tintc00_s –BA)*MT
0.91*XBASM	3.24*XBASM	(0.91*XBASM+0.3405*(tintc00_s -0.91*XBASM)-BA)*MT
3.24*XBASM	8.08*XBASM	(1.703*XBASM+0.128*(tintc00_s -3.24*XBASM)-BA)*MT
8.08*XBASM	13.54*XBASM	((2.323*XBASM)-BA)*MT
13.54*XBASM		(((2.323*XBASM)-BA)*MT)-0.03*(tintc00_s-13.54*XBASM)

Persons 66 years and older		
Annual Income base for tax credit		
Lower level	**Upper level**	**Tax credit**
0	100,000 SEK	0.2* tintc00_s
100,000 SEK	300,000 SEK	15,000+0.05* tintc00_s
300,000 SEK	600,000 SEK	30,000
600,000 SEK		30,000-0.03*(* tintc00_s-600,000)

BA = Basic Allowance, see chapter 2.4.4.2
MT = Municipality tax rate and County council tax rate

Due to lack of data, five tax credits cannot be simulated. However they are presented below and an overview of their total amounts is reported in the Table below.

Tax credit for persons with Disability pension (Sjukersättning/aktivitetsersättning) (2018-2022).

Since 2018, a person receiving disability pension (pdi>0) is entitled to disability tax credit under the following rules:

- If pdi< 2.53 *XBASM then the amount of the tax credit is equal to:
  pdi *0.045* (Municipality tax + County council tax)/100
- If pdi>= 2.53 *XBASM then the amount of the tax credit is equal to:

2.53*XBASM*0.045*(Municipality tax + County council tax)/100 + (pdi -2.53 *XBASM))* 0.025*(Municipality tax + County council tax)/100

Tax credit for trade union fee (2018-2019)

Persons belonging to a trade union get a tax reduction of 25% of the trade union fee. The tax credit for union fee is abolished from 2019-04-01.

Tax credit on seafarer's income

A tax reduction is given for persons with seafarer's income. The amount is from 9,000 SEK to 14,000 SEK per year depending on if the ship is sailing abroad or in Sweden.

Tax credit on domestic and reconstruction services (2007-2022)

The tax reduction is 30 percent of the labour cost for reconstruction services and 50 percent of the labour cost for domestic services. There is an upper limit for this reduction. For reconstruction services the reduction is maximum 50,000 SEK per year. For domestic services the reduction is maximum 75 000 SEK per year (implemented in 2021) for persons younger than 65 years and 50 000 SEK per year for older persons. The total reduction is maximum 75 000 SEK per year since 2021.

Tax credit for installation of 'green technology' (2021-)

The tax credit will reduce labour and material costs for the installation of various kinds of 'green technology, with varying rates of the reduction. For installation of solar cells, the reduction is 15 %, for storing self-produced electricity, the reduction is 50 %, for installation of chargins points for electric vehicles, the reduction is 50 %.

Tax credit on real estate tax

Pensioners (persons older than 65 years) can receive a tax credit on real estate tax so that this tax not exceeds four percent of the income. The tax credit only refers to the property where the person is living.

Table 2.33 Non-simulated tax credits 2016-2022, in millions SEK

Tax credit	2016	2017	2018	2019	2020	2021	2022
Domestic and reconstruction services	12,687	13,835	14,214	15,251	15,884	16,409	19,500
Disability pension	0	0	475	463	449	430	300
Seafarer´s income	54	53	49	51	51	51	
Trade union fee	0	0	1,267	636	0	0	0
Real estate tax	249	260	347	389	396	405	

*Estimated figures for 2020, 2021, and 2022

2.7 Other taxes

Tax on capital income

The tax on capital is 30 % of the positive capital income, defined as income from capital and property income minus interests paid. This can partly be simulated as 0.30*max(((yiy+ypr) - xhcmomi), 0). Other interests paid, in addition to the interests paid on mortgage (xhcmomi), are not recorded in the data and they cannot be taken into account.

Tax on real estate

As from 2008 government property tax on dwellings was abolished and replaced by a municipal property charge. The tax is applicable for persons owning a ready-built house or a block of ready-built flats in Sweden. Newly built houses are exempt from charge. Thus, the property is not charged the first five years, thereafter, half the normal rate applies for the five additional years. Accordingly, first after 10 years are the properties fully charged. The table below describes the types of property mainly concerning private persons. Tax on real estate is included in the SILC data (EUROMOD variable: tpr).

Table 2. 34 Tax on real estate

Type of property	Municipal property charge 2009-2022
House/land, 0-5 years	0
House/land, 6-10 years	min((0.00375* assessed value), (0.00375*800,000*KPIyear))
House/land older than 10 years	min((0.0075*assessed value), (0.0075*800,000*KPIyear))

*KPIyear = XBASMI/XBASMI 2008

3. DATA

3.1 General description

The Swedish database is drawn from the UDB version of the European Statistics on Income and Living Conditions (EU-SILC). Every year a systematic sample is drawn from the register of total population (TPR). The reference population is therefore the whole Swedish population, except short-term migrants (i.e. those staying no longer than 3-12 months). The sample design follows a stratified sample with simple random sampling within age strata. The table below illustrates the main characteristic for the 2019 sample. In general, the SILC sample in a given year (say year *t*) consists of four rotating panels: one is included for the first time in the same year *t*, while the other three panels were originally drawn in years *t-1*, *t-2* and *t-3*.

Table 3.1 EUROMOD database description

EUROMOD database	SE_2019_a2
Original name	UDB version 2019-1
Provider	EUROSTAT
Year of collection	2019
Period of collection	2018.01.01—2017.06.31
Income reference period	2018

Sample size	5621 households, 13436 individuals
Response rate	49.5%

The cross-sectional weighting procedure uses auxiliary information through a calibration approach. The use of auxiliary information is aimed to reduce nonresponse bias and to provide better estimates of indicators of poverty measures. The auxiliary variables are obtained from the total population register (TPR), the register of income and taxation (IoT) and the register of education; and include age*sex, civil status, education level, region, place of birth (Swedish born/foreign born), income deciles, income (amount), receipt of financial aid, housing allowance and sickness compensation.

