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

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

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

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

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

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

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

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

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

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1. BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The tax and benefit system in Poland is a unified national system. Local governments have some discretion over agricultural tax, real estate tax, tax on means of transport and some other charges like duty on possession of dogs which is levied on the dog owners.
- The fiscal year runs from 1st of January to 31st of December. The family benefits allowance period runs from 1st November to 31st October of the following calendar year for which the right to family benefits is granted.
- The state pension age in years 2005-2012 was 65 years for men, and 60 years for women. Beginning from January 2013 the state pension age started to grow gradually to reach 67 for men (born after 30.09.1953) and women (born after 30.09.1973). In 2017 the old retirement age was restored with the reform taking effect on 01.10.2017. Thus, the statutory retirement age is still 60/65 for women/men.
- Education in Poland is compulsory until the age of 18.
- Dependent child definitions are given in: The Natural Persons' Income Tax Act (*Ustawa o podatku dochodowym od osób fizycznych*), Family Benefits Act (*Ustawa o świadczeniach rodzinnych*) and State Support in Child-rearing Act (*Ustawa o pomocy państwa w wychowywaniu dzieci*).
- According to The Natural Persons' Income Tax Act dependent children are children:
 - a. aged less than 18;
 - b. who claim nursing benefit or nursing supplement or social pension - irrespective of age;
 - c. aged less than 25 and in education if their taxable income during given tax year was below 12 times the amount of social pension (16061.28 PLN in 2022, 19061.28 PLN in 2023, 21371.52 PLN in 2024)
- Family Benefits Act defines a child as someone who is neither a parent nor married:
 - a. aged less than 25 and income dependent on parents;
 - b. aged 25 or more and possessing a medical certificate confirming severe disability if relative of such child claims nursing allowance or special nursing allowance due to taking care of such child.
- Lone parents are unmarried, widowed or divorced parents, raising their dependent children without help of any cohabitant partner.
- Large families are defined as families with three or more children eligible for family benefit.
- Spouses may tax their income jointly. They may pool their incomes and divide by two to determine the appropriate tax brackets. After the tax is calculated it is then multiplied by two. Lone parents can take advantage of joint taxation too. They are allowed to tax their income jointly with one of their children on similar rules as spouses do.
- Capital income is taxed at a flat rate of 19%. Farmers pay agricultural tax that is based on farm size and quality of the land area. Self-employment income may be taxed in one

of three different ways, with more than 54%¹ of the self-employed paying income tax according to the general progressive system.

- All individuals who earn an income need to file a tax return unless the only source of income is from a pension or if the individual is a farmer without non-farm work income.
- In the Polish PIT system, tax bands and tax credits are not subject to indexation regime taking account of inflation. However, the values of: old-age pensions, disability pensions, survivor pensions, nursing supplement, as well as pre-retirement benefit, pre-retirement allowance, social pension, housing benefit and unemployed benefit, are subject to indexation meant to take into account the effect of inflation. Indexation of those benefits is conducted once per year in March.
- The values of family benefits and social assistance, as well as income thresholds used in means tests for the purpose of those benefits are verified once every three years. The verification process may result in indexation of benefits values and thresholds, however this is not compulsory and sometimes (i.e. 2009) the values might be kept unchanged. The indexation must account for change in the value of social minimum threshold which is set by the Institute of Labour and Social Studies. Indexation of social assistance is conducted in October while family benefits are indexed in November. The last audit of family allowance with supplements took place in 2021 and it resulted in the proposal of freezing family allowance values (apart from the care allowance, which has been increased) in consecutive years from November 2021 to October 2024. The last audit of allowances from social assistance which took place in 2021 increased thresholds and most benefits values and assumes those values to be fixed until the next verification in 2024.
- The means-tested benefit system determines entitlement using two values. For family benefits, the previous year's taxable income of the benefit unit is considered while for housing benefit, the value of the previous 3 months income of the benefit unit is considered. Eligibility for social assistance is determined based on both income and wealth evaluation (the latter is carried out by representatives from the local social assistance office).
- Consumption taxes consist of (1) VAT with three rates (standard 23% and reduced 8% and 5%), (2) excises on tobacco, alcohol, and energy, and (3) gambling tax (2,5% - 50%).

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

1.2 Social benefits

1.2.1 Contributory benefits

Old-age pension (*świadczenie emerytalne*): contributory benefit to workers who have attained the statutory retirement age conditional on contributory and non-contributory period. Pension amount varies with amount and years of contribution and is guaranteed not to be below a specified minimum level. Since January 2013 the statutory retirement age was gradually raised from the initial level of 65 (60) years for men (women) and was intended to reach 67 years for men in 2020 and women in 2040. In June 2017 the statutory retirement age value was 66 years and 3 months (61 years and 3 months) for men (women). Eligibility to old-age pension is conditioned on length of contributory and non-contributory period. Until 2013, contributory and non-contributory period amounted to 25 years for men and 20 years for women. After reform implemented in 2013 contributory period for women was aimed to reach 25 years in year 2022. In June 2017 minimum

¹ Source: Own calculations using: Central Statistical Office (2016a), Ministerstwo Finansów (2016c)

required contributory and non-contributory period for women was 22 years. Beginning from October 2017 the state pension age moved back to 65 (60) for men (women).

Earlier old-age pension (*świadczenie emerytalne*): men (women) born before 1st of January 1949 who have remained in employment relationship may acquire the full old-age pension at the age of 60 (55) years if they can prove at least 35 (30) year long contributory and non-contributory period or 25 (20) year contributory and non-contributory period and have been recognised as completely incapable of work. The same qualification rules for earlier old-age pension apply to women who were born after 31st of December 1948 and before 1st of January 1953.

Bridging old-age pension (*emerytura pomostowa*): the bridging pensions system that came into force from 2009 assumes that people working in special conditions have the right to receive a bridging pension up to five years before reaching retirement age.

Ex-officio old-age pension (*emerytura z urzędu*): was introduced on 01.01.2006. The ex-officio pension is granted to a person born before 01.01.1949 who is a recipient of the disability pension, irrespective of whether this person meets the condition of the contributory and non-contributory period.

Nursing supplement (*dodatek pielęgnacyjny*): is paid to old-age pensioners who are aged 75 and above and to pensioners with severe disability.

Pre-retirement benefits and allowances (*zasilek przedemerytalny lub świadczenie przedemerytalne*): are financed by the Labour Fund and payable to individuals after at least 6 months of receiving unemployment benefit who have the status of unemployed and satisfy specific requirements concerning age and employment history.

Disability pension (*renta z tytułu niezdolności do pracy*): contributory benefit granted following a work accident or an occupational disease irrespective of duration of accident insurance period and date of incapacitation.

Survivor's pension (*renta rodzinna*): contributory benefit paid to eligible survivor(s) of a deceased person if the deceased met the contributory conditions.

Thirteenth and fourteenth pensions (*trzynasta i czternasta emerytura*): additional minimum pension to be paid out once per year. The thirteenth pension is granted to anyone receiving a pension, while the fourteenth pension has an additional means-test.

Maternity benefit (*zasilek macierzyński*): is granted to an insured woman who within the period of sickness insurance or within the period of child care leave: gave birth to a child, took in a child under 1 year of age and applied for legal adoption or took in a child under 1 year of age to be raised in a foster family. The right to the maternity benefit is also awarded to an insured man who took a child to be brought up, under the similar rules, as those applied to insured women.

Sickness allowances (*zasilek chorobowy*): payments for periods of incapacity for work caused by an illness, accident or isolation due to an infectious disease. Sickness allowances are payable to employees starting from the 34th day of incapacity for work (continuous or otherwise) in a calendar year or from the 15th day (respectively) if the employee has reached age of 50 years. If the incapacity for work was caused by accident at work or occupational disease, sickness allowance is payable from the first day of incapacity for work. Sickness allowance is payable for the period in which a person is unable to work, however this period cannot exceed 182 days; and in case of incapacity for work caused by tuberculosis cannot exceed 270 days. From the 1st of January 2009 insured women have the right to the allowance (for a period not exceeding 270 days) if incapacity for work occurred during the period of pregnancy.

Health rehabilitation benefits (*świadczenie rehabilitacyjne*): granted to an insured person who has exhausted their entitlement to sickness allowance, but there is a good prognosis as to the restoration of their earning capacity. Rehabilitation benefits are disbursed in the form of monthly payments for a period not exceeding 12 months. A decision to grant health rehabilitation benefit is made by a doctor that is licensed to issue declarations of work capacity.

Compensatory allowances (*zasilek wyrównawczy*): granted to employees whose remuneration has been reduced as a result of occupational rehabilitation undertaken in order to adapt or retrain for a specific job. Only insured employees are entitled to the compensatory allowance. Compensatory allowance is financed by the Social Insurance Institution (ZUS) and can be paid directly by ZUS or through the employer.

Care allowances (*zasilek opiekuńczy*): payable to persons who are unable to work, because they have to take care of a sick child of up to 14 years of age or, in some cases, of a healthy child of up to 8 years of age, or another sick member of the family. These allowances are only available to persons who are subject to mandatory sickness insurance. In case of child care older than 14 years or in the event of taking care of other sick members of the family, the allowance is payable during a period of release from work, however it cannot be longer than 14 days per year. The total payment period of care allowance in respect of care of children and other family members may not exceed 60 days per year.

Funeral grant (*zasilek pogrzebowy*): is aimed at covering costs of funeral of insured persons, pensioners, retirees or recipients of pre-retirement allowances or benefits and members of their families.

Unemployment benefits (*zasilek dla bezrobotnych*): is granted to unemployed persons who have lost a job and met certain conditions over at least 365 days in the period of 18 months before the day of registration in the labour office. The conditions include contributory work requirements and active job search.

1.2.2 Family benefits

Family allowance (*zasilek rodzinny*): means-tested grant to families that have dependent children. The Family allowance is paid until the child finishes education (usually to the age of 18). If the child continues education at school or university the allowance is paid until the age of 24. Family benefits are not taxable. In addition to the family allowance, the following supplements may also be granted:

a) Supplement for child birth (*dodatek z tytułu urodzenia dziecka*): a one-time lump sum grant paid upon the birth of a child.

b) Parental leave supplement (*dodatek z tytułu opieki nad dzieckiem w okresie korzystania z urlopu wychowawczego*): a supplement granted to a parent, factual or statutory guardian of a child, who takes parental leave to take care of at least one child aged 6 years or less. Supplement is payable within period of 24, 36 or 72 months at a monthly rate.

c) Supplement for lone parents who do not receive alimony payments (*dodatek z tytułu samotnego wychowywania dziecka i na które nie ma możliwości zasądzenia alimentów*): supplement paid to a lone parent who does not get alimony payments. The supplement has been paid since 01.09.2005

d) Supplement for education and rehabilitation of a disabled child supplement (*dodatek z tytułu kształcenia i rehabilitacji dziecka niepełnosprawnego*): is granted to the parent or guardian of a disabled child until the child attains the age of 16 years or 24 years if the disability is severe or moderate.

e) Supplement for bringing up a child in a multi-child family (*dodatek z tytułu wychowywania dziecka w rodzinie wielodzietnej*): the supplement is payable for the third and each subsequent child entitled to the family allowance.

f) Supplement for starting the school year (*dodatek z tytułu rozpoczęcia roku szkolnego*): the supplement is payable for each child in primary and secondary school;

g) Supplement for starting school outside the place of residence (*dodatek z tytułu podjęcia nauki w szkole poza miejscem zamieszkania*): the supplement is payable at monthly rate for 10 months (from September to June) if the child takes up education in a school outside of the place of residence.

Since January 2016 the amount of family allowance with its supplements is gradually withdrawn as income of a family increases above the income threshold.

Further components of family benefits include:

Nursing benefit (*zasilek pielęgnacyjny*): a benefit granted to a handicapped child, a handicapped person over 16 years of age who possess a medical certificate confirming severe disability, or to a person who is over 75 years old and is not eligible for the nursing supplement. The benefit may also be granted to a person older than 16 years of age with a medical certificate of moderate degree of disability if the disability occurred before the person reached the age of 21. The benefit is not granted to a person who is staying at an institution providing full time care if the services provided by the institution are financed by the state or the National Health Fund.

Nursing allowance (*świadczenie pielęgnacyjne*): a benefit granted to a parent, a factual or statutory guardian, who resigns from employment or other paid job in order to take care of a child possessing a certificate confirming his/her disability. It used to be a means tested benefit but since 1.01.2010 it has become a universal benefit. Since 2013 the eligibility criteria for nursing allowance are limited to parents of those children whose disability occurred before becoming 18 (or 25 in case of children that continued their education after 18th year of life).

Special nursing allowance (*specjalny zasilek opiekuńczy*): this benefit is addressed to those individuals who resign from employment or other paid job in order to take care of a dependant relative with valid certificate that confirms his/her disability. To become eligible one has to meet the income criterion which is calculated for the sum of income in both of families: the family of person that is taking care of disabled relative and of a family that person requiring care is staying with.

Child birth allowance (*jednorazowa zapomoga z tytułu urodzenia się dziecka*): one-off means tested benefit for parents of newly born children.

Parental allowance (*świadczenie rodzicielskie*): this benefit supports those parents of new born children that are not eligible for maternity leave allowance: students, employees on civil contracts (who have not paid sufficient social insurance contributions), individuals insured in Agricultural Social Insurance Fund (KRUS) or unemployed. The benefit amount is 1000 PLN per month, paid for the period of 52 weeks if the mother gave birth to one child and up to 71 weeks if mother gave birth to quintuplets.

1.2.3 Alimony support

Alimony advance (*zaliczka alimentacyjna*): a payment made to lone parents for whom the court adjudicated the alimony, the execution of which was ineffective. The alimony advance was exempted from personal income tax and was not subject to an administrative and civil law

execution. Alimony advance was paid from September 2005 to September 2008. In October 2008 it was replaced by grants from the alimony fund.

Grant from alimony fund (*świadczenie z funduszu alimentacyjnego*): is paid in situations in which the court was unable to obtain alimony from the absent parent. The alimony fund was closed down on 1st May 2004 and brought back in October 2008.

1.2.4 Housing support

Housing benefit (*dodatek mieszkaniowy*): alongside social assistance and family allowance it is the main element of the system of public support for the poor in Poland. It is a means tested non-contributory benefit granted to families based on the size of their home and number of people in the household. The local government has some discretion over classification of housing costs for the purpose of determining the eligibility levels.

1.2.5 Social assistance

Social pension (*renta socjalna*): provides compensation to individuals who are completely incapable to work due to an impairment of bodily functions which occurred before attaining the age of 18, or before attaining the age of 25, if the person concerned was still in education, e.g. university or other graduate and post-graduate studies.

Social assistance (*pomoc społeczna*): this is the main social assistance scheme in Poland. It is a non-contributory benefit for households that have insufficient resources while also meeting some specific social criteria. It is intended to benefit orphans, the disabled, unemployed, homeless, the chronically sick, pregnant women and those generally in poverty. Rules and general guidelines are set at the national level but benefit amounts are partly subject to the discretion of the local social assistance office and resources. The benefit is non-taxable and constitutes a ‘safety net’. There are three main elements of the social assistance system: permanent compensation benefit, temporary social benefit and special purpose benefit in case of special circumstances. The social assistance benefits can also be divided into two groups: mandatory (obligatory) and non-mandatory (facultative) benefits.

- a) **Permanent compensation benefit** (*zasilek stały*): is an obligatory allowance granted to a person who is unable to work due to disability or age, and who does not qualify for social insurance payments or invalidity pension.
- b) **Temporary social assistance benefit** (*zasilek okresowy*): a grant made to a household that is experiencing financial problems caused by unemployment, prolonged illness(es), or disability and that have incomes lower than the social assistance threshold. The maximum amount of temporary social allowance is determined as the difference between the income criterion and income before receipt of TSA.
- c) **Special circumstances benefit** (*zasilek celowy*): is a facultative allowance paid in case of unforeseen events like natural disasters.

1.2.6 Other benefits

Childcare allowance (*świadczenie wychowawcze*): a benefit which is intended to give financial support to child rearing for families with children aged less than 18 years old. Implemented in April 2016, the allowance was a universal payment of 500 PLN per month for every second child and any subsequent children. The allowance for the first child in the family (within the age range)

was means-tested on total per capita family income (which excluded family benefits, housing support and social assistance benefits). In July 2019 the benefit was expanded to the first child in the family and means testing was abolished. The amount of the benefit increased to 800 PLN in January 2024.

Family care allowance (*rodzinny kapitał opiekuńczy*): universal benefit of 500 PLN per month for 2 years or 1000 PLN per month for 1 year paid for each second and subsequent child between the ages of 12-35 months, with the aim of helping parents return to work. The benefit is exempt from taxation.

Start of school year allowance (Good Start) (*świadczenie Dobry Start*): universal benefit paid once a year for children up to the age of 20, starting the school year. Disabled children at school will receive it until they are 24 years of age. The amount of the benefit is 300 PLN. The benefit is exempt from taxation.

Sickness benefit (*zasilek chorobowy*) is payable to employees by the employer for the first 33 days of their sickness period.

1.3 Social contributions

There are separate social security systems for non-farmers and farmers. Social security contributions in the non-farm system are used to finance current *contributory benefits* as well as other *non-contributory benefits*. The contributions are divided into the employee and the employer parts and are used to finance: old-age pension insurance, disability and survivors' pension insurance, sickness and maternity insurance, work and occupational illness insurance and unemployment benefits. Most of these contributions fall within the auspices of Social Insurance Fund (Fundusz Ubezpieczeń Społecznych - FUS) that is part of Social Insurance Institution (Zakład Ubezpieczeń Społecznych - ZUS).

Farmers contribute to retirement and disability pension insurance and to accident, illness, maternity insurance and health insurance. Contributions are paid to Farmers Social Insurance Institution (Kasa Rolnicznego Ubezpieczenia Społecznego – KRUS).

Old-age pension insurance (*składka emerytalna*): this contribution is divided equally into the employers' and employees' parts. The self-employed also contribute, while in the case of an unemployed person who receives unemployment benefits, contributions are retained from the benefits. Contributed amounts are determined on the basis of gross income from work for employees with permanent job contracts. For employees with temporary job contracts, the obligation to make this contribution may depend on other factors.

Disability insurance (*składka rentowa*): up until June 2007 this contribution was made in equal parts by both employers and employees. In July 2007 and January 2008 these contributions were reformed and the employee and employer rates currently differ. Contributions are also withheld from unemployment benefits. Disability insurance guarantees benefits in case of loss of income due to disability.

Sickness insurance (*składka chorobowa*): contribution made by employees to finance contributory sickness benefits. The self-employed may contribute voluntarily. Obligatory sickness insurance gives right to receive insurance and sickness allowance after 30 days of continuous sickness insurance.

Work accident insurance (*składka wypadkowa*): contribution made by employers on the basis of the degree of accident risk faced by employees.

Labour Fund (*Fundusz Pracy*): contributions made by employers to finance unemployment benefits, pre-retirement allowances and vocational activation programmes for people looking for work and/or people threatened by job loss.

Health insurance (*powszechnie ubezpieczenie zdrowotne*): contributions made to finance benefits that cover preventive, diagnostic, therapeutical and rehabilitation costs. Practically all social groups are covered by obligatory health insurance. Health insurance gives the right to medical care which ensures health protection, disease and contusions prevention, early detection of illnesses as well as disability prevention.

Farmer's old-age and disability insurance (*składka emerytalno-rentowa rolników*): contribution made by farmers in each quarter of the year, at a rate of 10% - 58% of the basic monthly old age pension depending on the size of the farm.

Farmer's accident, sickness and maternity insurance (*składka na ubezpieczenie wypadkowe, chorobowe i macierzyńskie*): contribution made by farmers at a quarterly rate fixed by the *Farmers' Social Insurance Council* towards expenditures associated with accident, sickness and maternity benefits and prevention and rehabilitation costs.

Farmer's health insurance (*składka na ubezpieczenie zdrowotne rolników*): remains one of changes introduced in Polish social security system in January 2012, since then farmers are obliged to pay health insurance contributions that are deducted quarterly and calculated on monthly amount basis.

1.4 Taxes

1.4.1 Personal income tax (podatek dochodowy od osób fizycznych)

Personal income tax is imposed on individual incomes at progressive rates of 12% and 32% from January 2022 (October 2019-December 2021 17% and 32%, January 2009 - September 2019 18% and 32%, and prior to this a 3-rate level was in operation: 19%, 30% and 40%). Since October 2019 employment income up to the threshold of 85528 PLN for anyone under the age of 26 is income tax exempt. A couple or a single parent may file taxes jointly, provided that for the whole tax year they did not earn income subjected to flat-rate taxation (an option available to the self-employed). A single parent or a couple making a joint tax declaration are allowed to set half of their taxable income against the tax schedule and then multiply the resulting tax due by two. Personal income tax however, does not apply to agricultural and self-employment incomes. Besides that, income from some other sources such as investments, incomes from property rent, interests, dividends or capital gains is taxed separately on a lump-sum basis.

Solidarity tax (*danina solidarnościowa*): is an additional tax rate of 4% for incomes exceeding 1 million PLN. It was introduced in 2019.

Tax card (*karta podatkowa*): lump-sum tax from small-scale entrepreneurial activities in craft and retail trade. The tax office (*Urząd Skarbowy*) decides which enterprise/activity qualifies to pay taxes under this rule.