This section briefly describes the weighting procedure.[5] The sample unit of interest in the Swedish EU SILC are the households of sampled individuals. More precisely, individuals are sampled in order to reach households. The sample is stratified by age in eight strata: 16-23 years, 24-33 years, 34-43 years, 44-53 years, 54-63 years, 64-73 years, 74-83 years and 84 years and older. The design weights of the initial sample (DB080) are given by the ratio of the total number of individuals in each stratum to the number of individuals in the sample in each stratum. In order to get the household weights (DB090), the design weights (DB080) are calibrated to the population totals of the auxiliary variables. All individuals in a household get the same value of the household weights (DB090) and personal weights RB050 and PB040 are set equal to DB090. Finally personal weights PB060 are obtained multiplying household weights (DB090) by the number of eligible persons in the household.

3.2 Data adjustment

Adjustments to variables are kept to a minimum. Some minor data cleaning has been done to make sure that the households and relationships of individuals within households are coherent (for example, that young children are not living alone or family relations are coherent).

In order to guarantee consistency between demographic variables and income variables which refer to the previous year (and on which EUROMOD simulation are based), all children born between the end of the income reference period and the date of interview have been dropped from the sample.

3.3 Imputations and assumptions

3.3.1 Time period

In the SILC user database, the income reference period is a 12-month period. Information on all income sources refers to the last income year (1 January 2018 – 31 December 2018). The variables are recorded at the time the person receives it, i.e. when the payment is done. This means that the income of a person for example unemployed during the last part of December 2018 but receiving the payment in January 2019, will then be part of the income for 2019.
The other variables refer to the time of the interview or a 12 months period prior to the interview.

[5] For more information see the Quality Report EU-SILC Sweden, available from: https://www.gesis.org/en/missy/materials/EU-SILC/documents/quality-reports

Children born after the end of the income reference period (i.e. 31 December 2018) have been dropped from the dataset.

3.3.2 Gross incomes

The incomes used are gross incomes.

3.3.3 Disaggregation of harmonized variables

EU-SILC variable HY050g (Family/children related allowances) has been split into two components: child benefit (bch00, simulated in EUROMOD as bch00_s) and parent's allowance at birth (bpl, not simulated in EUROMOD) according to the rules about child benefits.

EU-SILC variable PY140g (Education related allowances) has been split into two components: education related allowances (bed, non-simulated in EUROMOD) and extra supplement of child benefit for upper secondary school students (bchot, simulated in EUROMOD as bch01_s) according to the year of birth of the individual (i.e. after 1986 is considered as extra supplement).

3.4 Updating

To account for any time inconsistencies between the input dataset and the policy year, updating 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. Updating factors are generally based on changes in the average value of an income component between the year of the data and the policy year. For detailed information about the construction of each uprating factor as well as the sources that have been used, see Annex 1.

As a rule, updating 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 uprated original variables in the dataset. Updating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable.

4. VALIDATION

4.1 Aggregate Validation

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 official data. The main discrepancies between EUROMOD results and external benchmarks are discussed in the following subsections. Some factors that may explain the observed differences are also discussed.

The previous national team used as the the external source for macro validation the population register data (specifically the STAR-register, managed by Statistics Sweden), but these are not

available (for this purpose) to the current national team. Therefore, the macro-validation had to take place compared to publicly published aggregate statistics. This means that macro-level benchmarks are not available for all (reported or simulated) indicators from the EUROMOD model. Furthermore, it should be noted that there can be differences in for instance sample or income definitions that are used in EUROMOD compared to what is used for national reporting of macro-level statistics in Sweden.

4.1.1 Components of disposable income

The definition of disposable income in EUROMOD follows closely EU-SILC definition. The minor differences are outlined in the following table. Note that disposable income in EUROMOD is constructed using simulated components whenever possible and, hence, the values of two disposable income concepts are not identical.

Table 4.1 Components of disposable income

	EUROMOD 2018-2022	EU-SILC 2019
	ils_dispy	HY020
Employee cash or near cash income	+	+
Employer's social insurance contribution	0	0
Company car	0	+
Contributions to individual private pension plans	0	0
Cash benefits or losses from self-employment	+	+
Pension from individual private plans	+	+
Unemployment benefits	+	+
Old-age benefits	+	+
Survivor' benefits	+	+
Sickness benefits	+	+
Disability benefits	+	+
Education-related allowances	+	+
Income from rental of a property or land	+	+
Family/children related allowances	+	+
Social exclusion not elsewhere classified	+	+
Housing allowances	+	+
Regular inter-household cash transfer received	+	+
Interests, dividends, etc.	+	+
Income received by people aged under 16	+	+
Regular taxes on wealth	-	-
Regular inter-household cash transfer paid	-	-
Tax on income and social contributions	-	-
Repayments/receipts for tax adjustment	+	+

4.1.2 Validation of incomes inputted into the simulation

Information about income components from the underlying EUROMOD data (Swedish component of EU-SILC) are compared to information on income components (wages and various benefits) from Statistics Sweden. The comparison needs to be done with caution because the units of analysis and the exact income concepts in the survey and in the statistics are not always strictly comparable. Table 4.1 compares the number of recipients of different income components. In general, the survey matches quite well the official statistics, except for property income (in this case the number of recipients is overestimated by 42% in 2018) and private transfers (in this case

the number of recipients is overestimated by 97% in 2018). In the case of property income, this can happen since the data are aggregated at household level in the survey. However, in EUROMOD, property income is allocated to both partners (if present), which results in an overestimation of the number of recipients. In terms of annual amounts (Table 4.2), the survey also matches well the external statistics, again with the exception of property income and private transfers.

4.1.3 Validation of tax and benefit instruments

Tables 4.3 and 4.4 report the validation of tax instruments simulated in EUROMOD, Tables 4.5 and 4.6 report numbers and amounts of social insurance contributions (payments), and Table 4.7 and 4.8 report numbers and amounts of benefits receipt. In terms of benefits recipients, comparison with external statistics is not feasible due to lack of data, except for child benefit for which we observe an overestimation of 28% in 2021 compared to the external benchmark. A comparison with EU-SILC data yields an important overestimation of recipients of social assistance benefits (115%), but an underestimation housing allowances (45%). The latter is because in the Swedish EUROMOD model a distinction is made between housing allowances for families and young people, and housing allowances for pensioners. In SILC, however, these two allowances are combined, and therefore the number of recipients in SILC is higher than in the simulated benefit recipients of either type of housing allowance.

In 2021, there is a baseline overestimation of the number of people who receive disability pension (33%), social assistance (16%), child benefit (33%), housing allowance (32%), and housing allowance for pensioners (31%). This means that the number of people who received these benefits in 2021 was lower than the EUROMOD baseline shows. Possibly, these overestimations result from an incongruence between the number of people who are entitled to said benefits and the number of people who have in fact received the benefits. Moreover, there is an underestimation of the number of recipients of survivor's pension (82%) and unemployment assistance (31%). In particular the latter underestimation may be due to COVID-19-related effects not captured by the EUROMOD baseline. For the parental leave benefit, no ratio is shown in the macro validation, due to zero values in the EUROMOD baseline.

The main reasons for these discrepancies can be i) incomplete take-up of the benefits which is not accounted for in EUROMOD simulations, and ii) approximation, due to the data available, of the means test used to assign benefits.

Tables 4.3 and 4.4 include the validation of the main components of the income tax. In terms of personal income tax, we simulate: Government Tax, County Council Tax, Municipality Tax, funeral tax and Earned Income Tax Credit, but can only validate a limited number of these because of data availability. Other Swedish taxes, such as the funeral tax of the distinction between municipal and government income taxes, is not available in the EUROMOD simulations. For the tax policies that could be macro-validated, the number of tax payers are generally underestimated. This bias represents an underestimate of 13% for income tax and 13% for property tax. EUROMOD over-estimates the number of capital tax payer by 67%, possibly because EUROMOD does not account for increases in capital gain. In terms of the amounts of taxes paid, the underestimations represent 44% for income taxes, 51% for property tax and 15% for capital taxes. We have no explanation for the underestimated amounts for these.

The tables also report the validation of the social insurance contributions for employees, employers and self-employed individuals. However, due to data limitations, an exact comparison with external statistics is not possible for the number of payers of Employers Social insurance contributions. The number of payers should, however, be close to the number of employed

persons in Sweden, which lies between 5.05 and 5.1 million during the period of 2018-2021. The simulated values in EUROMOD are, in other words, close to the actual numbers. Nevertheless, we have decided not to include the number of employed persons as an indication of employers' social insurance contributions as it is an indication and not the exact official numbers. Employee social insurance contributions match very well the external statistics in terms of payers and aggregate amounts. As far as Social insurance contributions for the self-employed, the number of contributors is in general largely underestimated, by around 43%, for all type of contributions. On the contrary, the total amounts of Social insurance contributions for the self-employed match decently the external statistics. A relatively good match is observed for Employers social insurance contributions that were possible to externally validate. Note however, that many of the amounts are not available to find (without access to register microdata).

4.2 Income distribution

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

4.2.1 Income inequality

Table 4.9 shows the main inequality indices from EUROMOD and SILC. Gini coefficient for Disposable income and S80/S20 ratio are somewhat underestimated in EUROMOD. Overall, disposable equivalised income at different income deciles simulated by EUROMOD matches quite well the equivalised income reported in SILC, and this is also the case for the mean and median income simulated by EUROMOD. A minor exception is the bottom decile, which presents an overestimation of the share of equivalised disposable income by 15% in 2020.

4.2.2 Poverty rates

The overall relative poverty rate based on disposable income simulated in EUROMOD somewhat underestimates the one based on disposable income reported in EU-SILC (Table 4.10 in Annex 3). The differences are larger with the lowest poverty line (31% of median equivalised household income, which corresponds to the under-estimate of income in lower deciles) and in the case of elderly poverty. The latter can be affected by the under-simulation of the housing allowances and social assistance resulting in lower poverty rates simulated by EUROMOD.[6]

4.3 Validation of minimum wage

Baseline simulations in EUROMOD do not modify gross employment income in any way. However, the user may switch on a policy that 'corrects' employment income by ensuring it is not below the gross minimum wage corresponding to the number of hours the person has worked.

[6] When self-reported Housing allowance and Social assistance are used instead of the simulated amounts, the difference between EUROMOD and SILC poverty rates for the elderly are considerably reduced.

In the case of Sweden; however, because there is not statutory minimum wage, the default censoring minimum wage is set at 0 and therefore it does not affect results in any way. The user might choose to modify this.

4.4 Summary of "health warnings"

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

- Some aggregated variables available in the survey are very difficult to split without having access to the original source of data (in particular, parents' allowance at birth, income from capital and property income)
- The lack of information related to negative capital income (with the exception of the interests paid on the mortgage for the main house) and other expenditures affects the simulation of some tax credits
- The identification of those subject to self-employment social contributions is problematic as well as the correct definition of the tax base of the self-employment social contributions
- The assumption of 100% take-up of means-test benefit overestimates both recipients and amount of these benefits.
- The simulation of parental benefits is switched off in the baseline (therefore, those observed in the data are used).
- The simulation of monetary compensation schemes (bwkmcee_s and yemmc_s) is triggered by the simulation of labour market transitions defined in policy TransLMA_se. This policy becomes operational if the model is run in conjunction with the LMA add-on. The nature of these simulations is still experimental and only partially validated. Users are encouraged to refer to the "*Simulating labour market transitions in EUROMOD*" document prior to their use.
- Labour market transitions are switched OFF in EUROMOD baselines. As a consequence, the simulation of monetary compensation schemes does not produce any effect in baseline simulations. Since all policies not linked to labour market transitions are fully functional, it is possible for disposable income in 2020 to be higher than disposable income in previous years.

4.5 Avenues for future improvements of the Swedish model in EUROMOD

The current national team made a number of improvements to the Swedish model in EUROMOD after taking over in 2022. They have further identified a number of possible improvements to the policy model that will require more resources than currently available. An evaluation of the anticipated improvement of the simulation, feasibility in terms of input-information, and priorities is required, in addition to extensive testing and evaluation after implementation. We record these suggestions here.