Lump sum tax from registered revenues (*zryczałtowany podatek dochodowy od przychodów*): is applied to selected registered revenues and may be paid by taxpayers who in the previous year raised revenue from an economic activity at the amount not exceeding 2 million euro (9,030,600 PLN in 2021, 9,188,200 PLN in 2022, 9,654,400 PLN in 2023, 9,218,200 PLN in 2024). The lump-sum tax rates differ depending on the kind of revenues received. Regardless of the revenue, the lump sum tax on registered revenue is levied on taxpayers who start carrying out a given activity in the tax year and are not taxed in the form of tax card.

1.4.2 Agricultural tax (*podatek rolny*)

It is levied on ownership, co-ownership, possession and co-possession of agricultural arable lands or woods. Lands on which the agricultural tax is imposed are classified in the Register of Lands and Buildings. The tax base differs depending on whether land belongs to a farm or not. In case of farm land it is the number of *conversion hectares* (calculated on the basis of actual area, kind and quality of land and location in one of four tax zones, set depending on economic and climatic conditions of agricultural production). For other land it is the number of hectares.

1.4.3 Real estate tax (*podatek od nieruchomości*)

It is imposed on ownership, co-ownership, possession and co-possession of land, buildings, building structures and construction devices. Agricultural and forest lands do not fall within the scope of taxation. The tax base differs depending on the kind of real estate. Rates of real estate tax are set by the appropriate community council but rates cannot exceed statutory limits.

1.4.4 Forestry tax (*podatek leśny*)

It is levied on forest land classified by the Register of Land and Building as forests, except for forests up to 40 years old, forests enlisted as relics or forests used for carrying out economic activities other than those connected with forestry. The tax base is the area of woodland given in hectares.

1.4.5 Consumption taxes

Tax on goods and services (*podatek od towarów i usług VAT*): imposed on the supply of goods and services at each state of production and distribution process. Until December 2010 the basic rate was 22% and in 2011 it was raised to 23%, which is applied to most goods and services. Reduced rates apply to some categories of goods with the lower rate applying particularly to unprocessed or semi-processed products of agriculture, forestry, hunting and fishery. The 0% VAT rate was temporarily (02.2022 – 03.2024) used for food products with foregoing 5% VAT rate in regard to anti-inflation shield (*tarcza antyinflacyjna*).

Excise duties (*podatek akcyzowy*): are levied on several products such as tobacco, e-cigarettes' liquids, ethyl alcohol, alcoholic beverages, mineral oils, fuels (ad quantum) and cars (ad valorem). The amount due depends on the type of motor and the cylinder capacity

Gambling tax (*podatek od gier losowych*): is levied on revenues from activities related to the establishment and performance of gambling and mutual bets. Taxable base and rates differ depending on the kind of conducted gambling activities. Rates range from a low of 2.5% for revenues from mutual bets on competition of animals to 50% for casino gambles and machine/video lotteries.

2.SIMULATION OF TAXES AND BENEFITS IN EUROMOD

2.1 Scope of simulation

In Table 2.1 benefits included in EUROMOD are divided into imputed ones, partially simulated, simulated and excluded ones. The lack of detailed information on contribution history is the main reason why values of some benefits are imputed from the dataset. In Table 2.1 taxes and social contributions are presented.

Table 2.1 Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in EUROMOD				Why not fully simulated?
		2021	2022	2023	2024	
Old-age pension	poa00	I	I	I	I	No data on contribution history
Disability pension	pdi00	I	I	I	I	No data on contribution history
Survivor's pension:	psu00	I	I	I	I	No data on contribution history
Pension for mothers of 4 or more kids	poa04_s	S	S	S	S	Partially imputed, no data on number of children
Thirteenth pension	boa13_s	S	S	S	S	
Fourteenth pension	boa14_s	S	S	S	S	
Unemployment benefits	bun_s	PS	PS	PS	PS	Eligibility and amount depend on contribution history. Simulation takes eligibility from data
Pre-retirement benefit and pre-retirement allowance	pyr	I	I	I	I	No data on contribution history
Maternity benefit	bma	I	I	I	I	No data on contribution history
Sickness benefit	bhl	I	I	I	I	No data on contribution history
Care benefit		E	E	E	E	No data on contribution history
Compensatory allowances		E	E	E	E	No data on contribution history
Funeral benefit	psuot	I	I	I	I	No data on contribution history
Rehabilitation benefits	psuot	I	I	I	I	No data on contribution history
Social pension	pdinw	I	I	I	I	No data on disability history
Nursing supplement	poacm_s	S	S	S	S	
Nursing benefit	pdiuc_s	S	S	S	S	
Family allowance	bch00_s	S	S	S	S	
Supplement due to taking care of a child during childcare leave (childcare leave allowance)	bcc	I	I	I	I	No data on work history
Supplement for lone parents	bchlp_s	PS	PS	PS	PS	Eligibility from data
Supplement for child birth	bchba_s	S	S	S	S	
Supplement for large families	bchlg_s	S	S	S	S	

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Supplement for starting the school year	bched_s	S	S	S	S	
Supplement for education outside place of living	bchot	I	I	I	I	No data on place of living
Supplement for education or rehabilitation of disabled child	bchdied_s	S	S	S	S	
Child birth allowance	bchuc_s	-	-	-	-	
Supplement for education or rehabilitation of disabled child	bchbamtna_s	S	S	S	S	
Nursing allowance	bcrdi_s	PS	PS	PS	PS	Eligibility based on declaration of positive number of months of benefit take-up in the database
Special nursing allowance	bdinc_s	PS	PS	PS	PS	No data on persons taking care of family member from outside the household
Parental allowance	bchba01_s	S	S	S	S	
Housing benefits	bho_s	S/PS	S/PS	S/PS	S/PS	Eligibility from data or full simulation
Permanent social assistance	bsapm_s	S	S	S	S	
Temporary social assistance	bsatm_s	S	S	S	S	Eligibility is based on the wealth test
Childcare allowance	bchcc	S	S	S	S	
Family care allowance	bchfm	-	-	S	S	
Start of school year allowance	bed00	S	S	S	S	
Special circumstances social assistance	bsaot	I	I	I	I	

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 [2021-2024]

	Variable name(s)	Treatment in EUROMOD				Why not fully simulated?
		2021	2022	2023	2024	
Personal income tax	tin_s	S	S	S	S	
Corporate income tax		E	E	E	E	No information available
Agricultural income tax	tag_s	S	S	S	S	
Forestry tax		E	E	E	E	No information available

Tax card and lump-sum revenue		E	E	E	E	No information available
Gaming tax		E	E	E	E	No information available
Tax on goods and services – VAT		S	S	S	S	Calculations based on extended input files with consumption expenditures from HBS
Excise duty		S	S	S	S	Calculations based on extended input files with consumption expenditures from HBS
Old-age insurance		PS	PS	PS	PS	Amounts contributed by the central government from benefits are not taken into account (except unemployment benefit)
Disability insurance		PS	PS	PS	PS	Amounts contributed by the central government from benefits are not taken into account (except unemployment benefit)
Sickness insurance	tsceesi_s	S	S	S	S	
Work accident insurance	tscerac_s	S	S	S	S	
Fund of Guaranteed Employee Benefits	tscerei_s	S	S	S	S	
Labour Fund	tscerui_s	S	S	S	S	
Health insurance	thl_s	PS	PS	PS	PS	Amounts contributed by the central government from benefits are not taken into account (except unemployment benefit)

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

2.2 Main policy changes

Table 2.3 Main policy changes [2021 – 2024]

Policies	2020 → 2021	2021 → 2022	2022 → 2023	2023 → 2024
Personal income tax		Decrease in PIT rate from 17% to 12%.	Abolition of the income threshold for child tax credit in the case of parents with a disabled child.	
Health insurance		Amount for the self-employed depends on the income (instead of a lump sum). No deduction from PIT.		
Pensions		Introduction of the fourteenth pension.		

Housing benefit	New base of income threshold (percentages of average income instead of minimum pension).
Consumption taxes	Temporary decrease in VAT from 5% to 0% for basic food products.
Family benefits	Introduction of Family Care Capital.
Other benefits	Introduction of support allowance (partial replacement of nursery allowance – not simulated).

During the period from 2021 to 2024 the following structural changes of simulated policies occurred:

- ***Housing benefit***

From July 2021 new rules of housing benefit means-testing. 30% (40% for one-person household) of average income is the means-tested threshold (the other two compulsory requirements are still the area of the house and the type of property). The amount of housing benefit is a sum of specific costs (adjusted to the house area limit) decreased by the adequate percentage (depends on the number of household members) of a sum of specific incomes. There is no longer an increase in this percentage, which depended on the income level (100% or 150% of the minimum pension). Since July 2021 there have been three (15% for 1 person, 12% for 2-4 people, 10% for 5+ people) instead of six rates.

- ***Fourteenth pension***

From October 2021 pensioners meeting the means-test criteria are eligible for one additional pay-out equivalent to the minimum pension (“fourteenth pension”).

- ***Personal income tax***

Since January 2022 the bottom personal income tax rate decreased from 17% to 12% (the reform was implemented in July, but was applied retroactively to income since January). The tax-free allowance increased to 30,000 PLN per year and the threshold for the upper tax bracket increased to 120,000 PLN per year. HI is no longer deductible from the progressive income tax. Health insurance contribution for entrepreneurs also depends on their income.

- ***Family Care Capital***

Since January 2022 parents of children between the ages of 12 and 35 months receive an additional 500 PLN per month for each second and subsequent child.

- ***Childcare Benefit***

Since January 2024 parents receive childcare allowance of 800 PLN per underage child per month instead of 500 PLN.

2.3 Order of simulation and interdependencies

Table 2.4 shows the order of simulation of Polish tax-benefit system in EUROMOD. Structural changes of policies in 2021-2024 included in the model's spine are reflected by on and off marks. The majority of policies are being simulated throughout the whole given period. COVID response policies were only in place in 2020.

At the beginning of the model's spine default values and parameters (SetDefault_pl) as well as uprating factors (Uprate_pl) are defined. Next ConstDef_pl defines as constants monthly minimum wage, standard number of work hours per week, tax-free amount, etc. Further, income lists (ILSDef_pl, ILSUDBDef_pl, ILDef_pl), tax units (TUDef_pl) and random numbers (random_pl) are defined. The policy yem_pl, which in baseline is switched off, makes possible the evaluation of applying minimum wage to all individuals reporting employment income below the existing minimum wage. Right after, negative values of self-employment income are recoded as zero.

In 2020 the model includes additional policies simulating the response to COVID-19 pandemic: yemcomp_pl and bwkmcst_pl. These policies can only produce results if the model is run in combination with the LMA add-on. The individuals that are selected to undergo transitions to monetary compensation schemes are defined in the TransLMA_pl policy, which is switched on automatically by the add-on. For more information about the modelling of labour market transitions please consult the '*Simulating labour market transitions in EUROMOD*' document.

Aforementioned policies begin with the allocation of income losses for workers based on sectoral demand shocks, and their coverage by the wage compensation schemes implemented in response to COVID. They allocate the amount of time a worker will spend in one of the available schemes (from 0 to 3 months), followed by calculation of the amount of the benefit for each worker. Following are recalculations of income resulting from reduced employment hours or furlough. The same is applied for the self-employed. Workers are then divided between furlough and the reduced hours scheme at random. Revenue losses are simulated for the additional option of retaining pre-COVID working hours while receiving financial support from the government to cover employment costs.

Because of the fact that unemployment benefit is subject to social security contributions, the unemployment benefit values are simulated before social security contributions. Social security contributions are calculated prior to personal income tax. Social security contributions for individuals with permanent or temporary contracts for both employee's and employer's parts of insurance are worked out in separate policy modules: tsceepj_pl, tscerpj_pl – for individuals with permanent contract and tscetj_pl, tscertj_pl – for individuals with temporary contract.

For employee SSC and self-employed SSC COVID response exemptions of SSC payments for employees with lost hours in employment or in small firms are modelled in sic_ee_cr_pl, sic_er_cr_pl and sic_se_cr_pl.

The farmers' social security contributions and health insurance contributions, which are domain of Agricultural Social Insurance Fund are calculated in policies tscfr_pl and tfrhl_pl. Health insurance for farmers was introduced in February 2012.

This is followed by the thirteenth pension and the fourteenth pension, `boa13_pl` and `boa14_pl`, which must be included in the tax base. Subsequently, `poa04_pl` is imputed based on eligibility criteria and external statistics. Since we don't know how many children a pensioner had in their lifetime, we select those women who have reached the age of retirement and do not receive a pension, and randomly assign the benefit.

Due to different treatment of self-employed conducting non-agricultural economic activity than employees on contracts & farmers, social security contributions for self-employed are computed in yet another policy module, namely `tsese_pl`.

Next, in policy modules: `tscmaee_pl`, `tscmaer_pl` calculations of social security contributions for maternity benefit claimants are carried out, while module `tscun_pl` returns values of contributions for unemployment benefit recipients.

After social security contributions, taxation policy related modules begin. Firstly, capital income tax value is assessed (`tkl_pl`). Maximum value of potential health insurance tax credit is calculated in `tax_hl_mx_pl` policy (it is not deductible starting with 2022). Personal income tax (PIT) base is the result of operations conducted in policy module `tintb_pl`. If there is a choice to decide whether to tax jointly or separately, individual tax amount from the output of `tinit_pl` and `tinitln_pl` policies are compared with joint tax amount from output of `tinjt_pl` policy module. Optimisation is performed in policy `tin_pl` which returns final simulated value of PIT. Thereafter, health insurance contributions payable to National Health Fund are evaluated in `thl_pl` policy module.

The last tax modelled in the spine – agricultural tax is calculated in `tag_pl` policy. After agricultural tax, imputation of farmers' income for the purpose of social assistance is done in `yivag_pl` policy.

The first benefit simulated after social security contributions and income taxes is nursing supplement. It is simulated in policy `poacm_pl` prior to nursing benefit (`pdiuc_pl`) and family allowance (`ben_fa_pl`). It is because of the fact that to become eligible for nursing benefit individual cannot receive nursing supplement. Nursing supplement is simulated before family allowance because its value is included in means-test for family allowance. To claim family allowance supplements family must be eligible for family allowance, so it is natural order to simulate family allowance supplements (`ben_fas_pl`) after main family allowance (`ben_fa_pl`). Since 2016 family allowance with supplements is gradually withdrawn (tapered at 100%) as income used for the purpose of means-test increases (`ben_fatpr_pl`).

Since the income criterion to child birth allowance, which became a means-tested benefit in 2013, uses the same income concept as family allowance, which includes nursing supplement, it is logical to simulate child birth allowance (`ben_cb_pl`) after nursing supplement and family allowance with its supplements.

Next in order of simulation is nursing allowance (`ben_na_pl`) which cannot be claimed if a person receives unemployment benefit. After nursing allowance, special nursing allowance is calculated (`bdinc_pl`). It has similar requirements as nursing allowance – claimant cannot receive unemployment benefit at the same time, and additionally it is means-tested benefit which uses income concept from family allowance.

Parental allowance is simulated in policy `bchba01_pl`. An eligible parent who receives the unemployment benefit or maternity benefit which is lower than parental allowance value is granted with top-up of those benefits. Within tax unit take-up of family allowance supplement due to childcare leave, nursing allowance or special nursing allowance excludes the eligibility to parental allowance.

Later housing benefit (bho_pl) is simulated because of income concept used as a mean-test which includes unemployment benefit, family allowance with its supplements, nursing benefit, special nursing allowance.

Permanent social assistance and temporary social assistance are simulated in policy bsa_pl. While means-test for permanent social assistance takes into account unemployment benefit, family allowance with supplements, nursing benefit, nursing allowance, special nursing allowance and housing benefit, the income concept used in mean-test for the purpose of temporary social assistance includes additionally the value of permanent social assistance.

Disability-care allowance (“500+” for disabled adults introduced in October 2019, modelled since 2020) has a threshold which includes most of state funded pensions and benefits. Disabled individuals over 18 years old receive extra income up to a certain amount.

Childcare allowance (child-raising benefit introduced in April 2016) used the same income concept as the family allowance for the purpose of means-testing. However, the childcare allowance is not used in income concepts of other benefits such as the family allowance, child birth allowance, nursing allowance, special nursing allowance, housing benefit or social assistance. This is why the childcare allowance is one of the last operations in the model. Since October 2019, the childcare allowance is no longer subject to means testing, and is granted to every child under 18.

The family care allowance (bchsc_pl since 2022) and the start of school year allowance (bed00_pl since 2018) are the last policies simulated. They are neither subject to taxation nor included in the income assessment for any other benefits. They are universal, and due to their lack of interactions with other policy elements are simulated at the end of the policy spine.

Described order of simulation is justified. Family allowance with supplements, special nursing allowance, housing benefits, social assistance (and childcare allowance until June 2019) - all depend on net incomes after income tax due. They are therefore simulated after the simulation of income taxes and social security contributions.

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

Table 2.4 EUROMOD Spine: order of simulation [2021 – 2024]

Policy	2021	2022	2023	2024	Description of the instrument and main output
SetDefault_pl	on	on	on	on	DEF: SET DEFAULT
Uprate_pl	on	on	on	on	DEF: UPRATING FACTORS
ConstDef_pl	on	on	on	on	DEF: CONSTANTS
ILSDef_pl	on	on	on	on	DEF: STANDARD INCOME CONCEPTS
ILSUDBDef_pl	on	on	on	on	DEF: UDB STANDARD INCOME CONCEPTS
ILDef_pl	on	on	on	on	DEF: OTHER INCOME CONCEPTS
TUDef_pl	on	on	on	on	DEF: ASSESSMENT UNITS
random_pl	on	on	on	on	DEF: Random Assignment
yem_pl	switch	switch	switch	switch	INC: Minimum wage
neg_pl	on	on	on	on	DEF: Recode negative self-employment income to zero

TransLMA_pl	off	off	off	off	DEF: Modelling labour market transitions (DO NOT SWITCH ON; ONLY WORKS WITH THE LMA ADD-ON)
yemcomp_pl	off	off	off	off	BEN: Wage compensation scheme COVID-19 (Dofinansowanie wynagrodzeń) (works only with LMA ADD-ON in 2020)
bwkmest_pl	off	off	off	off	BEN: Demurrage COVID-19 (Świadczenie postojowe) (works only with LMA ADD-ON in 2020)
bun_pl	on	on	on	on	BEN: Unemployment benefit (Zasiłek dla bezrobotnych)
boa13_pl	on	on	on	on	BEN: Thirteenth pension (Dodatkowe roczne świadczenie pieniężne dla emerytów i rencistów - "Trzynasta emerytura" - "Trzynastka")
boa14_pl	on	on	on	on	BEN: Fourteenth pension (Kolejne dodatkowe roczne świadczenie pieniężnym dla emerytów i rencistów - "Czternasta emerytura" - "Czternastka")
poa04_pl	on	on	on	on	BEN: Pension for mothers with 4 or more kids (Rodzicielskie świadczenie uzupełniające MAMA 4+)
tsceepj_pl	on	on	on	on	SIC: Employee's on employment/permanent contract social insurance contributions (Składki ZUS pracownika na umowie o pracę)
tscerpj_pl	on	on	on	on	SIC: Employer's social insurance contributions - employment/ permanent contract (Składki ZUS pracodawcy przy umowie o pracę)
tsceetj_pl	on	on	on	on	SIC: Employee's on civil law agreement/temporary contract social insurance contributions (Składki ZUS pracownika na umowie cywilno-prawnej)
tscertj_pl	on	on	on	on	SIC: Employer's social insurance contributions - civil law agreement/ temporary contract (Składki ZUS pracodawcy przy umowie cywilno-prawnej)
tscfr_pl	on	on	on	on	SIC: Farmer's social insurance contributions (Składki na ubezpieczenie społeczne rolników KRUS)
tfrhl_pl	on	on	on	on	TAX: Farmer health contribution (Ubezpieczenie zdrowotne rolników KRUS)
tscse_pl	on	on	on	on	SIC: Self-employed (Ubezpieczenie społeczne przedsiębiorców)
tscmaee_pl	on	on	on	on	SIC: Maternity leave recipients (Ubezpieczenie społeczne pracowników na zasiłku macierzyńskim- część pracownika)
tscmaer_pl	on	on	on	on	SIC: Maternity leave provider (Ubezpieczenie społeczne pracowników na zasiłku macierzyńskim - część pracodawcy)
tscun_pl	on	on	on	on	SIC: Unemployment benefit recipients (Ubezpieczenie społeczne pobierających zasiłek dla bezrobotnych)
tkt_pl	on	on	on	on	TAX: Capital income tax (Podatek od dochodów kapitałowych)
tax_hl_mx_ee_pl	on	on	on	on	TAX: Maximum health insurance - employees (Ubezpieczenie zdrowotne pracownika - składki NFZ)

tax_hl_mx_se_pl	on	on	on	on	TAX: Self-employed health insurance (Ubezpieczenie zdrowotne przedsiębiorcy-składki NFZ osób samozatrudnionych)
tax_hl_mx_pl	on	on	on	on	TAX: Maximum and minimum Health Insurance
tintb_pl	on	on	on	on	TAX: Income tax base (Podstawa opodatkowania)
tinit_pl	on	on	on	on	TAX: Individual taxation
tinitln_pl	on	on	on	on	TAX: Linear tax - individual taxation (Podatek liniowy)
tinjt_pl	on	on	on	on	TAX: Income tax - joint taxation (wspólne rozliczenie)
tin_pl	on	on	on	on	TAX: Income tax: optimisation (optymalizacja PIT)
thl_pl	on	on	on	on	TAX: Health Insurance (NFZ)
tag_pl	on	on	on	on	TAX: Agricultural tax (Podatek rolny)
yivag_pl	on	on	on	on	BEN: Farmer income imputation (Dochód rolnika do progu świadczeń)
poacm_pl	on	on	on	on	BEN: Nursing supplement (Dodatek pielęgnacyjny)
pdiuc_pl	on	on	on	on	BEN: Nursing benefit (Zasiłek pielęgnacyjny)
ben_fa_pl	on	on	on	on	BEN: Family allowance (Zasiłek rodzinny)
ben_fas_pl	on	on	on	on	BEN: Family benefit/allowance supplements (Dodatki do zasiłku rodzinnego)
ben_fatpr_pl	on	on	on	on	BEN: Family benefit/allowance with supplements (Zasiłek rodzinny z dodatkami)
ben_cb_pl	on	on	on	on	BEN: One-off subsidy due to giving birth to a child ("Becikowe" - Jednorazowa zapomoga z tytułu urodzenia się dziecka)
ben_na_pl	on	on	on	on	BEN: Nursing allowance (Świadczenie pielęgnacyjne)
bdinc_pl	on	on	on	on	BEN: Special nursing/attendance allowance/benefit (Specjalny zasiłek opiekuńczy)
bchba01_pl	on	on	on	on	BEN: Parental allowance (Świadczenie rodzicielskie - "kosiniakowe")
bho_pl	on	on	on	on	BEN: Housing benefit (Dodatek mieszkaniowy)
bsa_pl	on	on	on	on	BEN: Social assistance (Zasiłki z pomocy społecznej)
bsvca_pl	on	on	on	on	BEN: Disability-care allowance (500+ for disabled adults) (Świadczenie uzupełniające dla osób niezdolnych do samodzielnej egzystencji)
bchcc_pl	on	on	on	on	BEN: Child-care allowance / Child-raising benefit (Świadczenie wychowawcze "Rodzina 500+/800+")
bchsc_pl	n/a	on	on	on	BEN: Family Care Capital (Rodzinny Kapitał Opiekuńczy)
bed00_pl	on	on	on	on	BEN: Start of school year allowance (Program "Dobry Start" 300+)
tco_pl	off	off	off	off	TAX: Commodities
spp_pl	off	off	off	off	TAX/BEN: Special Price Policies (OFF by default – switch controlled by CT add-ons)
output_std_pl	on	on	on	on	DEF: STANDARD OUTPUT INDIVIDUAL LEVEL
output_std_hh_pl	off	off	off	off	DEF: STANDARD OUTPUT HOUSEHOLD LEVEL

2.4 Policy switches

Uprating by Average Adjustment (UAA) switch has been implemented in 2020. This allows for uprating pensions according to the regular rules of indexation when the switch is off, or according to the average rise in pensions when it is on.²

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

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

HHoT - Extended simulation (HHoT_ext): this extension improves the simulation accuracy of some policies when EUROMOD is run with hypothetical data. For instance, if the legislation of a benefit requires information on a variable which is not available in SILC, we can define this variable in HHoT and use it to simulate the policy's rules more precisely. The extension is set to on when the model is used with HHoT data.