Income concepts IlsDef_se

Identify why *Maintenance Payment* (4.1.10) is subtracted from Original Income and if this is how it should be. Our reasoning is that this procedure results in an income concept (and, by extension, poverty and inequality indicators) that mix income and consumption/expenditure.

Unemployment benefit (contributory) bunct_se

Identify why the unemployment benefit (14.3.1) max-function has been turned off and if it should be turned back on again.

Parental benefit bfapl_se

Consider assigning parental leave benefit (15.20) to the mother instead of to the head of the household. Assigning it to the mother will be more in line with how parental leave is divided in practice (irrespective of who's heading the household).

Housing allowance bho_se

The simulation of this policy calculates housing allowance for families with cohabiting parents. 23.6 concerns 'female partners' and 23.7 concerns 'male partners'. Consider making this gender neutral, i.e. partner 1 and partner 2, irrespective of their sex/gender.

Consider allocating housing allowance on a monthly basis as opposed to on an annual basis, as the amount in 23.9.1 was a temporary covid-19 related add-on paid out for the later half of 2020, 2021 and 2022.

Housing allowance for pensioners bhope_se:

Old-age pensioners and disability pensioners are included in the same calculations. Consider separating the calculations, as these are in fact two separate policies. Housing allowance for old-age pensioners is managed by the Swedish Pension Agency (*Pensionsmyndigheten*), and the housing allowance for disability pensioners is managed by the Swedish Social Insurance Agency (*Försäkringskassan*).

Social assistance bsamt_se

We have included the additional amount received by 19-20-year-olds for the years 2016-20. Identify whether the variable needs to be updated also for years prior to 2016.

5. REFERENCES

EUROSTAT Statistics Database (2020).
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Statistics Sweden (2020) "National Reference Metadata in ESS Standard for Quality Reports Structure". https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp

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

Vår trygghet 2009, Vår trygghet 2010, Vår trygghet 2011, Vår trygghet 2012.
Handledning för beskattning av inkomst vid 2009 års taxering Del 1, Del2, Del 3

Handledning för beskattning av inkomst vid 2010 års taxering Del 1, Del2, Del 3

ANNEX 1. UPRATING FACTORS

Variable name	Factor reference name	2017	2018	2019	2020	2021	2022	Source and explanation
Harmonized consumer price index (index 2015=100)	$HICP	103.02	105.12	106.93	107.63	110.49	113.95	EUROSTAT; the values of 2022 is based on values in February https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ei_cphi_m&lang=en
Consumer price index	$f_cpi	322.11	328.40	334.26	335.92	343.19	353,56	SCB; The values of 2022 is based on values in February https://www.scb.se/hitta-statistik/statistik-efter-amne/priser-och-konsumtion/konsumentprisindex/konsumentprisindex-kpi/pong/tabell-och-diagram/konsumentprisindex-kpi/kpi-faststallda-tal-1980100/
HICP - actual rentals for housing (index 2015=100)	$f_house	103.02	105-12	106-93	107.63	110.49	109.48	Eurostat;(http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en, actual rentals for housing); https://tradingeconomics.com/sweden/harmonised-idx-of-consumer-prices-hicp-actual-rentals-for-housing-eurostat-data.html (Used for the estimates in February of 2022)
Average monthly salary, SEK	$f_wage	33700	34600	35921	36911	37691		http://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__AM__AM0110__AM0110A/LonYrkeUtbildning4A/ (2019 projection proportional to $f_xlon). In EUROMOD 2.0+ these numbers are the same but the source is not updated as here.
Hourly wage, SEK	$f_xlon	236.2	242.9	252.3	264.5	270.2	277,8	**Error! Hyperlink reference not valid.**http://prognos.konj.se/PXWeb/pxweb/sv/SenastePrognosen/SenastePrognosen__f30_lonerochkonsumentpriser/F3004.px/table/tableViewLayout1/?rxid=265ee5d8-b549-41b2-81aa-5cecea3bf826 (value for 2022 is a prediction).
Price base amount	$f_xbasm	44800	45500	46500	47300	47600	48300	http://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__PR__PR0101__PR0101E/Basbeloppet/?rxid=1df81ffb-6943-4796-a5d5-4b5e900d58b3

Income base amount	$f_xbasmi	61500	62500	64400	66800	68200	71000	https://www.regeringen.se/artiklar/2021/11/inkomstbasbelopp-och-inkomstindex-for-ar-2022-faststallt/
Aggregate income from capital, millions of SEK	$f_yiy	140909	136266	143290	141530	141052		Forecast made by the FASIT model
Aggregate income from property, millions of SEK	$f_ypr	2003	2197	2443	2469	2515		Forecast made by the FASIT modell
Unit index	$f_unit	1	1	1	1	1	1	
Pension Index (new)	$f_pen	166.39	170.73	175.96	182.58	186.52	194.19	https://www.regeringen.se/artiklar/2021/11/inkomstbasbelopp-och-inkomstindex-for-ar-2022-faststallt

ANNEX 2. POLICY EFFECTS IN 2021-2022

Preliminary: Indexation based on projected HICP for 2022

Table A2.1 and Figure A2.1 show the effect of 2022 policies on mean equivalised household disposable income by income component and income decile group. The effect is estimated as a difference between simulated household net income under the 2021 tax-benefit policies (deflating monetary parameters by projected Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2021 policies, as a percentage of mean equivalised household disposable income in 2020.