HHoT – Unemployment extension (HHoT_un): this extension improves the simulation accuracy of the unemployment insurance benefit when EUROMOD is run with hypothetical data. For instance, in most countries the legislation of this benefit requires information on variables such as individuals' employment history, which are not available in SILC; we can define these variables in HHoT and use them to simulate the policy's rules more precisely when running the model with hypothetical data. This extension is set to on when the model is used with HHoT data.

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.

2.5 Social benefits

2.5.1 Unemployment benefit (*bun_s*)

- **Definitions**

The unemployment benefit covers unemployed people who have worked at least 1 year over the 18 months prior to the date of registration to the relevant labour office. The unit of analysis is an individual (tu_individual_pl).

- **Eligibility conditions**

To become eligible one has to meet certain conditions. First of all, the person must be registered as unemployed in the relevant labour office. Secondly, the labour office is not able to provide neither offers of employment nor trainings, internships or public works for unemployed individual. Moreover, unemployed person must have working history of at least 1 year of work over the 18 months prior to the date of registration as unemployed person, and the person had worked for a salary which was equal at least to monthly minimum wage. Those conditions apply to the self-employed as well, however self-employed who pay SIC on preferential conditions during the first two years of running their business won't be eligible for the unemployment benefit if they close their business.

- **Income test**

Not applicable.

- **Benefit amount**

Base gross amounts of unemployment benefit differ depending on period of payment. In the first three months individual is granted with higher amount of benefit [1] per month while in the remaining months the benefit amount is lowered [2].*

Table 2.5 Base amount of unemployment benefit [2021-2024]

Policy year	-	2021	2022	2023	2024
Regulation period	01.09.2020 - 31.05.2021	01.06.2021 – 31.05.2022	01.06.2022 – 31.05.2023	01.06.2023 – 31.05.2024	01.06.2024 - 31.05.2025
Amount during the first three months [1]	1200.00	1240.80	1304.10	1491.90	1661.98
Amount after three months [2]	942.30	974.40	1024.10	1171.60	1305.16

Note: PLN gross per month

Source: Ministry of Labour and Social Policy

The duration of unemployment benefit payment period can be either 6 or 12 months. Benefit is granted for the period of 6 months in areas where unemployment rate is less than 150% of national average. 12 months benefit period is applied in areas where an unemployment rate is at least equal to 150% of national average, or if an individual is over 50 years old and has working history period of at least 20 years, or if the claimant's spouse is unemployed too and not eligible for unemployment benefit and they have at least one dependent child under the age of 15.

In addition, base amounts of unemployment benefits are subject to a further decrease/increase conditional on duration of working history. As mentioned, to claim the unemployment benefit

* numbers in square brackets appearing in descriptions of simulated policies refer to rows of Tables including information relevant to policies being described.

one has to meet the criterion of having a work history of at least 1 year. If the work history period is less than 5 years, the benefit amount is 80% of the base benefit amount and if one has work history period of at least 20 years of work, the benefit amount is 120% of the base benefit amount. In other cases the base benefit amount is granted.

- **EUROMOD notes**

Simulation of unemployment benefit takes the eligibility from the data. In the simulation process, only those individuals who reported positive values of unemployment benefit ($bun > 0$) can be granted with the benefit (partially simulated).

Table 2.6 Characteristics of the unemployment benefit in 2024

Eligibility	Contribution period	≥ 365 calendar days over the last 18 months
	Other conditions	registered at labour office
	Eligibility of self-employed	Similar conditions
Payment	Contribution base	No, flat-rate benefit
	Monthly base amount:	net 1512.42 PLN for three months, net 1187.73 PLN thereafter.
	Flat payment: Percentage of base amount depending on work history:	1 to 5 years: 80%, 5 to 20 years: 100%, 20 years and more: 120%
	Duration	
	Standard (in months)	6
	Special cases (in months)	12 if: local unemployment rate $\geq 150\%$ national average, OR working period ≥ 20 years and age ≥ 50 , OR spouse is unemployed with no allowance and child aged ≤ 15
Subject to	Taxes	YES
	SIC	YES

2.5.2 Nursing supplement (*poacm_s*)

- **Definitions**

The nursing supplement provides support to pensioners older than 75 years or with a severe disability. The unit of analysis is the individual (*tu_individual_pl*).

- **Eligibility conditions**

All pensioners aged 75 and more or those pensioners diagnosed with a severe disability. This is a non means-tested benefit.

- **Income test**

Not applicable.

- **Benefit amount**

Table 2.7 Nursing supplement

Policy year	2021	2022	2023	2024
Regulation period	01.03.2021 – 28.02.2022	01.03.2022 – 28.02.2023	01.03.2023 – 29.02.2024	01.03.2024 – 28.02.2025
Amount	239.66	256.44	294.39	330.07

Note: PLN per month

Source: Ministry of Labour and Social Policy

2.5.3 Nursing benefit (pdiuc_s)

- **Definitions**

The nursing benefit is a universal (non-contributory) benefit for disabled people. The unit of analysis is the individual. If the entitled person is a child, the benefit is paid to the parent/guardian (tu_individual_pl or tu_fa_bna_pl). It has existed since 2004.

- **Eligibility conditions**

It is a universal (non-contributory) benefit for disabled children, severely disabled working-age adults, severely disabled pensioners and people aged 75 or more with no disability. It is incompatible with receiving nursing supplement – only one of these can be received at any time.

- **Income test**

Not applicable.

- **Benefit amount**

Table 2.8 Nursing benefit

Policy year	2020 - 2024
Regulation period	since 01.11.2019
Amount	215.84

Note: PLN per month

Source: Ministry of Labour and Social Policy.

- **EUROMOD notes**

In prevailing legislation moderately disabled persons above the age of 16 are eligible for nursing benefit on condition that disability occurred before that person turned 21. Since it is not possible to derive such information from input database, all moderately disabled persons over 16 are granted with nursing benefit in the model.

2.5.4 Family allowance (bch00_s)

- **Definitions**

This is an income-tested child benefit that requires the presence of dependent children in the family (tu_fa_bfa_pl).

- **Eligibility conditions**

Family allowance is granted to families with dependent children and income lower than a specified threshold. Until December 2015 Family allowance (with supplements) was withdrawn at a point threshold. From January 2016 the benefit (with supplements) is withdrawn gradually as family income exceeds the threshold (with a 100% taper rate). Dependent children are defined as aged below 18 or below 21 and in secondary school or below 24 if continues education or holds a certificate of disability.

- **Income test**

The benefit is means-tested over the previous year using the personal income tax form. In January 2016 the system of point withdrawal of family allowance with its supplements was replaced with tapered withdrawal scheme (100% taper). To get the full amount of the allowance the net income (net of social security contributions, health insurance contributions and income tax payments) per capita must be below a threshold [1] that is larger [2] if there is a disabled child in the family. The income test for farmers is applied on imputed income equal to the number of converted hectares times a specified amount (1/12 of imputed income) [3].

Table 2.9 Family allowance thresholds

Policy year	2021	2022	2023	2024
Regulation period	01.11.2020 – 31.10.2021	01.11.2021 – 31.10.2022	01.11.2022 – 31.10.2023	01.11.2023 – 31.10.2024
[1]	674.00	674.00	674.00	674.00
[2]	764.00	764.00	764.00	764.00
[3]	270.33	318.25	274.00	462.42

Note: PLN per month

Source: Ministry of Labour and Social Policy

- **Benefit amount**

The base amounts of family allowance payments are given in the table below. However, since January 2016 Family allowance is tapered beyond the income threshold. When the income of a family exceeds income threshold, the Family allowance amount is pooled together with its supplements and lowered by the amount of the surplus of family income over the income threshold. The lowered amount of Family allowance with supplements may not be lower than the amount of 20 PLN per month. Payment period is from 1st of November till 31st of October.

Table 2.10 Family allowance – benefit levels

Policy year	2017 - 2024
Regulation period	since 01.11.2016
Child aged 0-4	95
Child aged 5-17	124
Child aged 18+	135

Note: PLN per month per child

Source: Ministry of Labour and Social Policy

2.5.5 Supplement for large families (*bchlg_s*)

- **Definitions**

The supplement for large families provides support for families with three or more children. This benefit requires the presence of dependent children in the family (*tu_fa_bfa_pl*).

- **Eligibility conditions**

Supplement for large families is granted to one of the parents in a family with at least three children. To receive this form of support the family must be eligible for the family allowance.

- **Income test**

To become eligible for the supplement for large families the claimant must be entitled to the family allowance (*bch00_s*) where respective income test applies (as described in point 2.5.4).

- **Benefit amount**

The supplement paid per child amount at 80.00 PLN per month between November 2012 and October 2015, 90.00 PLN per month between November 2015 and October 2016, and 95.00 PLN per month since November 2016.

Table 2.11 Family allowance: supplement for large families

Policy year	2017 - 2024
Regulation period	since 01.11.2016
Amount	95

Note: PLN per month per 3rd and every younger child

Source: Ministry of Labour and Social Policy

2.5.6 Supplement for child birth (*bchba_s*)

- **Definitions**

The supplement for child birth integrates the family allowance of families with children under 1 year of age.

- **Eligibility conditions**

Families (*tu_fa_bfa_pl*) with children aged less than 1 year old and eligible for the main family allowance are also eligible for a supplement for child birth.

- **Income test**

To become eligible for the supplement for child birth the claimant must be entitled to the family allowance (*bch00_s*) where respective income test applies (as described in point 2.5.4)

- **Benefit amount.**

Table 2.12 Family allowance supplement for child birth

Policy year	2006 - 2024
Regulation period	since 01.01.2006
Amount	1000

Note: One-off payment, PLN per a newborn

Source: Ministry of Labour and Social Policy

2.5.7 Supplement for starting school year (*bched_s*)

- **Definitions**

The supplement for starting school year integrates the family allowance of families with children due to start of the school year. It aims at supporting families to meet the costs of buying schoolbooks and other material for the child starting the school year. This benefit requires the presence of dependent children in education in the family (tu_fa_bfa_pl).

- **Eligibility conditions**

Only one parent of the dependent child aged under 20 starting school year is eligible. The child must be attending either primary school, lower secondary school or upper secondary school. The benefit is paid once per year per child attending any grade of mentioned school types.

- **Income test**

To become eligible for the supplement for starting school year the claimant must be entitled to the family allowance (bch00_s) where respective income test applies (as described in point 2.5.4).

- **Benefit amount.**

Table 2.13 Family allowance supplement for starting school year

Policy year	2007 - 2024
Regulation period	since 01.09.2006
Amount	100

Note: PLN per eligible child per year

Source: Ministry of Labour and Social Policy

2.5.8 Supplement for education or rehabilitation of disabled child (*bchdied_s*)

- **Definitions**

This supplement supports families with disabled children below age 24. It requires the presence of dependent children in the family (tu_fa_bfa_pl).

- **Eligibility conditions**

The benefit can be paid either to the father or the mother in families with disabled children aged below 24 years.

- **Income test**

To become eligible for the supplement for education or rehabilitation of disabled child the claimant must be entitled to the family allowance (bch00_s) where respective income test applies (as described in point 2.5.4).

- **Benefit amount**

The amount of the benefit is different depending on whether the disabled child is aged below 5 years [1] or between 5 and 24 [2].

Table 2.14 Family allowance supplement for education or rehabilitation of disabled child

Policy year	2017 - 2024
Regulation period	since 01.11.2016
Child aged 0-4 [1]	90
Child aged 5+ [2]	110

Note: PLN per month per child

Source: Ministry of Labour and Social Policy

2.5.9 Supplement for lone parents (*bchlp00_s*)

- **Definitions**

This is a supplement for lone parent families that are meeting the low income criterion. It requires the presence of dependent children in the family (*tu_fa_bfa_pl*).

- **Eligibility conditions**

Lone parent families who are eligible for family allowance are also eligible for this supplement. It may not be combined with a social pension for a child.

- **Income test**

To become eligible for the supplement for lone parents the claimant must be entitled to the family allowance (*bch00_s*) where respective income test applies (as described in point 2.5.4).

- **Benefit amount**

The amount of the benefit per child is reported in the table below. A higher amount is paid for disabled children.

Table 2.15 Family allowance supplement for lone parents [PLN per month per child]

Policy year	2017 - 2024
Regulation period	since 01.11.2016
Not disabled child	193
Disabled child	273

Notes: PLN per month, from November 2016 the benefit amount for all children must not be higher than 386 PLN and in case of disabled children 546 PLN.

Source: Ministry of Labour and Social Policy

2.5.10 Child birth allowance (*bchuc_s/bchbamtna_s*)

- **Definitions**

The child birth allowance is paid to parents of alive new-born children. This benefit requires the presence of dependent children in the family (*tu_fa_bfa_pl*). It has existed since 2006.

- **Eligibility conditions**

Since 2013, parents of new-born children need to meet the eligibility income test. Before 2013 the benefit used to be universal.

- **Income test**

Since 01.01.2013 parents of alive new-born children must meet the income criteria of net income per capita below the amount of 1922 PLN per month.

- **Benefit amount**

One-time payment per eligible child – the benefit amount is 1000 PLN (the same since its introduction in 2006).

- **EUROMOD notes**

Before 2013, the child birth Allowance was a non means-tested benefit, the respective output variable in EUROMOD for policy years before 2013 is named *bchuc_s*. From 2013 onwards the benefit is means-tested and the correspondent output variable in EUROMOD is *bchbamtna_s*.

2.5.11 Nursing allowance (*bcrdi_s*)

- **Definitions**

This benefit is addressed to individuals who resign from employment to take care of a disabled family member with whom they remain in lineal consanguinity or with whom they are siblings (*tu_fa_bna_pl*). It has existed since May 2005.

- **Eligibility conditions**

Until the 31st of August 2009, this benefit was restricted to parents of disabled children. From 1st of September 2009 it can be also granted to relatives remaining in lineal consanguinity with disabled individuals or to siblings of disabled individuals. Until 2010 nursing benefit was a means-tested benefit. From the 1st of January 2010 the income test for the benefit no longer exists. In 2013 the additional eligibility criteria related to history of disability was introduced. Since 2013 the benefit is granted for those individuals who take care of disabled persons whose disability started before reaching age of 18 (or age of 25 in case of those who studied at time when disability began).

- **Income test**

Since 01.01.2010 this allowance is not means-tested.

- **Benefit amount**

Fixed amount, which is independent from the number of disabled children in the family, was increased in July 2013, June 2014 and in January 2015. Since January 2012 until the end of 2014 claimants were also receiving supplements to the nursing allowance.

- **EUROMOD notes**

Since nursing allowance is granted based on criterion of age when disability occurred and there is no such information in the dataset, the eligibility is modelled based on declaration of nursing allowance take-up in the dataset. For policy years 2009-2023 nursing allowance is granted based

on $bcrdimy > 0$ condition. For policy year 2008 it is granted based on variable $bcrchdimy$ (it also need to be greater than zero). For policy years 2005-2007 the benefit is granted based on declaration of positive value of benefit in survey data ($bcrchdi > 0$).

Table 2.16 Nursing allowance

Policy year	2021	2022	2023	2024
Regulation period	2021	2022	2023	2024
Amount	1971	2119	2458	2988

Note: PLN per month

Source: Ministry of Labour and Social Policy

2.5.12 Special nursing allowance (*bdinc_s*)

- **Definitions**

This policy is prevailing since 01.01.2013 and it is addressed to relatives taking care of their dependant relatives (tu_fa_pl). As opposed to nursing allowance, there is no criterion on the age when disability started. The benefit is also paid for individuals taking care of disabled family members living in another household, however it is means-tested benefit.

- **Eligibility conditions**

This benefit is granted to individuals who resigned from work in order to take care of their dependant relatives. Individuals must not receive unemployment benefit or pre-retirement pension and take care of their disabled relatives.

- **Income test**

Net income per capita in a family of individual taking care of relatives added up to net income in the family of the dependent relative must be below the amount of 764 PLN per person per month.

Table 2.17 Special nursing allowance thresholds

Policy year	2016 - 2024
Regulation period	since 01.11.2015
Threshold	764

Note: PLN per month

Source: Ministry of Labour and Social Policy

- **Benefit amount**

Table 2.18 Special nursing allowance amounts

Policy year	2019 - 2024
Regulation period	since 01.11.2018
Amount	620

Note: PLN per month

Source: Ministry of Labour and Social Policy

- **EUROMOD notes**

Due to limited information in SILC input data, it is impossible to simulate a part of special nursing allowance payments that are transferred to individuals who are voluntarily on leave and take care

of their disabled relatives from outside their households. The model assumes that individuals who resigned from work in order to take care of their dependent relatives are people who are economically inactive or declared an other economic status and live in a household with a disabled relative. Students can also claim the special nursing allowance, but they need to prove that they have enough time to take care of the dependent relative (it is not modelled in EUROMOD).

2.5.13 Parental allowance (*bchba01_s*)

- **Definitions**

Family benefit meant to support parents of new born children who are not eligible for maternity leave allowance: students, employees on civil contracts (i.e. without social security contributions), individuals insured in Agricultural Social Insurance Fund (KRUS) or unemployed. One of the parents can also claim a top-up to maternity benefit or unemployment benefit if the value of one of those benefits is lower than 1000 PLN per month. The parental allowance payment period is 52 weeks, 65 weeks in case of birth of twins, 67 weeks for triplets, 69 weeks for quadruplets and 71 weeks for quintuplets.

- **Eligibility conditions**

The benefit requires the presence of new born child in a family.

- **Income test**

The benefit is non means-tested. However the eligibility to parental allowance is excluded by eligibility to family allowance supplement due to childcare leave, nursing allowance or special nursing allowance.

- **Benefit amount**

1000 PLN per month. The benefit amount is irrespective of the number of children born in one confinement. The parent of a new born child who is eligible for either maternity benefit or unemployment benefit with benefit amount below 1000 PLN per month can claim top-up to one of those benefits equal to the difference between 1000 PLN and the value of maternity benefit or unemployment benefit.

2.5.14 Housing benefit (*bho_s*)

- **Definitions**

Family or household level benefit meant to support families with their housing expenditures. Expenses include rent and other housing related bills (gas, electricity, heating, water, etc.).

- **Eligibility conditions**

This is an income-tested benefit with additional restrictions concerning flat size. The size limit for a 1 person household is 35 m². However the limit may be increased by 30% with proportional decrease in the amount of the benefit. The limits are given in the table below.

Table 2.19 Housing benefit flat area limits

Number of people in household	Flat area	Extended flat area
1 person	35 m ²	+ 30% = 45,5 m ²
2 people	40 m ²	+ 30% = 52 m ²
3 people	45 m ²	+ 30% = 58,5 m ²

4 people	55 m ²	+ 30% = 71,5 m ²
5 people	65 m ²	+ 30% = 84,5 m ²
(5+n) people	65 m ² + n*5 m ²	+ 30% = 84,5 m ² + (n*30%*5) m ²

Source: *Ustawa z dn. 21 czerwca 2001 r. o dodatkach mieszkaniowych*. Dz.U. 2001 nr 71 poz. 734

Besides an income-test, another form of eligibility test is applied here. Employees of the local entity which is administering the housing benefits, can verify the material situation of the applicants during a home visit. If during such a visit it would be noticed that the material situation within the household is better than the situation assessed through the means-test, the application for a housing benefit would be rejected.

- **Income test**

To qualify for the housing benefit, housing income per capita for the last quarter had to be below 125% of the minimum pension for a multi-person household and 175% for a one-person household until the 30th of June 2021. Since July 2021 the income threshold is 40% of the average salary from the previous year for a multi-person household and 30% for a one-person household. Income is gross income minus revenue costs, social security contributions, health insurance contributions and personal income tax. Social assistance is not included in the income test. The amount of paid alimony decreases the income concept used for the income test. There is a list of exact sources included in the income test

Farmers' income is computed on the basis of equivalence hectares and is augmented by the amount of family benefits.

Table 2.20 Minimum pension values until June 2021, average salary from previous year since July 2021

Policy year	2021	2022	2023	2024
Regulation period	03.2021 – 06.2021	03.2022 – 02.2023	03.2023 – 02.2024	since 03.2024
Amount	1250.88	5662.53	6346.15	7155.48

Note: PLN per month

Source: Social Insurance Institution, Statistics Poland

- **Benefit amount**

The amount is equal to the difference between expenditures and a fraction of the income. The fraction of the income depends on household size and used to depend on per capita income. The eligible amount is computed as:

$$HB = E - K*(Y_{HB})$$

where k equals to 10%, 12%, 15% or 20%.

The minimum HB amount had to be above 2% of minimum old-age pension until June 2021 and must be at least 0.5% of average salary since July 2021. The maximum value of housing benefit equals 70% of the expenses related to the normative area of the occupied dwelling or 70% of the actual expenses incurred for the apartment, if the area of the apartment is less than or equal to the normative area.

Table 2.21 Housing benefit – housing costs parameters until June 2021 and since July 2021

Period	One-person household	2-4 people in the household	5+ people in the household
--------	----------------------	-----------------------------	----------------------------

Until June 2021	Income	Below 150% of minimum pension	150% - 175% of minimum pension	Below 100% of minimum pension	100% - 125% of minimum pension	Below 100% of minimum pension	100% - 125% of minimum pension
	K	15%	20%	12%	15%	10%	12%
Since July 2021	Income	Below 40% of average salary		Below 30% of average salary		Below 30% of average salary	
	K	15%		12%		10%	

Source: *Ustawa z dn. 21 czerwca 2001 r. o dodatkach mieszkaniowych*. Dz.U. 2001 nr 71 poz. 734

- **EUROMOD notes**

Eligibility test for the housing benefit consists of two stages: the income-test and the home visit by housing benefit officer. If during the visit housing benefit officer would assess that household's material situation is better than the situation evaluated in the income test the application for housing benefit would be rejected. The results of home visits paid by housing benefit officers are not modelled in EUROMOD. Therefore, it is assumed that the housing benefit is being transferred to those households that declare eligibility for a housing benefit in input dataset.

2.5.15 Permanent social assistance (*bsapm_s*)

- **Definitions**

The permanent allowance is a specific permanent social assistance allowance for a person incapable of working due to disability or age, who is not entitled to social insurance invalidity pension (pdinw). The benefit constitutes a complement to income, up to the amount of a specified income criterion.

- **Eligibility conditions**

To be eligible one must have disability of significant or moderate degree or be unable to work due to age, whereby the age limit is the same as retirement age. See income thresholds in Table 2.22.

- **Income test**

If an individual living alone [1] or a family member [2] is not a farmer the income test is based on net income per capita (excluding investment income, incidental benefits), and if individual is a farmer the income measure is hectare-based imputed [3] earnings plus non-work income.

Table 2.22 Permanent and temporary social assistance thresholds

Policy year	2019 - 2021	2022 - 2024
Regulation period	01.10.2018 - 31.12.2021	since 01.01.2022
Single person [1]	701	776
Family member [2]	528	600
Farmer [3]	308	345

Note: PLN per month per person [1] and [2], PLN per conversion hectare [3]

Source: Ministry of Labour and Social Policy

- **Benefit amount**

The amount corresponded to the difference between a threshold and total household income. The amount of permanent allowance could not be lower than 30 PLN per month until 2023. Since 2024 the amount corresponds to the difference between 130% of the threshold and total household income. Benefits below 100 PLN are not paid.

Table 2.23 Permanent social assistance amounts

Policy year	2019 - 2021	2022 - 2023	2024
Regulation period	01.10.2018 - 31.12.2021	01.01.2022 – 31.12.2023	since 01.01.2024
Single person...	701 - income	776 - income	1.3 * 776 - income
... not more than	645	719	1000
Family member	528 - income	600 - income	1.3 * 600 - income
Minimum amount	30	30	100

2.5.16 Temporary social assistance (*bsatm_s*)

- **Definitions**

A grant made to persons who are experiencing financial problems (income lower than the specified legal income criterion), caused by unemployment, chronic illness(es), or disability; or to persons who have incomes lower than the social assistance threshold and are still ineligible for social protection (*tu_fa_bsa_pl*).

- **Eligibility conditions**

To be eligible a household income per capita must be below the specified threshold and a household must pass an informal test conducted by a local social assistance representative. The income thresholds are the same as in permanent social assistance. (see Table 2.22)

- **Income test**

The income concept is the same as for permanent social assistance, but it additionally includes permanent social assistance.

- **Benefit amount**

The amount corresponds to the difference between a threshold and total household income with a threshold calculated as for permanent social assistance. The amount must not be lower than 20 PLN.

Table 2.24 Temporary social assistance amounts

Policy year	2019 - 2021	2022 - 2024
Regulation period	01.10.2018 – 31.12.2021	since 01.01.2022
Single person...	701 - income	776 - income
... not more than	418	600
Family member	528 - income	600 - income
Minimum amount	20	20

Note: PLN per month.

Source: Ministry of Labour and Social Policy

- **EUROMOD notes**

Eligibility test conducted by a Local Social Assistance Representative

The payment of social assistance is conditional on an assessment by the Local Social Assistance Centre (MOPS). Thus although there is no official wealth or assets test, a visit by the MOPS

representative acts as such an informal test. In the model we introduce a type of wealth-test to mimic the local authority discretion concerning the eligibility assessment.

We estimate a probability (probit) model of receiving temporary social assistance on a set of household characteristics for the entire population. Exogenous variables include: flat size, region, number of people living in the household, dummies for possession of colour TV set, computer, washing machine, bath shower, capacity to face unexpected financial expenses, capacity to afford paying for one week annual holiday away from home.

The estimates are then used to generate an expected receipt probability value for each household and we set a uniform wealth threshold above which a family is eligible to receive the assistance conditional on passing also the income means-test. The threshold is calibrated in order to reflect the correct number of recipients of temporary social assistance according to official statistics.

Central versus local funding of Temporary Social Assistance:

The Central Government is obliged to pay 50% [1] of eligible amount in case of multi-person household and 50% [2] in a case of single-person household (bsatmefna_s) while the rest of the eligible amount may be paid by the local government. In the model it is assumed that local government pays 0% [3] of the amount at its disposal due (bsatmefmu_s).

The model allows to choose between the effective amount (bsatmefna_s + bsatmefmu_s) and the entitled amount (bsatmen_s).

Table 2.25 Temporary social assistance – theoretical and modelled funding proportions

Year	2021	2022	2023	2024
[1]	50%	50%	50%	50%
[2]	50%	50%	50%	50%
[3]	0%	0%	0%	0%

Source: Ministry of Labour and Social Policy

Table 2.26 presents the estimation of share of local government spendings in funding of temporary social assistance statutory amounts.

Table 2.26 Temporary social assistance – estimation of actual funding proportions

Year	2021	2022	2023
Amount guaranteed by central government	517.0	511.7	472.6
Theoretical spending of local government	517.0	511.7	472.6
Theoretical total spending of central & local government	1034.1	1023.5	945.2
Actual spending of local government	14.0	15.3	14.4
Proportion of local governments spending to their theoretical spending in %	2.7%	3.0%	3.1%

Notes: Millions of PLN

Source: Own calculations using Ministerstwo Pracy i Polityki Społecznej (2022b-2024b)

The take up of the benefit is controlled through the BTA extension. BTA extension is on, so the baseline model adjusts for non-take-up of the benefit; BCA extension is off, so it does not

calibrate its receipt according to external statistics, but the user can activate it if necessary. See section 2.4 for technical details on both extensions and their interactions.

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

- **BTA:** The estimated take-up rate of the benefit should be set as the value of the \$bsa_BTA_rate constant in the model. Currently, the model incorporates values for 2005-2024, obtained through the estimation of the aforementioned probit model.
- **BCA:** The aggregate expenditure needs to be filled out in the External Statistics table, so that the calibration rate (\$bsatm_BCA_rate) is computed accordingly. Data are currently available for the years 2018-2023; given the absence of information for 2024, the calibration rate is not computed within the 2024 system, but the one computed within the 2023 system is used instead. For the modelling of reforms, the 2024 system should be used in order to allow for variation in the number of beneficiaries (hence expenditure): beneficiaries will change when the eligibility conditions change by applying the share of 2023 to the new pool of eligible units. If previous systems were used for reforms, total expenditure/total number of beneficiaries would remain constant irrespective of the reform applied, since the model would always stick to the existing external statistics.

2.5.17 Childcare allowance (*bhcc_s*)

- **Definitions**

Monthly child benefit that requires the presence of underage (younger than 18 years old) child(ren) in the family (*tu_bhcc_pl*). Its purpose is to partially cover the expenses related to the care and upbringing of the child. It has existed since April 2016.

- **Eligibility conditions**

From April 2016 to June 2019 childcare allowance (“500+”) was granted to families as a universal benefit for every second and any subsequent underage child. To claim the allowance for the first (oldest) underage child a family needed to have income below a specified threshold. Since July 2019 childcare allowance is universal for every underage child.

- **Income test**

The benefit was means-tested until June 2019, but only concerning payments for the first child (oldest child within the age range 0-17). In case of the second and any subsequent child, the allowance was granted irrespective of income. The income concept used in the means-test was the same as for the family allowance (see section 2.5.4). It used family income from the previous year: net income (net of social security contributions, health insurance contributions and income tax payments). Family income per capita had to be below 800 PLN per month (1200 PLN per month if there was a disabled child in a family). The income test for farmers was applied on imputed income equal to the number of converted hectares times a specified amount which was the same as in family allowance for farmers means-test. As of July 2019 the income test for the first child has been waived and the allowance is granted to all underage children.

- **Benefit amount**

The benefit amount was 500 PLN per month per eligible child in 2016-2023 and 800 PLN since 2024. Payment period in the first year of childcare allowance was from the 1st of April till the

30th of September. In the following years payment period was intended to last from the 1st of October in a given year till the 30th of September of the following year. Since 2021 the period is from the 1st of June to the 31st of May of the next year.

Table 2.27 Child-raising benefit amounts

Policy year	2016 - 2023	2024
Regulation period	01.04.2016 – 31.12.2023	since 01.01.2024
Amount	500	800

Note: PLN per month per child aged 0-17

2.5.18 Family care allowance (Family Care Capital) (*bchscs_s*)

- *Definitions*

This is a non-income tested child benefit for each second and subsequent child between the ages of 12 and 35 months (*tu_bchfa_pl*).

- *Eligibility conditions*

The child is eligible from the 12th month until the 35th month of their life. The parents can also opt to double the allowance for the duration of one year if they so choose, as opposed to distributing the allowance over the course of two years.

- *Income test*

The benefit is granted to all parents, regardless of income. The benefit is non-taxable and is not included in calculations for eligibility for any other benefits.

- *Benefit amount*

The benefit amount is 500 PLN once per month for two years or 1000 PLN monthly for one year. Parents can choose the option.

Table 2.28 Family Care Capital allowance amount

Policy year	2022 - 2024
Regulation period	01.01.2022 – 30.09.2024
Amount	500 (simulated)

Note: PLN per month per eligible child

2.5.19 Start of school year allowance (“Good Start”) (*bed00_s*)

- *Definitions*

This is a non-income tested child benefit for each child at the start of their school year that requires the presence of dependent children in the family (*tu_bchcc_pl*). It has existed since 2018.

- *Eligibility conditions*

The student is eligible until they turn 20, or 24 if they have a disability. If the dependent child reaches the age limit before the start of the school year, but within the same calendar year in which

the benefit is claimed then they are still eligible. Children that are attending kindergarten are not eligible, nor are university students.

- **Income test**

The benefit is granted to all parents, regardless of income. The benefit is non-taxable and is not included in calculations for eligibility for any other benefits.

- **Benefit amount**

The benefit amount is 300 PLN, once per year.

2.5.20 Thirteenth pension (*boa13_s*):

- **Definitions**

This is a non-means tested benefit for all pensioners amounting to one extra payout of the minimum pension in May of each year. It has existed since 2019.

- **Eligibility conditions**

Anyone who was receiving a pension in May 2019 and is receiving it in April in the next years, receives the additional benefit.

- **Income test**

There is no income test. However, the benefit is included in the income base for taxation.

- **Benefit amount**

The benefit amount is equivalent to the minimum pension. 1588.44 PLN gross (1445.48 PLN net) in 2023 and 1780.96 PLN gross (1620.67 PLN net) in 2024. It is a one-time per year payout.

Table 2.29 “13th pension” amount

Policy year	2021	2022	2023	2024
Regulation period	04.2021	04.2022	04.2023	04.2024
Amount (gross)	1250.88	1338.44	1588.44	1780.96

Note: PLN per year

2.5.21 Fourteenth pension (*boa14_s*):

- **Definitions**

This is a means-tested benefit for pensioners amounting to one extra pay out of the minimum pension each year. It has existed since 2021. The benefit is included in the income base for taxation (excluding year 2022).

- **Eligibility conditions**

Anyone who is receiving a pension in a stated month of a given year and meets the means-testing criteria receives the additional benefit.

- **Income test**

The sum of all pensions and old-age benefits received by the pensioner cannot exceed an income threshold (of 2900 PLN/month). Beyond this threshold the benefit is withdrawn at a rate of 1 to 1. The benefit is included in the income base for taxation.

- **Benefit amount**

The maximum benefit amount is equivalent to the minimum pension, however in 2023 there was a one-off increase to 2650 PLN gross (1780.96 PLN gross in 2024). It is a one-time/year payout. The minimum value has to be at least 50 PLN.

Table 2.30 “14th pension” threshold and amounts

Policy year	2021	2022	2023	2024
Threshold	2900	2900	2900	2900
Maximum amount	1250.88	1338.44	2650	1780.96
Minimum amount	-	50	50	50

Note: PLN

2.5.22 Pension for mothers with 4 or more kids (*poa04_s*):

- **Definitions**

This benefit grants the minimum national pension to mothers (or single fathers) who have raised 4 or more kids. It has existed since March 2019.

- **Eligibility conditions**

Must be a mother (or single father) who raised 4 or more kids and did not meet the required minimum time in work to be eligible for the national pension.

- **Income test**

There is no income test. However, the benefit is included in the income base for taxation.

- **Benefit amount**

The benefit amount is equal the minimum national pension, once per month.

2.6 Social contributions

2.6.1 Employee social contributions

- **Liability to contributions**

Social security contributions are paid by both the employer and the employee. While old-age pension insurance and disability insurance contributions are levied on employee and employer, sickness insurance is paid only by an employee. The tax unit for the purpose of employee’s social contributions is *tu_individual_pl*.

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

All rates are applied to the same income base, which is gross income, defined as:

$$\text{gross income} = \text{net income} + \text{IT} + \text{HI} + \text{employee part of SSC}$$

$$\begin{aligned} \text{IT} &= \text{personal income tax} \\ \text{HI} &= \text{health insurance contributions} \\ \text{SSC} &= \text{social security contributions} \end{aligned}$$

Gross income does not include the part of social security contributions that are paid by the employer.

Incomes from temporary labour contracts may or may not be included in the social security income base. With minor exceptions, a temporary job income is excluded from the SSC income base if the job is performed in addition to a permanent job and if it is performed for a different employer than the one of the permanent job. Due to the lack of detailed data, all temporary work incomes earned in addition to permanent work incomes are excluded from the social security income base. Old-age pension insurance and disability insurance contributions are also paid on unemployment benefits and maternity benefits. Other benefits are excluded from social security contributions.

For the purpose of old-age pension insurance and disability insurance contributions, the gross income base is limited: contributions are paid as long as the annual cumulative gross income is below a threshold. The threshold is computed as 30 times the average monthly wage indicator, estimated for a given year by the government and published in the state budget.

Table 2.31 Old-age pension and disability insurance maximum income base (annual in PLN)

Year	2021	2022	2023	2024
Yearly limit for old-age pension insurance and disability insurance base	157,770	177,660	208,050	234,720

Source: Zakład Ubezpieczeń Społecznych (2024e).

- ***Contribution rates***

Table 2.32 Employee social security contribution rates (since January 2012)

	Total contribution rate (%)	Employee rate (%)
Old-age pension insurance	19.52	9.76
Disability insurance	8.00	1.50
Sickness insurance	2.45	2.45

Source: Zakład Ubezpieczeń Społecznych (2022e).

2.6.2 Employer social contributions

- ***Liability to contributions***

Employers share the burden of old-age pension insurance and disability insurance contributions together with employees. However, work accident insurance, contributions to Labour Fund & Fund of Guaranteed Employee’s Benefits are levied only on employers. The tax unit used for the purpose of employer’s social contributions is `tu_individual_pl`.

- *Income base used to calculate contributions*

Gross income described in the section devoted to employee social contributions does not include the part of social security contributions, which are paid by the employer. The total cost to the employer is therefore gross income plus the employer’s part of social security contributions. For the purpose of assessment of employer’s social contributions the same income thresholds as in case of employee’s contributions are being applied.

- *Contribution rates*

Table 2.33 Employer social security contribution rates (since April 2018)

	Total contribution rate (%)	Employer rate (%)
Old-age pension insurance	19.52	9.76
Disability insurance	8.00	6.5
Sickness insurance	2.45	–
Work accident insurance	from 0.67 to 3.33	from 0.67 to 3.33
Labour Fund	2.45	2.45
Fund of Guaranteed Employee Benefits	0.10	0.10

Source: Zakład Ubezpieczeń Społecznych (2022e).

2.6.3 Social contributions of farmers

- *Liability to contributions*

Individual farmers and their families, who conduct farming activities on their own behalf, are eligible for social insurance according to Agricultural Social Insurance Fund (KRUS) principles. The KRUS contributions are quarterly lump-sum payments. Old age pension and disability insurance contributions are pooled together, while for the purpose of work accident insurance, sickness insurance and maternity insurance individual have to pay another contribution.

- *Income base used to calculate contributions*

The fact of being a farmer conducting an agricultural activity on area of size of at least 1 conversion hectare is condition required to be eligible for social security contributions for farmers.

- *Contribution rates*

People insured in KRUS paid the following quarterly amounts of contributions, per person in PLN:

Table 2.34 Old age pension quarterly amounts for farmers conditional on farm area

Year	Quarter	Farm’s size				
		up to 50 ha	50ha – 100ha	100ha – 150ha	150ha – 300ha	more than 300 ha
2021	1 st	291	642	990	1341	1692
2021	2 nd	303	669	1032	1398	1764

2021	3 rd	303	669	1032	1398	1764
2021	4 th	303	669	1032	1398	1764
2022	1 st	303	669	1032	1398	1764
2022	2 nd	324	714	1104	1494	1887
2022	3 rd	324	714	1104	1494	1887
2022	4 th	324	714	1104	1494	1887
2023	1 st	324	714	1104	1494	1887
2023	2 nd	429	945	1458	1974	2487
2023	3 rd	429	945	1458	1974	2487
2023	4 th	429	945	1458	1974	2487
2024	1 st	429	945	1458	1974	2487
2024	2 nd	480	1056	1635	2211	2787
2024	3 rd	480	1056	1635	2211	2787
2024	4 th	480	1056	1635	2211	2787

Source: Kasa Rolniczego Ubezpieczenia Społecznego: *KRUS w liczbach*

Table 2.35 Work accident, sickness and maternity insurance quarterly contribution rates of KRUS (1st quarter 2021 – 4th quarter 2024)

Work accident, sickness and maternity insurance	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
2021	126	126	126	126
2022	180	180	180	180
2023	180	180	180	180
2024	180	180	180	180

Source: Kasa Rolniczego Ubezpieczenia Społecznego: *KRUS w liczbach*

2.6.4 Self-employed social contributions

- *Liability to contributions*

Self-employed conducting non-agricultural economic activity.

- *Income base used to calculate contributions*

The income base for this form of employment is self-declared, with a minimum declared income base set at 60% of the average monthly gross income anticipated in given year. There is a second rate for anyone who's revenue is below 2.5 times the minimum wage – in this case, income base is 30% of the national minimum wage. The rates of SSC for self-employed (entrepreneurs) are the sum of the rates for employee and employer. Sickness insurance for the self-employed is voluntary.