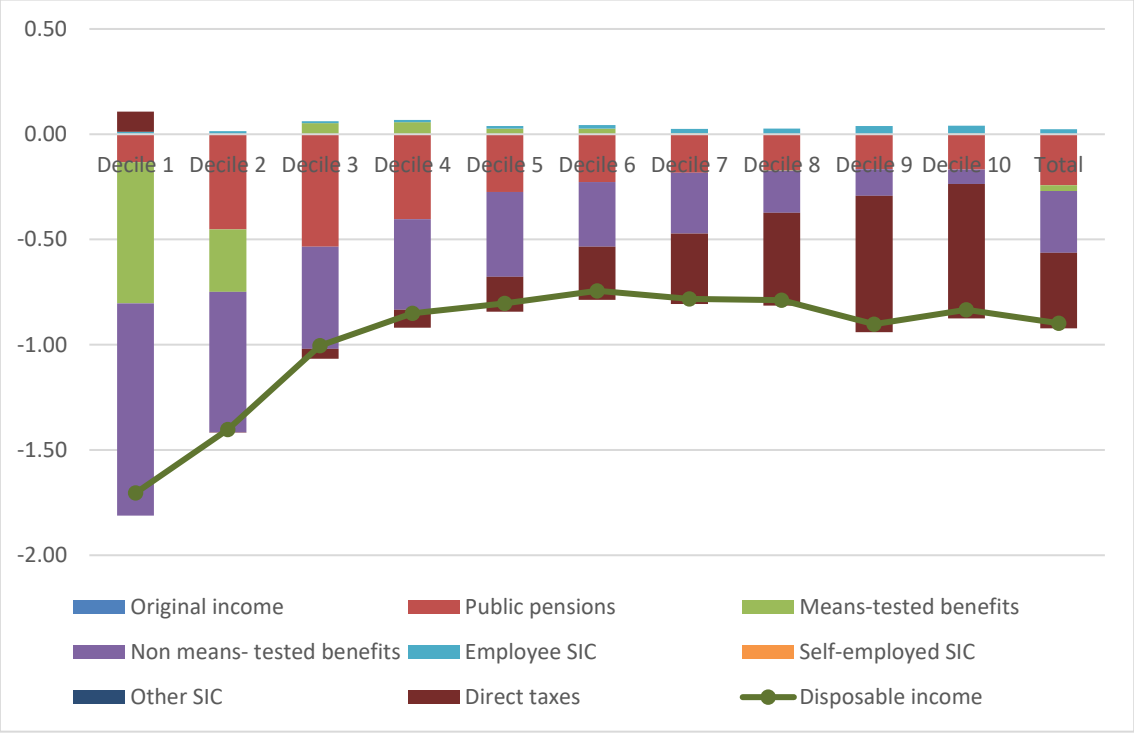
In comparison to 2022 policies, (deflated) 2021 policies decrease mean household income by 0.36% in total. Such a decrease was mostly regressive with lower income deciles seeing a stronger reduction than the higher ones. The main drivers of this impact were public pensions and non-means-tested benefits whose real value was eroded by the inflation and whose reduction affected the lower income deciles more severely.

Table A2.1: Policy effects in 2021-2022, using the CPI-indexation, 5.31%

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	-0.13	-0.67	-1.01	0.01	0.00	0.00	0.10
2	0.00	-0.45	-0.30	-0.67	0.01	0.00	0.00	0.00
3	0.00	-0.53	0.05	-0.48	0.01	0.00	0.00	-0.05
4	0.00	-0.40	0.06	-0.43	0.01	0.00	0.00	-0.09
5	0.00	-0.27	0.03	-0.40	0.01	0.00	0.00	-0.17
6	0.00	-0.23	0.03	-0.31	0.02	0.00	0.00	-0.25
7	0.00	-0.18	0.00	-0.29	0.02	0.00	0.00	-0.33
8	0.00	-0.17	0.00	-0.20	0.03	0.00	0.00	-0.44
9	0.00	-0.17	0.00	-0.13	0.04	0.00	0.00	-0.65
10	0.00	-0.17	0.00	-0.07	0.04	0.00	0.00	-0.64
Total	**0.00**	**-0.24**	**-0.03**	**-0.29**	**0.02**	**0.00**	**0.00**	**-0.36**

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2020, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2022 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure A2.1: Policy effects in 2021-2022, using the CPI-indexation, % [alpha = 1.0531]



ANNEX 3. VALIDATION TABLES

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Earnings (ils_earns)													
income : employment (yem)	N	5,808	5,808	5,808	5,808	5,754	5,792	N/A	N/A	1.01	1.00	N/A	N/A
income : self employment (yse)	N	916	916	916	916	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CODIV-19 compensation paid by the firm (yemmc_s)	Y	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other original income (ils_origy - ils_earns)													
Investment income (yiy)	N	5,464	5,464	5,464	5,464	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other income (yot)	N	684	684	684	684	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Property income (ypr)	N	116	116	116	116	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
private pension (ypp)	N	804	804	804	804	625	617	N/A	N/A	1.29	1.30	N/A	N/A
private transfers (ypt)	N	328	328	328	328	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
maintenance payment (xmp)	N	230	230	230	230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Continued...

	Source	Comments
Earnings (ils_earns)		
income : employment (yem)	-	-
income : self employment (yse)	-	-
CODIV-19 compensation paid by the firm (yemmc_s)	-	-
Other original income (ils_origy - ils_earns)		
Investment income (yiy)	-	-
Other income (yot)	-	-
Property income (ypr)	-	-
private pension (ypp)	-	-
private transfers (ypt)	-	-
maintenance payment (xmp)	-	-