- *Contribution rates*

Table 2.36 Self-employed social contributions

Year	Rate	Minimum income base	Old-age pension insurance	Disability insurance	Sickness insurance	Work accident insurance	Labour Fund
2021	Regular	3155.40	19.52%	8.00%	2.45%	0.67% - 3.33%	2.45%
2021	Small	840.00	19.52%	8.00%	2.45%	0.67% - 3.33%	0%
2022	Regular	3553.20	19.52%	8.00%	2.45%	0.67% - 3.33%	2.45%

2022	Small	903.00	19.52%	8.00%	2.45%	0.67% - 3.33%	0%
2023	Regular	4161.00	19.52%	8.00%	2.45%	0.67% - 3.33%	2.45%
2023	Small	1047.00	19.52%	8.00%	2.45%	0.67% - 3.33%	0%
2024	Regular	4694.40	19.52%	8.00%	2.45%	0.67% - 3.33%	2.45%
2024	Small	1272.60	19.52%	8.00%	2.45%	0.67% - 3.33%	0%

Note: PLN per month. The “small” rate applies to anyone whose revenue is below 2.5 times the minimum wage, in which case the income base is 30% of the national minimum wage.

Source: Zakład Ubezpieczeń Społecznych (2024f).

- **EUROMOD notes**

While sickness insurance for the self-employed is voluntary and the income base for this form of employment is self-declared (with a minimum declared income base set at 60% of the average monthly gross income anticipated in the given year), we assume that all self-employed minimize their Social Security Contributions (SSC) by declaring the minimum income base and by opting out of the sickness insurance.

There is also a case of 30% of minimum wage that is used to assess social security contributions liability for self-employed who are either disabled or are conducting non-agricultural economic activity for less than 24 months. Self-employed who fulfil those requirements can use a reduced rate of 30% instead of the standard rate of 60%, to assess their social security contribution base. Rate of 30% is not modelled in EUROMOD. Table 2.37 summarizes the proportion of the self-employed who use the rate of 30% to assess SIC base to total number of self-employed SIC contributors. In 2019 those self-employed who paid preferential SIC (excluding Labour Fund contributions) accounted for 16.7% of the total number of self-employed, while in 2020 it was 17.2%. Preferential SIC from self-employed (excluding Labour Fund contributions) in 2019 and 2020 accounted for 4.8% and 5.5% of the total revenues, respectively (Table 2.38).

Table 2.37 Proportion of contributors of preferential self-employed SIC to the total number of self-employed SIC

SIC for:	2020	2021	2022	30.06.2023
Retirement and disability pension	17.2%	17.3%	16.7%	18.4%
Sickness insurance	16.6%	16.6%	16.1%	17.7%
Work accident insurance	17.2%	17.3%	16.7%	18.4%
Labour Fund	n/a	n/a	n/a	n/a

Note: The ratios are proportions of monthly averages within the years.

Source: Zakład Ubezpieczeń Społecznych (2020b-2022b, 2020c-2022c, 2020d-2022d).

Table 2.38 Proportion of aggregated values of contributions from preferential self-employed SIC contributors to the total value of self-employed SIC contributions

SIC for:	2020	2021	2022	2023
Retirement and disability pension	5.5%	6.1%	5.6%	4.9%
Sickness insurance	5.1%	5.5%	5.2%	5.1%
Work accident insurance	5.6%	6.1%	5.7%	5.0%

Note: The ratios are proportions of monthly averages within the years.

Source: Zakład Ubezpieczeń Społecznych (2020b-2022b, 2020c-2022c, 2020d-2022d).

In EUROMOD it is assumed that self-employed people pay the accident insurance rate for entrepreneurs who employ up to 9 persons. Table 2.39 shows the rate [1].

Table 2.39 Accident insurance rate for self-employed hiring less than 10 persons

Policy year	2018 - 2024
Regulation period	since 01.04.2018
Rate	1.67%

Source: Zakład Ubezpieczeń Społecznych (2022e).

2.6.5 Health insurance contributions

Employee’s health insurance contributions:

- *Liability to contributions*

In general, individuals liable to employee social security contributions are obliged to pay health insurance contributions.

- *Income base used to calculate contributions*

Health insurance (HI) contributions are considered to be social security contributions, however, they are calculated according to different principles. While sickness insurance finances replacement benefits during prolonged sickness or maternity leave, health insurance finances the National Health Fund (NFZ), which is the public healthcare management institution.

The income base for HI contributions for work contracts is lower than for SSC; it is equal to the gross income minus the employee part of SSC. i.e.

$$\text{HI income base} = \text{gross income} - \text{employee part of SSC} = \text{net income} + \text{IT} + \text{HI}$$

- *Contribution rates*

As of January 2022, HI contributions are no longer linked to the personal income tax (PIT). Before January 2022, the HI dues paid on any particular work contract could not exceed the PIT dues paid on that contract. Also, 7.75% of the HI income base was deducted from the calculated PIT dues. In other words:

- if the calculated PIT dues were lower than 7.75% of the HI income base then the actual HI dues were equal to the calculated PIT dues and the actual PIT paid was zero;
- if the calculated PIT dues exceeded 7.75% of the HI income base, but did not exceed 9.0% of the HI income base, then the actual HI dues were equal to the calculated PIT dues, while actual PIT dues were equal to the difference between the calculated PIT dues and the amount of deduction (7.75% of the HI income base)
- if the calculated PIT dues exceeded 9% of the HI income base, then the actual HI dues were equal to 9.0% of the HI income base, while the actual PIT dues were equal to the difference between the calculated PIT dues and the amount of deduction (7.75% of the HI income base).

Since HI contributions are no longer deductible from the PIT, low-income earners who would see an increase in their HI dues as a result of the reform may abide by the old system.

Table 2.40 Employees’ health insurance rates

Policy year	2007 - 2021	2022 - 2024
Regulation period	01.01.2007 – 31.12.2021	since 01.01.2022
Full HI rate	9.00%	9.00%

HI PIT deduction rate	7.75%	-
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Source: Ministry of Health

Health insurance contributions for self-employed:

- *Liability to contributions*

Self-employed conducting non-agricultural economic activity.

- *Income base used to calculate contributions*

The self-employed pay health insurance contributions according to the same rates and personal income tax deduction rules as employees. However, just like in the case of SSC a minimum HI income tax base limit applies, which until 2021 resulted in the self-employed paying a lump-sum amount of contributions. Interestingly, the HI income base was higher than the SSC income base (75% of the average monthly gross income in business sector in the previous year’s last quarter, instead of 60% of the overall average monthly gross income anticipated in the given year), even though the HI income base for work contracts is lower than the SSC income base. In addition HI dues for self-employed can exceed IT dues, but still only 7.75% of the HI income base limit can be deducted from the income tax dues. Since January 2022, HI is non-deductible, just as for employees. However, for the self-employed who opt for the flat tax of 19%, their rate of HI contributions is reduced to 4.9%. Base for health insurance contributions depends on the form of taxation, revenues or income value. The minimum base since 2022 is the minimum wage. Contribution year starts in February and ends in January the following year. Contribution rates for scale tax payers are shown in Table 2.41.

Table 2.41 Health insurance for self-employed (monthly)

Year	HI income base (minimum since 02.2022)	HI dues (minimum since 02.2022)	IT-deductible dues
2021	4242.38	381.81	328.78
January 2022	4665.78	419.92	0.00
February 2022 - January 2023	3010.00	270.90	0.00
February 2023 - January 2024	3490.00	314.10	0.00
February 2024 – January 2025	4242.00	381.78	0.00

Note: PLN per month

Source: Ministry of Health

Farmers’ health insurance contributions:

- *Liability to contributions*

Since the changes in the act that defines rules of the farmer’s health insurance system that were introduced in Poland in February 2012, farmer’s health insurance contributions are no longer paid from budgetary funds to such extent as before the changes. Farmers are obliged to pay health insurance contributions from their own funds depending on their farm size measured in conversion hectares and type of agricultural activity (with some exceptions).

Farmers’ health insurance contributions are paid each quarter in the same periods as described in case of farmers’ old-age pension, disability, work accident, sickness and maternity insurance. To become liable to farmers’ health insurance contributions one has to meet certain criteria like:

- to be a person eligible for farmers’ social security contributions or to be an inmate closely related to such person;
 - be a farmer or farmer’s inmate not eligible for social contributions from Social Insurance Fund (ZUS);
 - be a person eligible for old-age/disability pension from Farmers Social Insurance Institution (KRUS);
 - be family members of farmers, farmers’ inmates, pensioners from Farmers Social Insurance Institution (KRUS), who are not eligible for health insurance on basis of employee/self-employed health insurance system.
- ***Income base used to calculate contributions***

Farmers’ health insurance contributions are calculated on basis of area of arable land measured in conversion hectares.

- ***Contribution rates***

Farmers’ health insurance monthly contribution amounts to 1 PLN per insured farmer and 1 PLN per household member in particular agricultural holding, multiplied by number of conversion hectares. If the farm’s size is less than 6 conversion hectares health insurance contributions are paid from budgetary funds. Moreover, farmers’ health insurance contribution amounts vary depending on whether farm is ran jointly with production in special agricultural sector or only in self-contained special sector of agricultural production.

Table 2.42 Farmers’ health insurance monthly contribution rates depending on type of agricultural holding and insured person’s status (since February 2012)

Type of agricultural holding	Insured farmer	Household member
Farm sized less than 6 conversion hectares	financed from budget	financed from budget
Farm sized 6 or more conversion hectares	1 PLN per person multiplied by number of conversion hectares	1 PLN per person multiplied by number of conversion hectares
Farm sized less than 6 conversion hectares jointly with production in special agricultural sector	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	financed from budget
Farm sized 6 or more conversion hectares jointly with production in special agricultural sector	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	1 PLN per person multiplied by number of conversion hectares
Self-contained special sectors of agricultural production	9% of declared income from activity in special sector of agricultural production (not less than 9% of minimal wage) per person	in 2012 it used to be 9% of base amount of 33,4% of average salary in non-financial corporations sector in 4 th quarter of previous year per person, since 2013 the salary from the year that was two years before the current year is applied

Source: Kasa Rolniczego Ubezpieczenia Społecznego: ZADANIA KRUS: Ubezpieczenia zdrowotne

2.7 Personal income tax

2.7.1 Tax unit

Personal income tax in Poland is an individual system, but couples (as well as single parents), can file a joint tax return. In case of joint filing, the tax is levied on the average taxable income, and then the tax dues are multiplied by two. This can lower the tax liability if the two persons individually would fall into different income brackets. For example, if one of these individuals has no income or almost no income in a given year, they benefit from joint filing by claiming two universal tax credits.

2.7.2 Exemptions

The list of tax-exempt incomes includes more than 100 categories, most importantly:

- non-contributory benefits (social assistance, family benefits and housing benefits),
- disability pensions for war veterans,
- student scholarships,
- alimonies paid to children.

Regular old-age and disability pensions are not tax exempt. From August 2019 (proportional part – 5/12) to December 2021, employment income up to the threshold of the first tax bracket for anyone under the age of 26 was income tax exempt. The amount (85526 PLN per year) has stayed the same, even though the tax bracket increased to 120.000 PLN per year in January 2022. Similar tax exemption takes place in the case of people with at least 4 children (since) Income from farm activity or self-employment is taxed according to special rules, described in a separate section below.

Incomes from capital gains are taxed according to separate rules, described in the separate section below.

2.7.3 Tax allowances

In June 2024 the list of tax allowances included:

- revenue costs,
- charitable donations,
- housing loan (mortgage) interest,
- medical rehabilitation expenses,
- internet access expenses,
- contributions to Individual Pension Security Account,
- tax deduction for volunteer blood-donors,
- purchase of new technologies,
- research and development expenses.

Revenue costs

The amount of revenue costs allowance depends on the type of the work contract. On most temporary labour contracts, the allowance is equal to 20% of gross income. On some types of temporary contracts, such as scientific or artistic activities, the rate of allowance is 50%. However, due to the lack of detailed data, in the model we assume the basic 20% rate for all temporary work contracts.

The revenue cost allowance for permanent work contracts is a lump-sum amount, which depends on two factors:

- whether the employee has one or more permanent jobs,
- whether the job (jobs) is outside the area of residence.

The table below gives the amounts of revenue cost exemptions on permanent work incomes from 2020 till 2024 in PLN.

Table 2.43 Cost exemptions limit on permanent work income (annual in PLN since 2020)

	Number of jobs	2020 - 2024
Job(s) within the residence area	1	3000
	>1	4500
Job(s) outside of the residence area	1	3600
	>1	5400

Source: Ministry of Finance

- *EUROMOD notes*

In the model we assume that all persons have one job performed at the area of residence.

Charitable donations

Donations made for purposes related to religion and for public utility organizations are deductible up to 6% of the taxable income. Since 2019 there is no limit for the deduction of donations to the church's charitable and welfare work. However, if the donation is made to an individual or entity that engages in certain activities, the deduction is not allowed.

Table 2.44 Charitable donations

Donation type	Year	deduction limit (% of taxable income)
for church's charitable and welfare activities	2019-2024	no limit
other donations	2019-2024	6

Source: Ministry of Finance

Housing loan (mortgage) interest

Interests on mortgage loan are deductible if the credit was taken between the 1st of January 2002 and the 1st of January 2007 to build or purchase residential property. However, to qualify for the deduction, the construction must have been completed within the 3 years from the end of the calendar year the building permit was issued.

Table 2.45 Housing loan interest allowance

Year	deduction limit (amount of mortgage loan, PLN)
2021	349,090
2022 - 2023	374,290
2024	443,450

Source: Ministry of Finance

In 2007 housing loan (mortgage) interest deduction was withdrawn. However, it is treated as an acquired right and may be claimed by those who got a housing loan between 2002-2006 up to the end of 2027.

Medical rehabilitation expenses

Taxable income may be also decreased by expenses incurred for the purposes of medical rehabilitation

Table 2.46 Medical rehabilitation expenses allowance

	Year	deduction limit (PLN per year)
Medical rehabilitation expenses allowance	2003 - 2024	2280

Source: Ministry of Finance

- *EUROMOD notes*

Medical rehabilitation expenses allowance is not modelled in EUROMOD.

Internet access expenses

Internet access expenses are deductible up to 760 PLN per annum. Since 2013 Internet expenses allowance is restricted to taxpayers who have not used this allowance more than once. It can be used only in two consecutive years.

- *EUROMOD notes*

Since it is impossible to identify those taxpayers who have not used this allowance for at least two years, the value of internet access expenses allowance is set to 0 since 2013.

Payments to Individual Pension Security Accounts

Since 2012 individuals who pay contributions to their Individual Pension Security Accounts can deduct the amount of those contributions from their tax base. However, the deducted amount is limited to a particular amount each year. In 2012 and 2013 the deduction could not exceed 4% of the individual's retirement insurance contribution base from the previous year, with a certain maximum. Moreover, those individuals whose yearly salary in 2011 and 2012 was below the yearly minimum wage could apply the deduction limit of 4% of the minimum wage. From 2014 to 2020 every contributor to Individual Pension Security Account has a deduction limit of 120% of the average projected monthly salary. Since 2021 self-employed individuals performing non-agricultural activity have a higher limit - 180% of average projected monthly salary.

Table 2.47 Maximum tax deduction due to Payments to Individual Pension Security Accounts

Year	2021	2022	2023	2024
Deduction limit for self-employed	9466.20	10659.60	12483.00	14083.20
Deduction limit for others	6310.80	7106.40	8322.00	9388.80

Source: Ministry of Finance

- **EUROMOD notes**

This deduction is not modelled in EUROMOD.

Tax deduction for volunteer blood-donors

Volunteer blood-donors can deduct from their taxable income 130 PLN per litre of donated blood, plasma or other blood particles. The deduction cannot exceed 6% of individual’s taxable income.

- **EUROMOD notes**

This deduction is not modelled in EUROMOD.

Purchase of new technologies

Until the 31st of December 2015 the self-employed conducting non-agricultural economic activity could deduct from their taxable income 50% of the value of purchased intangible assets including patents, results of research & development works that are innovative and have not been used worldwide for more than 5 years since implementation. If the entrepreneur couldn’t deduct full amount of deduction because of low taxable income, the remaining part of deduction could be used within three years. This deduction was withdrawn and from 2016 to 2018 it functioned as an acquired right. Entrepreneurs conducting business in special economic zones were not eligible for this tax deduction.

- **EUROMOD notes**

This deduction is not modelled in EUROMOD.

Research and development expenses

Since the 1st of January 2016 entrepreneurs can deduct from their taxable income the expenses on research and development activities. This deduction is intended to replace deduction for purchase of new technologies. The possible amount of deduction is varying depending on category of costs connected with research and development activity and size of company. Entrepreneurs could deduct 10% - 30% as of 2016, 30% - 50% as of 2017, 100% - 150% in 2018 - 2021, and 100% - 200% since 2022 of employers costs connected with salaries of employees conducting research and development work. The second category of costs includes:

- purchases of raw materials and resources used in the R&D process;
- expert reports, opinions, consulting services and purchase of research results from scientific entities defined in Act on the Principles of Financing Science used for the purpose R&D activity;
- charges for the use of research equipment used in R&D activity.

Micro, small and medium sized business entities (according to classification from the Act on Entrepreneurs’ Law) can deduct up to 200% of the costs mentioned in the second category. Large business entities can deduct up to 100% of the cost from this category. If the entrepreneur couldn’t

deduct full amount of deduction because of low taxable income, the remaining part of deduction can be used within 6 years (3 years before 2018). Entrepreneurs conducting business in special economic zones are not eligible for this tax deduction.

- **EUROMOD notes**

This deduction is not modelled in EUROMOD.

2.7.4 Tax base

The tax base is gross income which is equal to the gross income minus social security contributions and tax allowances (deductions). Health insurance contributions are not subtracted from gross income (they are included in the income tax base), but they were linked with income tax until 2021 as described in a separate section above. As described in the “tax unit” section, the average income tax base is used for couples and single parents filing a joint tax return with their spouse or dependent child respectively.

2.7.5 Tax schedule

There are only 2 brackets in Poland. Since October 2019, employment income up to 85,528 PLN for anyone under the age of 26 is income tax exempt:

Table 2.48 Tax schedule (PLN/year)

Bracket number	2020 - 2021			2022 - 2024		
	Lower limit	Upper limit	Rates	Lower limit	Upper limit	Rates
1	0	85,528	17%	0	120,000	12%
2	85,528	-	32%	120,000	-	32%

Source: Ministry of Finance

2.7.6 Tax credits

Tax credits depending on tax rate and tax-free amount

From the 1st January 2017 to the 31st of December 2021

- Between 2017 and 2021 tax credit included withdrawal rate. Withdrawal rate depended on annual taxable income. The maximum tax-free amount was increased from 6,600 PLN to 8,000 PLN in 2018. The tax credit also depended on the tax rate, which changed from 18% to 17% in October 2019. The rules of tax credit calculations in 2021 are presented in Table 2.49.

Table 2.49 Tax credit in 2021 (PLN / year)

Taxable income	Tax credit
0 – 8,000	1,360 = 17% * 8,000
8,000 – 13,000	1,360 – (1,360 – 525.12) * (taxable income – 8,000) / (13,000 – 8,000)
13,000 – 85,258	525.12
85,528 – 127,000	525.12 – 525.12 * (taxable income – 85,528) / (127,000 – 85,528)
127,000 –	0

Source: Ministry of Finance

Since January 2022

- Universal tax credit: each taxpayer may deduct a specified amount per year from his/her tax dues. This tax credit is equivalent to a tax-free income (30,000 PLN per year) multiplied by the tax rate (12%). Since January 2022 families with four or more children are granted an additional tax free allowance of 85,528 PLN per year.

Table 2.50 Tax credit since 2022 (PLN / year)

	2022 - 2024
Universal tax credit	3,600 = 30,000 * 12%

Source: Ministry of Finance

Child tax credit

The child tax credit was introduced in 2007 as a non-refundable tax credit of a fixed amount per child per month. Since 2013 there has been an income threshold for parents of only one child - the credit is granted to spouses and lone parents whose yearly taxable income does not exceed 112,000 PLN (and 56,000 PLN in case of an unmarried parent). There is no thresholds for parents of at least 2 children. Self-employed whose income is not taxed in accordance with general income tax regulation with progressive tax rates are not eligible for the child tax credit. Since tax year 2013 taxpayers entitled to child tax credit deduct higher values of CTC per 3rd, 4th and any subsequent dependent child. After changes which applied to incomes from tax year 2014 onwards, CTC became a refundable tax credit. After the reform those who pay SIC and HI are eligible for a top-up of CTC which is limited up to the amount of their contributions.

Table 2.51 Child tax credit maximum values (PLN per year)

	2014 - 2024
per 1 st or 2 nd child	1112.04
per 3 rd child	2000.04
per 4 th or any subsequent child	2700.00

Source: Ministry of Finance

Health insurance contributions tax credit

Part of health insurance was deductible until 2022 (7.75% of the HI income base, as described above; see Table 2.33).

- *EUROMOD notes*

The value of universal tax credit in Poland is defined in The Natural Persons' Income Tax Act. In personal income taxation the tax base which is free of taxation is derived by division of UTC value by tax rate in the first tax bracket (18% until September 2019, 17% starting in October 2019, and 12% starting in January 2022). Thus the value of taxable income which was free of taxation was equal to 3,089 PLN (until December 2016) or up to 6,600 PLN (in 2017), up to 8,000 PLN (in 2018 - 2021), and 30,000 PLN since January 2022 per year. However, the amendment of The Tax Ordinance Act that came into force on the 1st of January 2006 instituted that both tax base and tax liability are rounded to full units of PLN. Tax base and tax liability ending with less than 0.50 PLN are rounded down to the nearest integer, while values ending with at least 0.50 PLN are rounded up to the nearest integer. Two stages of rounding – the first applied to tax base and the

second regarding to tax liability – caused that in 2008 - 2016 incomes up to 3,091.49 PLN, up to 6,601.49 in 2017 and 8,001.49 in 2018 per year were free of taxation. The rounding of tax base and tax liability is not conducted in EUROMOD.

In the Polish tax law, one of conditions defining a dependent child to the child’s income which is required to be less or equal to the tax-free amount. In EUROMOD, for the purpose of dependent child identification, the value of 3,089 PLN per year was used until 2021, and 12 times the value of the social pension since 2022.

Table 2.52 Maximum adult (18 - 24 years old) child income

Year	2009 - 2021	2022	2023	2024
Yearly limit	3089	16061.28	19061.28	21371.52

Note: PLN per year

2.8 Other taxes

2.8.1 Income tax for farmers (agricultural tax)

Incomes from agricultural activities, with the exception of revenue from special branches of agricultural production, are not liable to personal income tax. Such incomes are subject to an agricultural tax. The tax base is measured in “*conversion hectares*” (calculated on the basis of actual area, type and quality of land and location in one of four tax zones, depending on economic and climatic conditions of agricultural production). The annual rate of the tax amounts to the pecuniary equivalent of 2.5 quintals of rye per 1 conversion hectare of farm land and 5 quintals of rye per non-farm land. The pecuniary equivalent is based on the average purchase price of rye in 11 quarters proceeding the quarter proceeding tax year (3 quarters until 2013).

Table 2.53 Amounts of agricultural tax [2021-2024]

Amount of agricultural tax per	2021	2022	2023	2024
1 conversion hectare	146.38	153.70	185.125	224.075
1 hectare	292.75	307.40	370.25	448.15
1 quintal of rye	58.55	61.48	74.05	89.63

Source: Ministry of Finance

2.8.2 Income tax for self-employed.

Individuals who carry out business activities may opt to choose a flat-rate taxation of their business incomes at the rate of 19 %, equal to the rate of CIT. That is why instead of being taxed according to the general personal income tax rules with progressive tax rates, self-employed can choose to be taxed according to this flat tax rate. However, with the flat rate taxation the taxpayer is deprived of right to some allowances and to the tax credits. Some self-employed (such as hairdressers) can also opt for a lump-sum tax option or for a flat-rate tax levied on revenues (costs cannot be deducted; the rate differs depending on the type of activity). For those that report earning self-employment income in the data, we calculate the flat rate of 19% (linear tax) and apply a tax optimisation procedure to assign the form of taxation that is most beneficial to the tax unit. This entails the calculation of income tax according to three possible schemes – individual progressive scale, joint progressive scale, and the individual flat tax.

2.8.3 Income tax on capital gains

Dividends are excluded from the overall income. In general, there is no special tax rate for capital gains in Poland:

- Capital gains, such as the gains from savings accounts, mutual funds and stock exchange, are taxed at source according to a 19% flat rate, with no allowances or deductions. For stock exchange, the tax base is a net gain.
- The sale of real estate by an individual is taxable at the rate of 19% of the sale price but if the real estate is sold more than 5 years after it was purchased the capital gain is exempt from tax.

2.8.4 Income tax on registered revenues

Taxpayers can choose to tax their incomes from rents according to general (progressive) income tax rules, or according to special rules (no allowances or credits with two tax brackets). We assume that incomes from rents are taxed according to general rules.

Income tax rates on registered revenues since 2022:

- 17% (20% in 2003 - 2020) for people who are classified as having a free profession (*wolny zawód*) such as painters, actors, singers, translators, architects, lawyers etc.,
- 15%, e.g. brokerage in the sale of motorcycles, photographers, sport and recreation,
- 14%, e.g. health care, architecture, specialised design,
- 12%, e.g. issuing offline computer games, software advisory,
- 10%, e.g. real estate transactions on own account,
- 8.5% up to 100,000 PLN and 12.5% over 100.000 PLN, e.g. research and development activity, rental of own immobility,
- 8,5%, e.g. museums, libraries, firefighting,
- 5.5%, e.g. building activity, commissions on one-time public transport tickets,
- 3%, e.g. gastronomy up to 1.5% alcohol, animal production, sea fishers,
- 2%, e.g. not industrially processed plant and animal products.

2.8.5 Tax card

Tax card is a form of taxation addressed primary to small business entities such as craftsmen or tradesmen. This form of taxation does not require keeping books of account. Taxes are paid on monthly regular basis, tax amounts depend on type of activity and its scale, number of employed persons, number of inhabitants in the place where activity is conducted. To become eligible for this form of taxation, entrepreneur must submit application to head of local tax office who decides whether claimant qualifies to this type of taxation or not. Base tax amounts paid on basis of this form of taxation increase each year. This form of taxation is not simulated in EUROMOD.

2.9 Consumption taxes

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

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

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

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

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

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

2.9.1 VAT (il_tva)

To extract the baseline VAT embedded in the expenditure consumption reported by households we only need the VAT rate of the policy system year. VAT rates usually do not vary too much across products, and there are four rates (standard 23%, reduced 8%, reduced 5% and zero).

Table 2.54 VAT rates [2021-2024]

	Products and services	2021	2022	2023	2024
Standard	Shrimps, jewellery, electrical appliances, cosmetics, stationery, furniture, bottled water, sugar, tea	23%	23%	23%	23%
Reduced	Pharmaceutical products, hairdressing, newspapers, public transport tickets, cinema tickets, restaurants	8%	8%	8%	8%
Super reduced	Bread, milk, meat, grains, edible oils, vegetables, fruit, books	5%	0%	0%	5%
Zero		0%	0%	0%	0%
Exempted	Medical services, postal services, financial services, education	-	-	-	-

Source: Ministry of Finance

2.9.2 Ad valorem excises (il_t xv)

Ad valorem excises cover passenger cars which are not yet registered in Poland. The rate is unharmonised in the EU and depends on the capacity and type of the engine. Tax base is defined as the purchase price or customs value of the imported or intra-Community acquired car. For

specialized vehicles, the price is reduced by the cost of modifying an equivalent vehicle to perform the same tasks as the modified one.

Table 2.55 Ad-valorem excise rates [2021-2024]

Product	Unit	2021	2022	2023	2024
Passenger cars with engine capacity > 2000 cm ³	Tax base	18.60%	18.60%	18.60%	18.60%
Plug-in hybrid passenger cars with engine capacity > 2000 ≤ 3500 cm ³	Tax base	9.30%	9.30%	9.30%	9.30%
Hybrid passenger cars with engine capacity > 2000 ≤ 3500 cm ³	Tax base	9.30%	9.30%	9.30%	9.30%
Hybrid passenger cars with engine capacity ≤ 2000 cm ³	Tax base	1.55%	1.55%	1.55%	1.55%
Other passenger cars	Tax base	3.10%	3.10%	3.10%	3.10%

Source: Ministry of Finance

2.9.3 Ad quantum excises (il_txa)

Ad quantum excise applies mainly to most energy products, alcohol and tobacco.

Table 2.56 Ad quantum excise rates [PLN per unit]

Product	Unit	2021	2022	2023	2024
Coal and coke	GJ	1.28	1.38	1.38	1.38
Motor gasoline	1000 l	1514	1413	1529	1529
Aviation gasoline	1000 l	1822	1822	1822	1822
Jet engine fuels	1000 l	1822	1822	1822	1822
Diesel	1000 l	1822	1822	1822	1822
Jet fuels	1000 l	1446	1446	1446	1446
Diesel oils	1000 l	1145	1104	1160	1160
Self-contained biofuel components	1000 l	1145	1104	1160	1160
Diesel oils for heating purposes	1000 l	232	97	232	232
Light heating oils	1000 l	232	97	232	232
Heavy heating oils	1000 kg	64	69	69	69
Lubricating oils and preparations	1000 l	1180	1180	1180	1180
Liquefied petroleum gas for driving IC engines	1000 kg	644	387	659	659
Gaseous fuels for driving IC engines	GJ	10.02	10.32	10.32	10.32
Other gaseous fuels for driving IC engines	GJ	13.7	14	14	14
Other motor fuels	1000 l	1771	1786	1786	1786
Gaseous fuels for heating purposes	GJ	1.28	1.38	1.38	1.38
Other heating fuels with density < 890 kg/m ³	1000 l	232	97	232	232
Other heating fuels with density ≥ 890 kg/m ³	1000 kg	64	69	69	69
Electricity	MWh	5	4.6	5	5
Ethyl alcohol	hl 100% vol.	6275	6903	7248	7610
Beer	hl °Plato	8.57	9.43	9.90	10.40
Wine	hl	174	191	201	211
Fermented beverages	hl	174	191	201	211
Cider and perry ≤ 5% vol.	hl	97	97	97	97

Intermediates	hl	350	385	404	424
Cigars and cigarillos	kg	433	433	476	524
Chewing tobacco	kg	252.25	252.25	277.48	305.23
E-liquid for electronic cigarettes	ml	0.55	0.55	0.55	0.55

Source: Ministry of Finance

2.9.4 Mixed excise

Ad quantum and at the same time ad valorem excise are used in the case of cigarettes, smoking tobacco and novelty products.

Table 2.57 Mixed excise rates [PLN]

Product	Unit	2021	2022	2023	2024
Cigarettes	1000 pcs. + max retail price	228.10 + 32.05%	228.10 + 32.05%	250.91 + 32.05%	276.00 + 32.05%
Smoking tobacco	kg + max retail price	155.79 + 32.05%	155.79 + 32.05%	171.37 + 32.05%	188.51 + 32.05%
Innovative products	kg + % of Weighted Average Price	155.79 + 32.05%	311.58 + 32.05%	342.74 + 32.05%	377.01 + 32.05%

Source: Ministry of Finance

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

- Prices per product, usually from last year, but for instance, fuel prices have only 15 days delay.
- Inflation: Harmonised Index of Consumer Prices (HICP, Eurostat) at COICOP 5 digits, usually for the first quarter for beta release and up to third quarter 3 for final release.
- Inflation quarter-on-quarter forecasts (DG ECFIN, confidential) by HICP main groups (Unprocessed food, Processed food including alcohol and tobacco, Non-energy industrial goods, Energy, Services - overall index excluding goods) of quarters 2, 3 and 4, as needed for each release.

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

The price of (indicate product) did not followed this general sources/nowcasting strategy but was sourced from (indicate source) because (indicate reason).

•EUROMOD modelling

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

2.10 Extraordinary measures

2.10.1 Covid-19: Wage compensation scheme COVID-19 (yemcomp_pl)

- *Definitions*

Firms can receive a variety of financial support from the government if they are affected by COVID. The magnitude of support varies depending on the size of the firm, the scale of impact resulting from COVID and the ensuing lockdown, and the form of employment of the worker. A firm may choose to apply for various sources of support, but may only receive one source of funding for each worker. COVID response policies are intended to help maintain the employment of workers for the duration of the lockdown, thus they are available for anywhere from 1 – 3 months, and are provided in the form of partial wage compensation and SSC exemptions aimed at lowering labour costs. In our simulations we do not pass on reductions in employer SSC payments as we cannot expect such a short-term programme to be passed over to workers through increases in wages. For employees working in firms which can demonstrate revenue losses during the COVID lockdown there are three main sources of wage compensation as a means of employment protection.

- *Eligibility conditions*

Firms can apply for a range of compensation depending on their size and scale of losses.

- *Income test*

There is no income test. However, the benefit is included in the income base for taxation and SSC. SSC can also be reduced as part of the scheme.

- *Benefit amount*

The benefit amount varies depending on the above-mentioned factors. One option is for the firm to furlough workers, in which case the employees receive the minimum wage (2600 PLN per month), with the firm and the government each covering 50% of the salary. Alternatively, they may reduce a worker's hours to 80% of their pre-pandemic working hours up to a minimum salary of 2600 PLN per month. In this case the firm will receive 50% of the employees reduced salary up to 2079 PLN per month. Alternatively, if a firm can demonstrate revenue losses in the range of 30% - 50%, 50% - 80% or over 80%, they can apply for a wage compensation scheme with the value of 1300 PLN, 1820 PLN or 2340 PLN per month per worker respectively. Civil contract workers and the self-employed without any employees are eligible for an alternative benefit of 2080 PLN per month if they or their firm can demonstrate revenue losses resulting from COVID. In this case the wage compensation is not dependent on a reduction of working hours or furlough. Furthermore, all workers in small firms (less than 10 employees) are exempt from paying SSC for three months, while workers in firms with 10-49 employees are only liable for half of their regular SSC payments. Workers on furlough are exempt from SSC, while those with reduced hours can deduct up to 373 PLN per month.

- *EUROMOD notes*

In the simulated wage compensation schemes furloughed or reduced working hours are randomly allocated to those identified as most at risk to demand shocks during the lockdown. Labour transition model based data are produced by Eurostat, using detailed distributional information on the loss of jobs and short-term work schemes from the Labour Force Survey and administrative data. The impact across different categories of individuals, the duration of unemployment/absence and percentage of hours worked are modelled using the EU-LFS longitudinal and quarterly transitions as target. For more information please consult the methodological note available at

9a70fb55-ceb7-d25a-1b31-ab0c030095d2 (europa.eu). We do not model the compensation related to the firms losses, since we do not have statistics on the firms benefitting from this scheme, and because this scheme can be considered as a firm subsidy.

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

3.DATA

3.1 General description

The primary database used for the purpose of microsimulation in EUROMOD is the UDB SILC. However, supplementary database had been provided by CSO for the purpose of income variables disaggregation which is described more precisely in section 3.3.3 of the report.

Table 3.1 EUROMOD database description

EUROMOD database	2021
Original name	UDB EU-SILC
Provider	GUS
Year of collection	2021
Period of collection	September – November
Income reference period	2020
Data version	EU-SILC Cross UDB 2021 – version of 2022-09
Sample size	17,004
Response rate	83.5%

The survey unit is the household and all the household members who were at least 16 years old by December 31, 2020. The survey does not cover collective accommodation households (such as boarding house, workers’ hostel, pensioners’ house or monastery), except for the households of the staff members of these institutions living in these buildings in order to do their job (e.g. hotel manager, tender etc.). The households of foreign citizens should participate in the survey.

Definition of the household

Household is a group of persons related to each other by kinship or not, living together and sharing their income and expenditure (multi-person household) or a single person, not sharing their income or expenditure with any other person, whether living alone or with other persons (one-person household). Family members living together but not sharing their income and expenditure with other family members make up separate households. The household size is determined by the number of persons comprised by the household.

The household composition did not account for:

- individuals over 15 years of age, absent from the household for education purposes, living in boarding houses, students’ hostels or private dwellings;
- persons in prison;

- persons absent from the household at the time of the survey, staying at education centres, welfare houses or hospitals, if their real or intended stay outside the household is more than 6 months;
- persons (household’s guests) staying in the household at the time of the survey who have been or intended to be there for less than 6 months;
- persons renting a room, including students (unless they are treated as household members);
- persons renting a room or bed for the time of work in a given place (including such works as land melioration, geodetic measurements, forest cut-down or building constructions);
- persons living in the household and employed as au pairs, helping personnel on the farm, craft apprentices or trainees.

Weights

A two-stage sampling scheme with differentiated selection probabilities at the first stage was used. Prior to selection, sampling units were stratified. The first-stage sampling units (primary sampling units - PSU) were enumeration census areas, while at the second stage the selection of dwellings was conducted. All the households from the selected dwellings are supposed to enter the survey.

According to Statistics Poland (2016d): *“The strata were the regions (voivodships or parts of a voivodship, according to NUTS 2 classification) and within the regions primary sampling units were classified by class of locality. In urban areas census areas were grouped by size of town¹³. Big cities formed independent strata, but in the five largest cities districts were treated as strata. In rural areas strata were represented by rural gminas of a subregion or of a few neighbouring powiats. Altogether, 254 strata were distinguished.”*

It was decided that the sample should include about 24 000 dwellings in the first year of the survey (2005). Proportional allocation of dwellings to particular strata was applied. The number of dwellings selected from a particular stratum was in proportion to the number of dwellings in the stratum. Furthermore, the number of the first-stage units selected from the strata was obtained by dividing the number of dwellings in the sample by the number of dwellings determined for a given class of locality to be selected from the first-stage unit. In towns with over 100 000 population 3 dwellings per PSU were selected, in towns with 20-100 thousand population – 4 dwellings per PSU, in towns with less than 20 000 population – 5 dwellings per PSU, respectively. In rural areas 6 dwellings were selected from each PSU.

Design factor – DB080 is equal to the dwelling sampling fraction reciprocal in the h -th stratum. DB080 weights were adjusted with the use of household non-response rates estimated for each class of locality separately.

Table 3.2 Descriptive statistics – interview response rates

Class of locality	Completeness rate
Poland	0.875
Warsaw	0.822
Towns 500 000 – 1 000 000 inhabitants	0.801
Towns 100 000 – 500 000 inhabitants	0.930
Towns 20 000 – 100 000 inhabitants	0.902
Towns less than 20 000 inhabitants	0.856
Rural areas	0.866

Non-response

Household non-response rate was 59.6%. The number of contacted households was 19,687 out of 20,086 in the sample and 17,017 interviews were conducted. The main reason for lack of contact was “Address impossible to access” (270 cases). The main reason of non-responding was “Refusal” (1,476 cases) and “Inability to make contact with the household” (163 cases).

The number of accepted interviews for people at age of 16 or more was 31,390. There were 20,608 face to face interviews and 14,686 proxy interviews among them. The interviewers decided on proxy interviews only if the substitute respondents were well informed about the situation in the household and there was no other possibility to get the information. Proxy interviews were performed in the following situations:

1. no contact with the respondent because of long-term absence (e.g. work in another town or abroad);
2. respondent’s disability, illness or pathology (such as alcoholism);
3. according to other members of the household, the respondent was only available late at night and was not willing to participate in such a long interview, while at the same time the proxy could provide detailed information, even based on the documents, such as tax statements.

3.2 Data adjustment

No household was dropped from the sample. There were no adjustments of weights performed as well.

3.3 Imputations and assumptions

3.3.1 Time period

Socio-demographic information in EU-SILC 2021 - such as age, marital status, household composition, education, living condition, health, refer to year of data collection (2021).

Information on labour market activity and working history covers partially year of data collection and in some characteristics refer to year 2020. This includes information on working status in 2020, attributes of employing company (such as size and sector) or changes of labour market activities in year 2020 and reasons of that changes.

The EU-SILC UDB information on incomes refers to the year 2020. It includes i.e. employment income, self-employment income, unemployment benefits, old-age benefits, survivor’ benefits, sickness benefits, disability benefits. Monetary amounts in the original variables are usually denoted in yearly amounts in Euro.

For most income variables, information on for how many months given income source or benefit was received is available. In ascertainment of few benefits take-up period in months, additional information from Statistics Poland played important role, like for example in case of family benefits, unemployment benefits or social assistance.

In EUROMOD database monetary amounts from EU-SILC data which are expressed in annual amounts were divided by 12 and are denoted in national currency.

3.3.2 Gross incomes

Although the official publication entitled: *“Incomes and living conditions of the population in Poland (report from the EU-SILC survey of 2021)”* which had been published by the Statistics Poland contains a section devoted to data imputation, the description of imputation process applied to missing gross income variables is very general and it does not clearly state which methods were applied in imputation of particular gross/net income variables.

The report suggests that missing income data was imputed with either use of stochastic or deterministic imputation methods and it describes downsides and strengths of both imputation methods groups. Moreover, it mentions that in the imputation process of missing data or incomplete survey data, such methods as hot-deck method, regression imputation with randomly selected empirical residuals, regression deterministic imputation and deduction imputation were used.

3.3.3 Disaggregation of harmonized variables

Indicators provided by the Polish Statistics Poland

Annual information for incomes is available in UDB SILC. The main disadvantage of this dataset is the fact that incomes are aggregated into a limited number of broad income categories and that the data does not include specific crucial information from the point of view of microsimulation, such as disability status, flat size and farm size.

One important consequence of income aggregation in UDB SILC is that the same source of income may appear in several aggregated categories. In the case of Poland this applies in particular to:

- 1) nursing benefit, which falls into either: old-age benefits, disability benefits or income received by individuals aged under 16,
- 2) survivor’s pension, which may be included in survivor pensions, old-age benefits or income received by individuals aged under 16,
- 3) retirement pension which may be included in old-age benefits or family related benefit (if a person is below the statutory retirement age and retired in order to take care of a disabled child).

The primary database for the purpose of microsimulation in EUROMOD is the UDB SILC. On a special request from the Polish partner, the Centre for Economic Analysis, the Polish CSO prepared an additional database with data on flat size, farm size, disability levels and dummy variables indicating receipt of a specific income item (without amounts). Thanks to this information, we can identify, for example, that nursing allowance or family allowance was reported by a specific household, but we have no information about the amounts. The dataset provided by the Polish Statistics Poland was used to generate microsimulation indicators which were matched with the UDB SILC database. A complex set of imputations has been applied to this combined data to disaggregate some elements of the aggregated UDB incomes, which has substantially improved the quality of data validation process and subsequently also the simulations. We are very grateful to the representatives of the Polish CSO for making the indicator data available and for their helpful assistance. Below we refer to this database as the SILC national indicator database (SILC-NID).

PLEASE NOTE – any EUROMOD analysis using the data for Poland must, in addition to the general data acknowledgement include the following statement: **“Microsimulation SILC**

indicator dataset complementing the Polish UDB SILC database was provided for the purpose of income source identification in EUROMOD by the Polish Statistics Poland.”

Income disaggregation

Incomes aggregation in UDB SILC is presented below.