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

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Earnings (ils_earns)													
income : employment (yem)	N	1,829,402	1,917,863	1,959,193	2,014,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
income : self employment (yse)	N	55,859	57,399	58,611	58,611	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CODIV-19 compensation paid by the firm (yemmc_s)	Y	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other original income (ils_origy - ils_earns)													
Investment income (yiy)	N	144,900	143,165	142,682	142,682	139,000	153,000	N/A	N/A	1.04	0.94	N/A	N/A
Other income (yot)	N	1,117	1,117	1,117	1,117	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Property income (ypr)	N	6,110	6,698	6,823	6,823	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
private pension (ypp)	N	31,727	31,885	32,575	33,559	25,887	25,855	N/A	N/A	1.23	1.23	N/A	N/A
private transfers (ypt)	N	6,735	6,735	6,735	6,735	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
maintenance payment (xmp)	N	3,798	3,798	3,798	3,798	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Taxes (ils_tax)																					
income tax (tin_s)	Y	7,034	7,054	7,060	7,008	0	0	0	0	0.00	0.00	0.00	0.00	8,111	8,126	N/A	N/A	0.87	0.87	N/A	N/A
Tax on Capital Income (tinkt_s)	Y	4,053	4,050	4,047	4,044	0	0	0	0	0.00	0.00	0.00	0.00	2,453	2,432	N/A	N/A	1.65	1.67	N/A	N/A
property tax (tpr)	N	2,799	2,799	2,799	2,799	2,799	2,799	2,799	2,799	1.00	1.00	1.00	1.00	N/A	3,201	N/A	N/A	N/A	0.87	N/A	N/A
Employee Social Insurance Contributions (ils_sicee)																					
employee SIC (tscee_s)	Y	5,487	5,496	5,501	5,504	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Social Insurance Contributions (ils_sicse)																					
Self-employed sickness SIC (tscsesi_s)	Y	146	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Retirement benefit programme SIC (tscsepi_s)	Y	161	162	162	160	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Life insurance SIC (tscseci_s)	Y	146	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Work injury insurance SIC (tscseac_s)	Y	146	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Labour market contribution SIC (tscseir_s)	Y	146	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Ordinary wage tax (tscseot_s)	Y	162	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Parental leave programme SIC (tscseml_s)	Y	146	146	146	144	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Social Insurance Contributions (ils_sicer)																					
Employer Sickness insurance SIC (tscersi_s)	Y	5,402	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Retirement benefit programme SIC (tscerpi_s)	Y	5,736	5,778	5,779	5,781	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Life insurance SIC (tscerci_s)	Y	5,402	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Work injury insurance SIC (tscerac_s)	Y	5,402	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Labour market contribution SIC (tscerir_s)	Y	5,402	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Special wage tax (tscerot_s)	Y	5,762	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Parental leave programme SIC (tscerml_s)	Y	5,402	5,408	5,408	5,409	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer SIC reduction (tscerrd_s)	Y	0	0	700	701	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Credited Contributions (ils_sicct)																					
Other Contributions (ils_sicot)																					

Continued...

	Source	Comments
Taxes (ils_tax)		
income tax (tin_s)	-	-
Tax on Capital Income (tinkt_s)	-	-
property tax (tpr)	-	-
Employee Social Insurance Contributions (ils_sicee)		
employee SIC (tscee_s)	-	-
Self-employed Social Insurance Contributions (ils_sicse)		
Self-employed sickness SIC (tscsesi_s)	-	-
Self-employed Retirement benefit programme SIC (tscsepi_s)	-	-
Self-employed Life insurance SIC (tscseci_s)	-	-
Self-employed Work injury insurance SIC (tscseac_s)	-	-
Self-employed Labour market contribution SIC (tscseir_s)	-	-
Self-employed Ordinary wage tax (tscseot_s)	-	-
Self-employed Parental leave programme SIC (tscseml_s)	-	-
Employer Social Insurance Contributions (ils_sicer)		
Employer Sickness insurance SIC (tscersi_s)	-	-
Employer Retirement benefit programme SIC (tscerpi_s)	-	-
Employer Life insurance SIC (tscerci_s)	-	-
Employer Work injury insurance SIC (tscerac_s)	-	-
Employer Labour market contribution SIC (tscerir_s)	-	-
Employer Special wage tax (tscerot_s)	-	-

Continued...

	Source	Comments
Employer Parental leave programme SIC (tscerml_s)	-	-
Employer SIC reduction (tscerrd_s)	-	-
Credited Contributions (ils_sicct)		
Other Contributions (ils_sicot)		

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Taxes (ils_tax)																					
income tax (tin_s)	Y	523,322	541,856	553,605	574,452	0	0	0	0	0.00	0.00	0.00	0.00	804,000	816,000	853,000	884,000	0.65	0.66	0.65	0.65
Tax on Capital Income (tinkt_s)	Y	42,031	41,687	41,544	41,490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	89,500	84,600	115,200	110,800	0.47	0.49	0.36	0.37
property tax (tpr)	N	28,913	28,913	28,913	28,913	28,913	28,913	28,913	28,913	1.00	1.00	1.00	1.00	34,400	34,200	35,300	35,900	0.84	0.85	0.82	0.81
Employee Social Insurance Contributions (ils_sicee)																					
employee SIC (tscee_s)	Y	121,756	127,218	129,954	134,072	0	0	0	0	0.00	0.00	0.00	0.00	133,560	137,190	N/A	N/A	0.91	0.93	N/A	N/A
Self-employed Social Insurance Contributions (ils_sicse)																					
Self-employed sickness SIC (tscsesi_s)	Y	1,351	926	1,418	1,403	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Retirement benefit programme SIC (tscsepi_s)	Y	4,185	4,326	4,417	4,368	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Life insurance SIC (tscseci_s)	Y	223	153	234	231	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Work injury insurance SIC (tscseac_s)	Y	74	51	78	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Labour market contribution SIC (tscseir_s)	Y	37	25	39	39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Ordinary wage tax (tscseot_s)	Y	4,440	2,955	4,526	4,480	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed Parental leave programme SIC (tscseml_s)	Y	965	661	1,013	1,002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Social Insurance Contributions (ils_sicer)																					
Employer Sickness insurance SIC (tscersi_s)	Y	64,488	56,386	69,024	70,967	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32,793	33,253	33,641	30,000	1.97	1.70	2.05	2.37
Employer Retirement benefit programme SIC (tscerpi_s)	Y	189,351	198,492	202,770	208,480	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	128,100	130,900	136,700	142,000	1.48	1.52	1.48	1.47
Employer Life insurance SIC (tscerci_s)	Y	10,899	9,557	11,666	11,994	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Work injury insurance SIC (tscerac_s)	Y	3,633	3,186	3,889	3,998	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Labour market contribution SIC (tscerir_s)	Y	47,957	42,051	51,330	52,776	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Special wage tax (tscerot_s)	Y	212,281	185,088	225,932	232,293	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employer Parental leave programme SIC (tscerml_s)	Y	47,230	41,414	50,553	51,976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32,733	32,098	31,835	N/A	1.44	1.29	1.59	N/A

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Employer SIC reduction (tscerrd_s)	Y	0	0	6,806	6,988	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	126,800	128,200	131,600	136,100	0.00	0.00	0.05	0.05
Credited Contributions (ils_sicct)																					
Other Contributions (ils_sicot)																					