Table 3.3 Income aggregation in UDB SILC 2021

UDB-SILC variable		Non-simulated	Simulated
Cash employee income or near cash income	py010g	Labour Act employment, Civil Law employment, Maternity leave benefit, Sickness benefit	
Self-employment income	py050g	Business self-employment income, Agricultural self-employment income.	
Unemployment benefits	py090g	Pre-retirement allowance, Pre-retirement benefits, Employment gratuity	Unemployment benefits (partially)
Old-age benefits	py100g	Old-age pension, Supplements to pensions, Retirement gratuity, Rehabilitation allowance, Survivor’s pension, structural pension	Nursing allowance Nursing supplement
Survivor’ benefits	py110g	Survivor’s pension, Supplements to pensions	
Sickness benefits	py120g	Sickness benefits, Compensation for injury	
Disability benefits	py130g	Disability pension, training supplement, rehabilitation allowance, Social pension Special scholarship for disabled student	Nursing benefit
Family/children related allowances	hy050g	Supplements to pensions Supplement to lone parent Supplement for education outside living place) Alimony down payment, Old-age pension Supplements to pensions	Family allowance, childcare leave supplement, Supplement to lone parent, Supplement for large families, Child birth supplement, Education and rehabilitation of disabled child, Supplement for starting school, One-off child birth benefits, Maternity benefit, Nursing allowance, Special nursing allowance, childcare allowance, start of school year allowance
Social exclusion	hy060g	Other special allowances from Social Assistance,	Permanent Social Assistance,

Income received by people aged under 16	hy110g	Other financial support from NGOs Survivor’s pension, Scholarship,	Temporary Social Assistance Nursing benefit
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The variables from SILC were separated into EUROMOD variables using the variables from the SILC-NID as follows:

Table 3.4 Data disaggregation using national indicators (EU-SILC -> EUROMOD)

	SILC variables				
	py090g	py130g	py100g	py110g	hy100g
EUROMOD variables:					
bun	bun				
pyr	pyr				
ysv	ysv				
pdi00		pdi00	<i>poadp</i>		
poa00			<i>poa00</i>		
			<i>poafr</i>		
			<i>poasp</i>		
psu00			<i>psu_poa</i>	psu00	<i>psu_cb</i>
pdiuc		pdiuc	<i>poa_pdiuc</i>		<i>psu_uc</i>
pdinw		pdinw			
bed		<i>pdist</i>			<i>psu_ed</i>
					<i>psu_emp</i>
poaot			<i>poart</i>		
psuot				<i>psu_dg</i>	

Variables written in italics (e.g. *poadp*, *poafr*, *poasp*, *psu_poa*, *psu_cb*, *psu_uc*, *psu_ed*, *psu_emp*, *pdist*, *poart*, *psu_dg*) are not included in the final dataset. They are components of EUROMOD variables. After disaggregating SILC variables and aggregating components into EUROMOD variables one may assume that:

1. a number and a value for old-age pension (poa00) should be smaller in Euromod than in UDB (py100g) since some observations are re-classified as disability pension (pdi00) or survivor pension (psu00) or nursing benefit (pdiuc) or other old-age benefit (poaot);
2. a number and a value for disability pension (pdi00) should be similar to the values in UDB. However some observations for disability pensions from UDB were re-classified into nursing benefit (pdiuc) or social pension (pdinw) or education benefit (bed) while some observations from py100g were added to pdi00;
3. a number and a value for survivor pension (psu00) should be significantly above values in UDB due to survivor pensions paid to children that are part of hy100g and the pensions paid to widows in retirement age that are included in py100g;
4. nursing benefit (pdiuc) is imputed from components of py130g, py110g and hy100g;
5. social pension (pdinw) is part of py130g;
6. other old-age benefit (poaot) includes severance payment to retirees;
7. Other survivor pensions (psuot) includes death grant;

8. “Incomes received by people aged under 16” (hy110g) included in survivor pension (psu00), nursing benefit (pdiuc) and education benefits (bed) are allocated to the main person in a household (int_order = 1).

Special treatment was applied to family benefits (hy050g). The variable includes main family allowance, supplements to it, maternity benefit and other minor transfers. Family allowance is often main object of policy change that is why it is important to separate simulated and non-simulated incomes. Otherwise, we would not be able to correctly define incomes while simulating housing benefit and social assistance and it would be impossible to measure hypothetical disposable income. Components of hy050g were identified by comparison of the declarations in the SILC-NID data with system values.

Table 3.5 Disaggregation of family benefits (hy050g)

Simulated and in UDB		Non-simulated and in UDB	
bch00	Main family allowance	<i>bcc</i>	Childcare leave supplement
bchlp00	Main lone parent supplement	<i>bchunlp</i>	Minor lone parent supplement
bchlg	Large family supplement	<i>bchoe</i>	Outside education
bchba	Child birth supplement	<i>bma</i>	Maternity benefit
bhuc	Universal child birth allowance	<i>bfaam</i>	Alimony Fund allowance
berdi	Nursing allowance	<i>bchfsa</i>	Foster family benefit
bdinc	Special nursing allowance		
bchcc	Childcare allowance		
Simulated but not in UDB			
bchdied	Education and rehabilitation supp.		
bched	Starting school supp.		
bed00	Start of school year allowance		

Social exclusion benefits (hy060g) are split into three variables: permanent social assistance (bsapm), temporary social assistance (bsatm) and other social assistance (bsaot).

Table 3.6 Disaggregation of social exclusion benefits (hy060g)

Simulated and in UDB		Non-simulated and in UDB	
bsapm	Permanent social assistance	<i>bsaot</i>	Special social assistance and help from NGO’s
bsatm	Temporary social assistance		

Farmer status imputation

Social security contributions for farmers and agricultural tax are based on the size of arable land. This makes it necessary to identify famers in the model. While creating EUROMOD dataset, the main information used to derive farmer status was question dg4 which is collected at the household level. This question gives answer to whether particular household conducted agricultural activity in 2019. In order to impute the farmer status from household level data, additional conditions were checked for in Euromod’s dataset 2020. Imputation includes two stages. In the first stage a person is classified as a farmer if she/he:

1. is a member of a household conducting agricultural activity and
2. has economic status either of farmer, employer/self-employed, employee, inactive person or status ‘other’ and

3. is older than 15 years old and
4. does not have employee cash or near cash income

A person is not classified as a farmer if they use a farm and income from self-employment is not declared but income from paid-employment is positive. If the number of farmers identified by the first stage is lower than the number of household members paying farmer social contributions in the household (question dg10), an additional round of imputation is conducted. The second round of imputation is performed with use of the same conditions as those enumerated in the first stage of imputation.

Imputed housing rent

Values for mortgage interest per square metre are imputed if a reported value is above the median. The imputation is based on a linear prediction with flat size, degree of urbanization, dwelling type, number of rooms available to the household, household size, household type and total disposable household income.

3.4 Uprating

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

As a rule, uprating factors are provided both for simulated and non-simulated income components present in the input dataset. Note however that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the uprated original variables in the dataset. Uprating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable. The list of uprating factors as well as the sources used to derive them can be found in Annex 1. Uprating Factors (Table A1.1 and Table A1.2).

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

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

Table 3.7 summarizes the major features of the most recent database used to be run with the policy systems of 2021-2024.

Table 3.7 Extended EUROMOD database description

Extended EUROMOD database for the simulation of consumption taxes	SILC 2021 – Income year 2020 – Expenditures from HBS 2015
EUROMOD database	PL_2021_b1_2015_03_e2
Year of collection (HBS) and source	HBS 2015 – EU

Year of collection (SILC) and source	SILC 2021 – EU
Coverage and sample size	17,004
Share of households with negative incomes excluded from the matching procedure	0.24%

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

For the case of Poland, data PL_2021_b1_2015_03_e2, the number of variables included (income shares of expenditures, xs_c*) are 193 (please modify if needed), corresponding to the harmonized consumption categories defined at COICOP 2003 level 4 (five digits)

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

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

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

Note that for PL the expenditure shares of category CP022 and CP127 are equal to zero.

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

Table 3.8. Expenditure coverage of Extended EM Input files

COICOP group	HBS 2015 – Extended EM Input 2015	HBS 2015 – Extended EM Input 2021
1	101.27%	114%
2	105.97%	119%
3	101.15%	106%
4	97.51%	109.83%

5	103.68%	110.02%
6	105.17%	109.68%
7	115.91%	115.16%
8	100.69%	109.81%
9	105.35%	101.09%
10	112.23%	95.31%
11	106.06%	99.53%
12	81.99%	83.58%

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. Validation Tables. 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. Factors that may explain the observed differences are also discussed.

4.1.1 Components of disposable income

The components of disposable income used in EUROMOD and in EU-SILC data are listed in the table below. Although almost all income components from the table are present in both concepts of disposable income, there are some differences between disposable income calculated in EUROMOD and in EU-SILC.

While fringe benefits, such as company cars are present in EU-SILC disposable income, EUROMOD disposable income (ils_dispy) does not include them. The values of pensions from individual private plans are included in EUROMOD disposable income while in EU-SILC this value is omitted. Finally, the repayments/receipts for tax adjustment are not taken into account in EUROMOD, while in EU-SILC they are present.

Total disposable household income in EU-SILC (HY020) is computed as the sum of all household members' gross personal income components and gross income components at household level minus: regular taxes on wealth, regular inter-household cash transfer paid, tax on income and social insurance contributions. What in EU-SILC variables notation can be denoted as:

$$\begin{aligned}
 \text{HY020} = & \sum \text{PY010G} + \sum \text{PY021G} + \sum \text{PY050G} + \sum \text{PY080G} + \sum \text{PY090G} + \sum \text{PY100G} + \\
 & \sum \text{PY110G} + \sum \text{PY120G} + \sum \text{PY130G} + \sum \text{py140G} + \text{HY040G} + \text{HY050G} + \text{HY060G} + \\
 & \text{HY070G} + \text{HY080G} + \text{HY090G} + \text{HY110G} - \text{HY120G} - \text{HY130G} - \text{HY140G}
 \end{aligned}$$

The standard disposable income in EUROMOD (ils_dispy) is calculated as follows:

ils_dispy = Original income (ils_origy) + benefits (ils_ben) – taxes (ils_tax) – employee social insurance contributions (ils_sicee) – self-employed social insurance contributions (ils_sicse).

Table 4.1 Components of disposable income

	EUROMOD	EU-SILC
	ils_dispy	HY020
Employee cash or near cash income	yem	py010g
Employer's social insurance contribution	tscer_s	py030g
Company car	-	py021g
Contributions to individual private pension plans	xpp	py035g
Cash benefits or losses from self-employment	yse	py050g
Pension from individual private plans	ypp	py080g
<i>Unemployment benefits</i>	bun_s	py090g
<i>Old-age benefits</i>	poa	py100g
<i>Survivor' benefits</i>	psu00, psuot, psuor	py110g
Sickness benefits	bhl	py120g
Disability benefits	pdi00, pdinw, pdiuc_s	py130g
Education-related allowances	bched_s, bchdied_s	py140g
Income from rental of a property or land	ypr	hy040g
<i>Family/children related allowances</i>	bch00_s, bchba_s, bchlp00_s, bchlg_s, bchuc_s, bchbamtna_s, bdinc_s, bchot	hy050g
Social exclusion not elsewhere classified	bsapm_s, bsatm_s	hy060g
Housing allowances	bho_s	hy070g
Regular inter-household cash transfer received	ypt00, yptmp	hy080g
Interests, dividends, etc.	yyi	hy090g
Income received by people aged under 16	yot	hy110g
Regular taxes on wealth	tpr	hy120g
<i>Regular inter-household cash transfer paid</i>	xmp	hy130g
<i>Tax on income and social contributions</i>	ils_tax ils_sicee ils_sicse	hy140g
<i>Repayments/receipts for tax adjustment</i>	0	hy145n

4.1.2 Validation of market incomes

Macrovalidation tables are included in Annex 3. Validation Tables. Simulations are done using policy rules valid as of the 30th June.

The first step of validation concerns the components of market income in scope of recipient numbers and its aggregated values. Relevant values are included in **Error! Reference source not found.** for number of recipients and in **Error! Reference source not found.** for values of aggregates. Limited availability of external statistics restricts the validation of market income components. Those statistics that are accessible refer to the numbers of recipients and the values of employment and self-employment income.

The number of permanent employment income recipients in EU-SILC (11,454 thousand recipients) fits well with the values reported by CSO for years 2021 - 2023. The ratios between

EUROMOD and external statistics fall in the range between 95% and 96%. The agriculture self-employment income recipients number accounts for 789 thousand individuals in EUROMOD database and it is under the number reported by external statistics with ratios equal to 69% - 83%. Non-agriculture self-employment income recipients number accounts for 2,294 thousand individuals in EUROMOD database and it is above the number reported by external statistics with ratios equal to 111% - 117%.

Aggregated values of 2021 permanent employment income in the EUROMOD database are quite close to values presented in external statistics. Relevant ratios for years 2021 and 2022 equal to 89%. The value of self-employment income is not possible to compare with external statistics, as the administrative data aggregates the self-employed with employers, meaning that the income of business owners is included the total value. Furthermore, as it is stated in the list of EU-SILC target variables³: “collection of accurate income information from the self-employed is one of the most problematic areas for surveys”. The self-employed often do not separate their business and personal finances while they are responding to survey questions. Moreover, it is said that the self-employed are less likely than the employed to respond to income surveys, which results in a higher level of item non-response. Finally, the financial and accounting framework used in the construction of national accounts by statisticians does not relate well to those used by the self-employed.

4.1.3 Validation of taxes and social insurance contributions

Error! Reference source not found. contains the validation of the number of simulated taxes/social security contributions payers. The number of employees who contribute to social insurance looks poorly identified by the model. The simulation for 2021 - 2023 returns 132% - 133% of the number of employees paying SIC. When it comes to aggregated values (**Error! Reference source not found.**), the simulation for 2021 captures 55% of contributions paid by employees, 60% in 2022 and 58% in 2023. However, it is important to highlight that EUROMOD output and external data are measured using different units: EUROMOD output counts the number of payers in a year; external statistics measure the average monthly number of payers. The latest statistic for the number of persons employed in the “shadow economy” is from 2022, and is estimated at around 342 thousand⁴. This supports the assumption that unregistered employment is the main reason for the observed differences in the case of the simulated number of contributions payers. The difference with respect to simulated aggregated are likely to be a result of the EUROMOD input data not capturing the top of the income distribution properly. The same arguments are valid for simulated employer contributions.

The simulated number of the self-employed who pay social security contributions is 13% above the figure sourced from external data for 2021 and 2023 and 15% in 2022. When it comes to aggregated values simulated for 2021 and 2022, the simulated values of self-employed contributions are 37% above benchmark value, with a lower over-simulation of 23% in 2023. Similar explanations to those described above for employees apply for the self-employed too. The model simulates the number of contributors in a year, while administrative data is expressed as a monthly average. Moreover, there is also a concern about unregistered economic activity of the self-employed that is not reflected by the model. The number of self-employed who contribute for illness insurance is over-simulated because the model assumes that it is paid by all self-employed, while the contribution is voluntary. Moreover, part of the observed discrepancies might, to some extent, be explained by the application of the 60% rate used to calculate the income base for self-employed social contributions. In reality, the self-employed running a business for less than two years and those who are disabled can use a reduced rate of 30% to calculate the

³Eurostat (2016).

⁴ Central Statistical Office (2019b).

income base for self-employed social security contributions. The simulated number of payers of social contributions for farmers has ratios between 151% and 193% in 2021 – 2023 and the amounts are over-simulated by 48% - 68%.

Ratio for the number of income tax payers for 2021 is simulated with an accuracy of 92%, decreasing to 63% in 2022, when compared to external statistics. The significant drop in the number of taxpayers in 2022 results from the increase of the tax free allowance from PLN 8,000 to PLN 30,000 per year. The aggregated value for personal income tax is over-simulated by 15% in 2021, and under-simulated by 49% in 2022 and 2023. Again, the 2022 tax reform led to significant reduction in income tax revenues. This effect is over-simulated, since the reform cuts taxes for a vast majority of the income distribution, but increases taxes for the richest households. These missing top incomes in the data mean that these additional revenues from the reform are missing in the simulated income tax revenues.

4.1.4 Validation of benefits

Error! Reference source not found. presents a validation of the number of recipients of benefits. Looking closer to subgroups of pensioners reveals an over-simulation in the number of retirement pension recipients with ratios of 115% - 118% and ratios of 118% - 133% in the group of disability pension recipients. At the same time the number of survivor's pension recipients is under-simulated with ratios of 50% - 51%. The under-simulation of the number of survivors pension recipients may be partially explained by the fact that those benefits can be perceived by their claimants as either old-age (retirement) or disability pensions and incorrectly reported in the survey data. If one would add up the numbers of recipients of disability, retirement and survivor's pensions and compare it with the relevant sum of external statistics then the ratio of accuracy would be 107% - 108%. This shows that in general the information about recipients of disability, old-age and survivors pensions in EUROMOD is accurate. The number of recipients of the social pension and is quite accurate in the data with ratios of 91% - 93%. In the case of early retirement it is 104% - 159%. Unfortunately, the statistics that allow for the validation of the number of recipients of other non-simulated benefits included in **Error! Reference source not found.** are not provided in publicly available sources.

Error! Reference source not found. includes disability pensions, old-age pensions, survivors pension and pre-retirement benefit aggregated yearly amounts. Disability pension amounts are under-simulated with ratios of 83% - 84%, and survivor pension amounts have a ratio of 39% - 43%. Under-simulation of survivors benefit aggregated amounts has the same explanation as in the case of number of recipients. Taking all old-age benefits together, they are simulated with an accuracy of 85% -102%, which is quite close to the official statistics. The claimants of those benefits presumably reported them in the survey as old-age pensions. Similarly, as in case of the number of recipients, there is no clear explanation of deviations of simulated values of pre-retirement benefits from the values reported in official statistics.

The property tax validation shows that households included in the data paid 14% - 15% of the total value reported by the Ministry of Finance, which may be accurate because, except for households, private companies and state entities are also liable to pay property tax.

The validation of the number of recipients of family allowance and its supplements is hampered due to the fact that the EUROMOD output in this case is on a family level and most official statistics concerning family benefits reflect the number of children. The only external statistics concerning family benefits expressed in number of families eligible are those about families claiming family allowance and supplement due to childcare leave. The number of recipients of main family allowance is under-simulated by the model. For 2023, the model simulates that 416

thousand families were eligible for family allowance. This number accounts for 92% of the families reported in official statistics.

Aggregated amounts of simulated family benefits in **Error! Reference source not found.** show that eligibility identification is the main problem in case of family benefits simulation. Simulated values of supplement for child birth vary from 56% to 94%. Aggregated values of the supplement for starting the school year are not much similar compared to benchmark statistics, capturing 58% to 77% of the supplement. Simulated values of the supplement for large families accounts for 67% to 86% of external statistics, while the supplement for lone parents ranges between 50% to 62% of the benchmark data. The simulated aggregated amount of child-birth allowance is over-simulated by 13% - 22%.

Identification of recipients of the nursing benefit also proved challenging. It is an important condition since according to the criteria for claiming the nursing benefit individuals above 16 years old with a moderate degree of disability can claim the benefit if their disability started before reaching the age of 21. This factor is being controlled in the simulation of the nursing benefit by the condition that an individual with a moderate degree of disability is granted the benefit if he declared take-up of the benefit in the national SILC data.

The simulated number of nursing benefit or nursing allowance recipients has ratios ranging from 59% to 108% comparing to the numbers reported in official statistics in 2021 - 2023.

The simulated number of recipients of the unemployment benefit for 2021 - 2023 is 176 thousand, while in official statistics it is 114-119 thousand. This over-simulation in EUROMOD occurs because it is the total number of recipients in a year, while external source gives a monthly average number of recipients. It is impossible to know the duration for which each recipient continues to receive the benefit. The duration varies depending on the conditions of unemployment, and thus they are often paid for less than 12 months. Still, some of the benefits are paid for 12 or even 18 months. Hence, it seems that the SILC database could represent unemployment benefit claimants accurately, but there are challenges in calibrating the validation to the external statistics. These discrepancies are much more pronounced in the value of the benefit, with ratios of 62% - 78%

The simulation identifies 73% - 83% of the aggregate value of housing benefits. Unfortunately, the government only releases data on the number of benefits paid, rather than the number of recipients. The real eligibility test for housing benefit consists of the income test and an informal assets test by local administration, while the simulation of housing benefit recipients number is based on fulfilment of income eligibility criteria and declaration of benefit take-up in input data. Since there is no set duration for benefit eligibility, it is not possible to assess the number of recipients based on the number of paid out benefits. The aggregate value of the start of school year allowance was simulated with 99% accuracy in 2022 and 2023.

4.2 Income distribution

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

4.2.1 Income inequality

In **Error! Reference source not found.** we present income distribution indicators such as decile shares in the population, median and mean equivalised incomes, Gini coefficient and income quantile ratio. The Gini coefficient is simulated very accurately (101% and 100% in 2021 and 2022) according to external statistics from 2020 and 2021. Income quantile ratio simulated in EUROMOD is equal to 101%.

4.2.2 Poverty rates

Validation of at risk of poverty rates calculated using EUROMOD is presented in **Error! Reference source not found.** For 2021, the simulated number of individuals below 40% of the median household disposable income is simulated with ratios of 103% - 119% in 2021 and 2022 (99% - 115% for men and 108% - 120% for women). The simulated proportion of individuals below 50% median household disposable income poverty line is close to the benchmark (108% and 109%). At the same time the simulated number of people with income below 60% median household disposable income is simulated with 107% accuracy in 2021 and 108% in 2022, with slightly lower simulated share of population living with income below 70% of the median HDI (104% - 106%).

The simulated share of people from different age groups living with income below 60% of the median HDI in 2021 - 2022 is 96% - 98% for population aged 0-15, 105% - 110% for population aged 16-24, 101% - 102% for population aged 25-49, 115% - 112% for the population aged 50-64 years and 118% - 119% for the population aged 65+.