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Pensions (ils_pen)																					
old age pension (poa)	N	2,399	2,399	2,399	2,399	2,399	2,399	2,399	2,399	1.00	1.00	1.00	1.00	2,250	2,262	2,300	N/A	1.07	1.06	1.04	N/A
disability pension (pdi)	N	309	309	309	309	309	309	309	309	1.00	1.00	1.00	1.00	259	245	232	221	1.19	1.26	1.33	1.40
survivors pension (psu)	N	38	38	38	38	38	38	38	38	1.00	1.00	1.00	1.00	236	224	212	N/A	0.16	0.17	0.18	N/A
Means-tested benefits (ils_benmt)																					
Housing allowance (bho_s)	Y	371	357	349	336	629	629	629	629	0.59	0.57	0.55	0.53	273	275	264	N/A	1.36	1.30	1.32	N/A
Housing allowance for pensioners (bhope_s)	Y	507	552	535	547	0	0	0	0	0.00	0.00	0.00	0.00	337	340	346	N/A	1.50	1.62	1.55	N/A
Social Assistance (means-tested) (bsamt_s)	Y	419	392	396	397	185	185	185	185	2.27	2.12	2.15	2.15	382	374	341	N/A	1.10	1.05	1.16	N/A
Non-means-tested benefits (ils_bennt)																					
unemployment benefit simulated (switched off in the baseline) (bunct_s)	Y	0	0	0	0	216	216	216	216	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
health benefit (bhl)	N	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1.00	1.00	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
education allowance (bed)	N	548	548	548	548	548	548	548	548	1.00	1.00	1.00	1.00	503	560	592	N/A	1.09	0.98	0.93	N/A
Parents' allowance at birth (bpl)	N	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1.00	1.00	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
child benefit (bch_s)	Y	2,203	2,203	2,203	2,203	1,715	1,715	1,715	1,715	1.28	1.28	1.28	1.28	1,558	1,610	1,659	N/A	1.41	1.37	1.33	N/A
unemployment benefit data (contributory). Before 2017 ds it actually also contains bunnc because it cannot be separated. (bunct)	N	216	216	216	216	216	216	216	216	1.00	1.00	1.00	1.00	238	340	313	N/A	0.91	0.64	0.69	N/A
Paternity benefit (PARBEN) (bpa_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parental leave benefit (PARBEN) (bfapl_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	891	857	824	N/A	0.00	0.00	0.00	N/A
Social Assistance (not means-tested). Before 2017 ds is 0 because it cannot be separated from bsamt. (bsanm)	N	75	75	75	75	75	75	75	75	1.00	1.00	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
unemployment benefit data (non-contributory). Before 2017 ds is 0 because it cannot be separated from bunct. (bunnc)	N	199	199	199	199	199	199	199	199	1.00	1.00	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
COVID-19 compensation paid by the State (bwkmcee_s)	Y	N/A	0	0	0	N/A	0	0	0	N/A	0.00	0.00	0.00	N/A	75	42	N/A	N/A	0.00	0.00	N/A

Continued...

	Source	Comments
Pensions (ils_pen)		
old age pension (poa)	-	-
disability pension (pdi)	-	-
survivors pension (psu)	-	-
Means-tested benefits (ils_benmt)		
Housing allowance (bho_s)	-	-
Housing allowance for pensioners (bhope_s)	-	-
Social Assistance (means-tested) (bsamt_s)	-	-
Non-means-tested benefits (ils_bennt)		
unemployment benefit simulated (switched off in the baseline) (bunct_s)	-	-
health benefit (bhl)	-	-
education allowance (bed)	-	-
Parents' allowance at birth (bpl)	-	-
child benefit (bch_s)	-	-
unemployment benefit data (contributory). Before 2017 ds it actually also contains bunnc because it cannot be separated. (bunct)	-	-
Paternity benefit (PARBEN) (bpa_s)	-	-
Parental leave benefit (PARBEN) (bfapl_s)	-	-
Social Assistance (not means-tested). Before 2017 ds is 0 because it cannot be separated from bsamt. (bsanm)	-	-
unemployment benefit data (non-contributory). Before 2017 ds is 0 because it cannot be separated from bunct. (bunnc)	-	-
COVID-19 compensation paid by the State (bwkmcee_s)	-	-

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

	Simulated	EUROMOD				SILC				Ratio				External				Ratio			
	(Y / N)	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Pensions (ils_pen)																					
old age pension (poa)	N	477,707	495,679	506,376	527,199	477,707	477,707	477,707	477,707	1.00	1.04	1.06	1.10	465,322	487,650	N/A	N/A	1.03	1.02	N/A	N/A
disability pension (pdi)	N	33,158	34,405	35,148	36,593	33,158	33,158	33,158	33,158	1.00	1.04	1.06	1.10	33,876	32,604	31,272	31,860	0.98	1.06	1.12	1.15
survivors pension (psu)	N	1,628	1,689	1,725	1,796	1,628	1,628	1,628	1,628	1.00	1.04	1.06	1.10	1,241	1,205	725	690	1.31	1.40	2.38	2.60
Means-tested benefits (ils_benmt)																					
Housing allowance (bho_s)	Y	9,043	9,707	9,598	9,386	17,155	17,155	17,155	17,155	0.53	0.57	0.56	0.55	4,606	5,284	5,019	N/A	1.96	1.84	1.91	N/A
Housing allowance for pensioners (bhope_s)	Y	16,151	19,019	18,569	19,974	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13,834	14,853	15,141	N/A	1.17	1.28	1.23	N/A
Social Assistance (means-tested) (bsamt_s)	Y	20,389	19,766	20,087	20,629	13,037	13,037	13,037	13,037	1.56	1.52	1.54	1.58	11,633	11,959	11,656	N/A	1.75	1.65	1.72	N/A
Non-means-tested benefits (ils_bennt)																					
unemployment benefit simulated (switched off in the baseline) (bunct_s)	Y	0	0	0	0	12,913	12,913	12,913	12,913	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
health benefit (bhl)	N	41,476	43,482	44,419	45,668	41,476	41,476	41,476	41,476	1.00	1.05	1.07	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
education allowance (bed)	N	35,207	35,813	36,040	36,570	35,207	35,207	35,207	35,207	1.00	1.02	1.02	1.04	32,841	37,507	40,481	N/A	1.07	0.95	0.89	N/A
Parents' allowance at birth (bpl)	N	33,259	34,867	35,619	36,621	33,259	33,259	33,259	33,259	1.00	1.05	1.07	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
child benefit (bch_s)	Y	36,605	36,605	36,605	36,605	36,535	36,535	36,535	36,535	1.00	1.00	1.00	1.00	33,175	33,326	33,390	N/A	1.10	1.10	1.10	N/A
unemployment benefit data (contributory). Before 2017 ds it actually also contains bunnc because it cannot be separated. (bunct)	N	12,913	13,537	13,829	14,218	12,913	12,913	12,913	12,913	1.00	1.05	1.07	1.10	14,318	24,595	21,369	N/A	0.90	0.55	0.65	N/A
Paternity benefit (PARBEN) (bpa_s)	Y	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parental leave benefit (PARBEN) (bfapl_s)	Y	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,795	35,469	35,180	N/A	0.00	0.00	0.00	N/A
Social Assistance (not means-tested). Before 2017 ds is 0 because it cannot be separated from bsamt. (bsanm)	N	5,208	5,242	5,382	5,668	5,208	5,208	5,208	5,208	1.00	1.01	1.03	1.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
unemployment benefit data (non-contributory). Before 2017 ds is 0 because it cannot be separated from bunct. (bunnc)	N	10,687	11,204	11,446	11,768	10,687	10,687	10,687	10,687	1.00	1.05	1.07	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
COVID-19 compensation paid by the State (bwkmcee_s)	Y	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31,622	9,508	N/A	N/A	0.00	0.00	N/A

Table A3.7. Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Decile 1	3.83	3.78	3.75	3.74	3.20	3.30	N/A	N/A	1.20	1.15	N/A	N/A
Decile 2	5.58	5.58	5.55	5.57	5.40	5.40	N/A	N/A	1.03	1.03	N/A	N/A
Decile 3	6.64	6.63	6.61	6.62	6.50	6.60	N/A	N/A	1.02	1.00	N/A	N/A
Decile 4	7.69	7.66	7.69	7.71	7.70	7.60	N/A	N/A	1.00	1.01	N/A	N/A
Decile 5	8.75	8.74	8.73	8.77	8.70	8.70	N/A	N/A	1.01	1.00	N/A	N/A
Decile 6	9.79	9.80	9.79	9.80	9.80	9.80	N/A	N/A	1.00	1.00	N/A	N/A
Decile 7	10.90	10.87	10.91	10.93	11.00	10.90	N/A	N/A	0.99	1.00	N/A	N/A
Decile 8	12.21	12.22	12.24	12.22	12.30	12.30	N/A	N/A	0.99	0.99	N/A	N/A
Decile 9	14.04	14.08	14.10	14.11	14.30	14.20	N/A	N/A	0.98	0.99	N/A	N/A
Decile 10	20.57	20.64	20.62	20.52	21.10	21.10	N/A	N/A	0.97	0.98	N/A	N/A
Median	262,084	274,173	279,275	287,074	261,555	267,344	N/A	N/A	1.00	1.03	N/A	N/A
Mean	276,678	289,358	294,590	302,628	282,161	289,944	N/A	N/A	0.98	1.00	N/A	N/A
Gini	25.44	25.58	25.65	25.53	26.90	26.80	N/A	N/A	0.95	0.95	N/A	N/A
S80/20	3.68	3.71	3.73	3.72	4.12	4.04	N/A	N/A	0.89	0.92	N/A	N/A

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

	EUROMOD				External				Ratio			
	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
40% median HDI by gender												
Total	3.04	3.28	3.39	3.44	5.10	4.50	N/A	N/A	0.60	0.73	N/A	N/A
Males	3.35	3.44	3.59	3.67	5.40	4.90	N/A	N/A	0.62	0.70	N/A	N/A
Females	2.74	3.11	3.20	3.22	4.80	4.10	N/A	N/A	0.57	0.76	N/A	N/A
50% median HDI by gender												
Total	7.98	8.22	8.60	8.71	9.20	9.00	N/A	N/A	0.87	0.91	N/A	N/A
Males	8.20	8.49	8.95	9.03	9.10	9.40	N/A	N/A	0.90	0.90	N/A	N/A
Females	7.75	7.94	8.25	8.39	9.20	8.70	N/A	N/A	0.84	0.91	N/A	N/A
60% median HDI by gender												
Total	14.67	14.64	14.72	14.81	16.10	15.70	N/A	N/A	0.91	0.93	N/A	N/A
Males	13.95	14.01	14.09	14.16	15.00	15.00	N/A	N/A	0.93	0.93	N/A	N/A
Females	15.40	15.28	15.36	15.46	17.20	16.30	N/A	N/A	0.90	0.94	N/A	N/A
70% median HDI by gender												
Total	23.83	23.93	24.20	24.10	24.60	23.90	N/A	N/A	0.97	1.00	N/A	N/A
Males	21.87	22.00	22.28	22.25	22.60	22.10	N/A	N/A	0.97	1.00	N/A	N/A
Females	25.82	25.90	26.14	25.98	26.60	25.80	N/A	N/A	0.97	1.00	N/A	N/A
60% median HDI by age group												
0-15 years	17.44	17.85	17.85	18.15	18.10	17.40	N/A	N/A	0.96	1.03	N/A	N/A
16-24 years	27.07	27.47	27.57	27.70	26.70	26.70	N/A	N/A	1.01	1.03	N/A	N/A
25-49 years	14.00	14.41	14.41	14.72	14.90	14.80	N/A	N/A	0.94	0.97	N/A	N/A
50-64 years	9.32	9.40	9.40	9.53	10.70	12.00	N/A	N/A	0.87	0.78	N/A	N/A
65+ years	11.83	10.38	10.70	10.17	15.30	12.90	N/A	N/A	0.77	0.80	N/A	N/A