4.3 Summary of “health warnings”

Some particular aspects should be borne in mind while using the Polish model of EUROMOD:

- 1) the weights do not control for different sources of non-response;
- 2) many sources of income are combined into one variable in EU-SILC what makes difficult to separate:
 - a) agricultural and business self-employment incomes and employment statuses;
 - b) temporary and permanent employment incomes and statuses;
 - c) work employment and sickness benefit;
- 3) simulated and non-simulated supplements to family allowance.
- 4) there are concerns that declarations on self-employment are not reliable;
- 5) the model assumes full benefit take-up and full compliance with taxes;
- 6) grey economy influence is not taken into account by the model;
- 7) tax card and lump-sum tax are not modelled in EUROMOD;
- 8) for the purpose of revenue costs assessment it is assumed that one job is performed by employees and self-employed at the area of residence;
- 9) lowered income base for disabled self-employed and those conducting business activity for less than 2 years is not modelled in EUROMOD.

- 10) The simulation of monetary compensation schemes (benefit for persons working under civil law contracts and self-employed person, SSC exemption for small firms, salary co-financing for firms with sufficient revenue losses, salary co-financing for workers with reduced working hours, and the furlough scheme) is triggered by the simulation of labour market transitions defined in policy TransLMA_cc. This policy becomes operational if the model is run in conjunction with the LMA add-on. The nature of these simulations is still experimental and only partially validated. Users are encouraged to refer to the “Simulating labour market transitions in EUROMOD” document prior to their use.
- 11) 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 2021 to be higher than disposable income in previous years.
- 12) The simulation of consumption taxes sensitively depends on the quality of the match of the extended EUROMOD files, as well as on the frequency of this data and the gaps between the input data files and the policy systems. At this point, the most recent HBS data available for all countries (EU-HBS) is 2015.
- 13) When the user runs a policy system year (e.g., 2024) that does not coincide with the incomes reported in the SILC-data used (e.g., 2022, with reported incomes from 2021), expenditures in EUROMOD are simulated under the constant income shares assumption (by default). This is because the income shares of expenditure included in the extended input files are not updated and remain constant regardless of the policy system that is used for the simulation. This means that a household that spends 10% of its income in food (e.g. the sum of all the xs_1* variables, i.e. xs01111, xs01112, and so on and so forth, is 0.10) will still spend 10% of their income in 2024, regardless of the change in incomes driven by the uprating factors and tax-benefit changes. This implicitly assumes an income elasticity of one.

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ANNEX 1. UPRATING FACTORS

Table A1.1 Raw indices for deriving EUROMOD uprating factors

Index	Income source / index type	2021	2022	2023	2024
\$f_h_cpi	Eurostat / Harmonized Indices of Consumer Prices (HICP)	141.77	161.97	179.68	190.81
\$f_lab_cost	Statistics Poland / Statistical Bulletin / Average monthly wages and salaries – grand total, IV-VI	5504.52	6156.25	7005.76	8038.41
\$f_ret_pen	Statistics Poland / Statistical Bulletin / Average monthly retirement pay and pension in PLN / from non-agricultural social security system / retirement pay	2711.42	2995.29	3555.92	4042.85
\$f_dis_pen	Statistics Poland / Statistical Bulletin / Average monthly retirement pay and pension in PLN / from non-agricultural social security system / disability pension	2147.16	2344.41	2744.47	3191.72
\$f_fam_pen	Statistics Poland / Statistical Bulletin / Average monthly retirement pay and pension in PLN / from non-agricultural social security system / family pension	2421.49	2629.50	3074.43	3495.55
\$f_gdp	Statistics Poland / National accounts / The CSO information on quarterly GDP estimate / Gross Domestic Product	2466164.8	2829925.6	3276268.7	3486285.4
\$f_stat_pen	- statutory indexation (wskaznik waloryzacji emerytur i rent)	104.24	107	114.8	111.9
\$f_lab_costlead	- Led Average monthly wages and salaries>grand total, IV-VI	5504.52	6156.25	7005.76	8038.41
\$f_one	Unity index	1	1	1	1
\$f_hourly_wage_lindi_1	Average hourly wage, Agriculture and Fishing (lindi = 1),	30.5734	34.7412	38.6359	38.6359

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	units of national currency				
\$f_hourly_wage_lindi_2	Average hourly wage, Mining, Manufact. and Utilities (lindi = 2), units of national currency	30.1195	34.2253	38.0623	38.0623
\$f_hourly_wage_lindi_3	Average hourly wage, Construction (lindi = 3), units of national currency	27.2859	31.0055	34.4815	34.4815
\$f_hourly_wage_lindi_4	Average hourly wage, Wholesale and retail (lindi = 4), units of national currency	32.0491	36.418	40.5007	40.5007
\$f_hourly_wage_lindi_5	Average hourly wage, Hotels and restaurants (lindi = 5), units of national currency	20.0576	22.7919	25.347	25.347
\$f_hourly_wage_lindi_6	Average hourly wage, Transport and communication (lindi = 6), units of national currency	35.615	40.47	45.007	45.007
\$f_hourly_wage_lindi_7	Average hourly wage, Financial intermediation (lindi = 7), units of national currency	44.3956	50.4475	56.1031	56.1031
\$f_hourly_wage_lindi_8	Average hourly wage, Real estate and business (lindi = 8), units of national currency	47.8732	54.3993	60.4978	60.4978
\$f_hourly_wage_lindi_9	Average hourly wage, Public administ. and defence (lindi = 9), units of national currency	35.4138	40.2413	44.7527	44.7527
\$f_hourly_wage_lindi_10	Average hourly wage, Education (lindi = 10), units of national currency	33.1738	37.696	41.922	41.922
\$f_hourly_wage_lindi_11	Average hourly wage, Health and social work (lindi = 11), units of national currency	30.4185	34.5651	38.4401	38.4401
\$f_hourly_wage_lindi_12	Average hourly wage, Other (lindi = 12),	30.9055	35.1185	39.0556	39.0556

	units of national currency				
\$f_hourly_wage	Average hourly wage, All activity sectors, units of national currency	32.7955	37.2661	41.4439	41.4439
\$f_hourly_wage_lagged	Average hourly wage, All activity sectors, units of national currency	31.3226	32.7955	37.2661	41.4439

Source: Statistics Poland (2022b-2024b), Eurostat

Table A1.2 Uprate factors

Variable	Variable label	Update factor	Factor reference name
afc	assets: financial capital	Growth of HICP	\$f_h_cpi
aoc	assets : other capital	Growth of HICP	\$f_h_cpi
bch	benefit : child	Growth of HICP	\$f_h_cpi
bch00	benefit : child : main/basic	Growth of HICP	\$f_h_cpi
bchba	benefit : child : birth/adoption	Growth of HICP	\$f_h_cpi
bchdied	benefit : child : disability : education	Growth of HICP	\$f_h_cpi
bched	benefit : child : education	Growth of HICP	\$f_h_cpi
bchlg	benefit : child : large family	Growth of HICP	\$f_h_cpi
bchcc	benefit : child : childcare allowance	Growth of HICP	\$f_h_cpi
bed00	benefit : child : start of school year	Growth of HICP	\$f_h_cpi
bchlp	benefit : child : lone parent	Growth of HICP	\$f_h_cpi
bchlp00	benefit : child : lone parent : main/basic	Growth of HICP	\$f_h_cpi
bchot	benefit : child : other	Growth of HICP	\$f_h_cpi
bcc	benefit : child care	Growth of HICP	\$f_h_cpi
bchuc	benefit : child : unconditional/universal	Growth of HICP	\$f_h_cpi
bchunlp	benefit : child : unemployment : lone parent	Growth of HICP	\$f_h_cpi
bcrdi	benefit : caring : disability	Growth of HICP	\$f_h_cpi
bdinc	benefit : disability : non-contributory	Growth of HICP	\$f_h_cpi
bed	benefit : education	Growth of HICP	\$f_h_cpi
bfa	benefit : family	Growth of HICP	\$f_h_cpi
bfaam	benefit : family : unpaid alimony	Growth of HICP	\$f_h_cpi
bfaot	benefit : family : other	Growth of HICP	\$f_h_cpi
bhl	benefit : health	Growth of HICP	\$f_h_cpi
bho	benefit : housing	Growth of HICP	\$f_h_cpi
bma	benefit : maternity	Growth of HICP	\$f_h_cpi
bot	benefit : other	Growth of HICP	\$f_h_cpi
bsa	benefit : social assistance	Growth of HICP	\$f_h_cpi

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bsaot	benefit : social assistance : other	Growth of HICP	\$f_h_cpi
bsapm	benefit : social assistance : permanent	Growth of HICP	\$f_h_cpi
bsapmot	benefit : social assistance : permanent : other	Growth of HICP	\$f_h_cpi
bsatm	benefit : social assistance : temporary	Growth of HICP	\$f_h_cpi
bun	benefit : unemployment	Growth of HICP	\$f_h_cpi
byr	benefit : early retirement	Growth of average retirement pensions	\$f_ret_pen
kfb	in kind : fringe benefit	Growth of HICP	\$f_h_cpi
kfbcc	in kind : fringe benefit : company car	Growth of HICP	\$f_h_cpi
kivho	in kind : imputed value : housing	Growth of HICP	\$f_h_cpi
pdi	pension : disability	Growth of average disability pensions	\$f_dis_pen
pdi00	pension : disability : main/basic	Growth of average disability pensions	\$f_dis_pen
pdiw	pension : disability : not working	Growth of average disability pensions	\$f_dis_pen
pdiuc	pension : disability : unconditional/universal	Growth of average disability pensions	\$f_dis_pen
poa	pension : old age	Growth of average retirement pensions	\$f_ret_pen
poa00	pension : old age : main/basic	Growth of average retirement pensions	\$f_ret_pen
poaab	pension : old age : abroad	Growth of average retirement pensions	\$f_h_cpi
poacm	pension : old age : complement	Growth of average retirement pensions	\$f_ret_pen
poacmdi	pension : old age : complement : disability	Growth of average retirement pensions	\$f_ret_pen
poacmoa	pension : old age : complement : old age	Growth of average retirement pensions	\$f_ret_pen
poacmsu	pension : old age : complement : survivors	Growth of average retirement pensions	\$f_ret_pen
poafr	pension : old age : farmer	Growth of average retirement pensions	\$f_ret_pen
poaot	pension : old age : other	Growth of average retirement pensions	\$f_ret_pen
psu	pension : survivors	Growth of average survivors pensions	\$f_fam_pen
psu00	pension : survivors : main/basic	Growth of average survivors pensions	\$f_fam_pen
psuor	pension : survivors : orphan	Growth of average survivors pensions	\$f_fam_pen
psuot	pension : survivors : other	Growth of average survivors pensions	\$f_fam_pen
psuwd	pension : survivors : widow	Growth of average survivors pensions	\$f_fam_pen

pyr	pension : early retirement	Growth of retirement pensions	\$f_ret_pen
tad	tax : repayments/receipts	No uprating	\$f_one
tin	tax : income tax	No uprating	\$f_one
tis	tax : income tax and sics	No uprating	\$f_one
tpr	tax : property tax	Growth of HICP	\$f_h_cpi
tscee	tax : sic : employee	No uprating	\$f_one
tscer	tax : sic : employer	No uprating	\$f_one
tscse	tax : sic : self-employed	No uprating	\$f_one
xcc	expenditure : child care	Growth of HICP	\$f_h_cpi
xcd	expenditure : charitable donations	Growth of HICP	\$f_h_cpi
xcmie	expenditure : communication : internet	Growth of HICP	\$f_h_cpi
xhc	expenditure : housing cost	Growth of HICP	\$f_h_cpi
xhc00	expenditure : housing cost : main/basic	Growth of HICP	\$f_h_cpi
xhchm	expenditure : housing cost : house maintenance	Growth of HICP	\$f_h_cpi
xhcmo	expenditure : housing cost : mortgage payment (interest+capital)	Growth of HICP	\$f_h_cpi
xhcmomc	expenditure : housing cost : mortgage payment (interest+capital) : mortgage capital	Growth of HICP	\$f_h_cpi
xhcmomi	expenditure : housing cost : mortgage payment (interest+capital) : mortgage interest	Growth of HICP	\$f_h_cpi
xhcot	expenditure : housing cost : other	Growth of HICP	\$f_h_cpi
xhcr	expenditure : housing cost : rent	Growth of HICP	\$f_h_cpi
xhcsc	expenditure : housing cost : service charges	Growth of HICP	\$f_h_cpi
xhcsce	expenditure : housing cost : service charges : electricity	Growth of HICP	\$f_h_cpi
xhcscht	expenditure : housing cost : service charges : heating	Growth of HICP	\$f_h_cpi
xhscrf	expenditure : housing cost : service charges : refuse	Growth of HICP	\$f_h_cpi
xhscswt	expenditure : housing cost : service charges : water	Growth of HICP	\$f_h_cpi
xishl	expenditure : insurance : health care	Growth of HICP	\$f_h_cpi
xivhcr	expenditure : imputed value : housing cost : rent	Growth of HICP	\$f_h_cpi
xmp	expenditure : maintenance payment	Growth of HICP	\$f_h_cpi
xpp	expenditure : private pension (voluntary)	Growth of average salary	\$f_lab_cost
yds	income : disposable	No uprating	\$f_one
ydses_o	income : equivalized disposable income: original SILC	No uprating	\$f_one
yem	income : employment	Growth of average salary	\$f_lab_cost
yempj	income : employment : permanent job	Growth of average salary	\$f_lab_cost
yemtj	income : employment : temporary job	Growth of average salary	\$f_lab_cost
yivwg	income : imputed value : wage/salary	Growth of average salary	\$f_lab_cost
yiy	income : investment	Growth of GDP	\$f_gdp
yot	income : other	Growth of HICP	\$f_h_cpi
ypp	income : private pension	Growth of retirement pensions	\$f_ret_pen
ypr	income : property	Growth of GDP	\$f_gdp

yprrt	income : property : rent	Growth of HICP	\$f_h_cpi
ypt	income : private transfers	Growth of HICP	\$f_h_cpi
ypt00	income : private transfers : main/basic	Growth of HICP	\$f_h_cpi
yptmp	income : private transfers : maintenance payment	Growth of HICP	\$f_h_cpi
yseag	income : self-employment : agriculture	Growth of HICP	\$f_h_cpi
ysebs	income : self-employment : business	Growth of GDP	\$f_gdp
ysv	income : severance pay	Growth of average salary	\$f_lab_cost

ANNEX 2. POLICY EFFECTS IN 2023 - 2024

Table A2.1 and Figure A2.1 show the effect of 2024 policies on mean equivalised household disposable income by income component and income decile group. This effect is estimated as the difference between simulated household net income under the 2024 tax-benefit policies (deflating monetary parameters by Eurostat’s Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2023 policies, as a percentage of mean equivalised household disposable income in 2023.

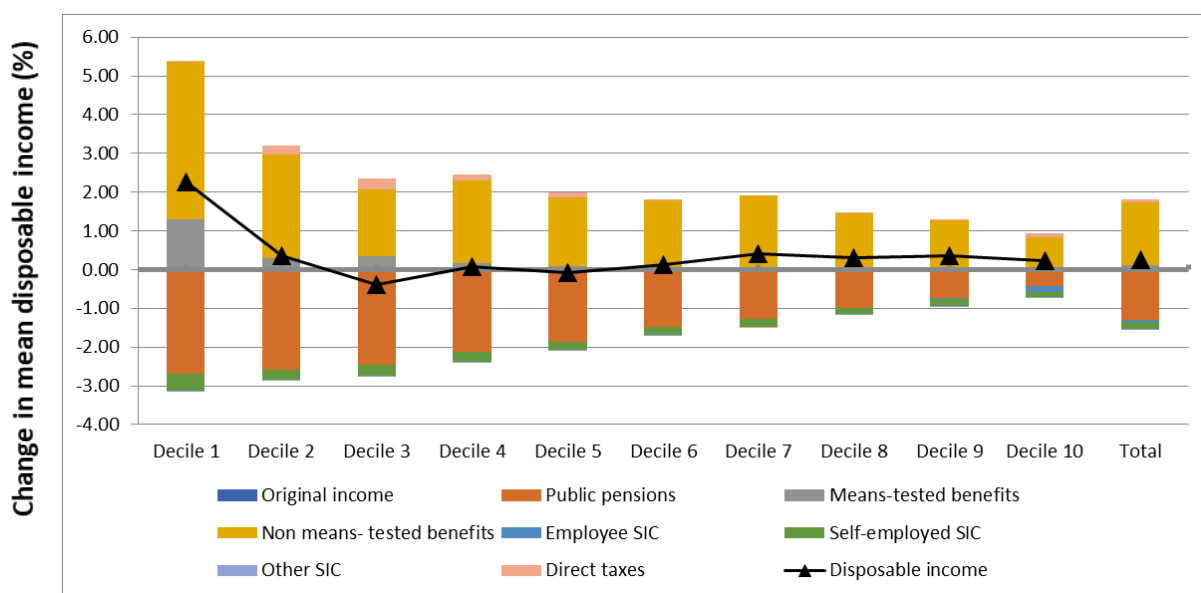
Table A2.1 and Figure A2.1 show that between 2023 and 2024 the average equivalised household disposable income (HDI) - measured in real values - increased by 0.26%. This change was mainly driven by an increase in non-means-tested benefits (by 1.61%) such as child-raising benefit (an increase from 500 PLN/month to 800 PLN/month) or the 13th pension (an increase from 1588.44 PLN/year to 1780.96 PLN/year) and means-tested benefits (by 0.12%) such as permanent social assistance (maximum amount increased from 719 PLN/month to 1000 PLN/month). The overall policy effect is negative only in the 3rd and 5th decile groups (-0.39% and -0.08%). The highest gain occurred among households in the 1st decile group (2.26% of equivalised HDI), while in other decile groups the difference even did not exceed 0.5%. Public pensions shrank in all decile groups, on average by 1.30%, with households in the 1st decile losing as much as 2.69% of disposable income and 0.41% in the case of the 10th decile group (the richer, the lower loss). There were also losses due to self-employed social insurance contributions (from -0.14% to -0.43%, on average -0.20%), whose base increased from 4161 PLN to 4694.40 PLN. There was no huge difference in employee social insurance contributions, which negatively affected mainly the richest.

Table A2.1 Policy effects in 2023-2024, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-2.69	1.29	4.09	0.00	-0.43	-0.01	0.02	2.26
2	0.00	-2.58	0.30	2.66	0.00	-0.28	0.00	0.25	0.35
3	0.00	-2.45	0.33	1.73	0.00	-0.29	0.00	0.29	-0.39
4	0.00	-2.12	0.16	2.13	0.00	-0.24	0.00	0.15	0.07
5	0.00	-1.87	0.09	1.77	0.00	-0.21	0.00	0.14	-0.08
6	0.00	-1.48	0.00	1.78	-0.01	-0.19	0.00	0.01	0.11
7	0.00	-1.27	0.04	1.87	-0.01	-0.20	0.00	-0.02	0.42
8	0.00	-0.99	0.02	1.42	0.00	-0.15	0.00	0.01	0.31
9	0.00	-0.73	0.04	1.24	-0.02	-0.19	0.00	0.03	0.37
10	0.00	-0.41	0.03	0.81	-0.16	-0.14	0.00	0.10	0.23
Total	0.00	-1.30	0.12	1.61	-0.04	-0.20	0.00	0.08	0.26

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 2023, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2024 policies by Eurostat’s Harmonized Index of Consumer Prices (HICP).

Figure A2.1 Policy effects in 2023-2024, using the CPI-indexation, %



ANNEX 3. VALIDATION TABLES

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

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earn)													
employment income, permanent job (employment contract) (yempj)	N	11,454	11,454	11,454	11,454	12,071	11,998	11,968	NaN	0.95	0.95	0.96	NaN
employment income, temporary job (different than employment contract) (yemtj)	N	3,623	3,623	3,623	3,623	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
self-employment income from agriculture (yseag)	N	789	789	789	789	954	1,151	1,103	NaN	0.83	0.69	0.72	NaN
self-employment income from business (non-agricultural) (ysebs)	N	2,294	2,294	2,294	2,294	1,956	2,028	2,076	NaN	1.17	1.13	1.11	NaN
covid-19 compensation paid by the firm (yemmc_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other original income (ils_origy - ils_earn)													
investment income (yiy)	N	272	272	272	272	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
other incomes (yot)	N	66	66	66	66	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : private pension (ypp)	N	2	2	2	2	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property income (ypr)	N	526	526	526	526	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
main private transfer (ypt00)	N	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
received maintenance payment (yptmp)	N	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maintenance obligation (xmp)	N	388	388	388	388	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

Source	Comments
Earnings (ils_earn)	
employment income, permanent job (employment contract) (yempj)	Concise Statistical Yearbook of Poland ; NOMINAL INCOME OF THE HOUSEHOLDS SECTOR ; employees -
employment income, temporary job (different than employment contract) (yemtj)	-
self-employment income from agriculture (yseag)	Concise Statistical Yearbook of Poland ; NOMINAL INCOME OF THE HOUSEHOLDS SECTOR ; in private farms in agriculture -
self-employment income from business (non-agricultural) (ysebs)	Concise Statistical Yearbook of Poland ; NOMINAL INCOME OF THE HOUSEHOLDS SECTOR ; outside private farms in agriculture -

Continued...

	Source	Comments
covid-19 compensation paid by the firm (yemmc_s)	-	-
Other original income (ils_origy - ils_earns)		
investment income (yiy)	-	-
other incomes (yot)	-	-
income : private pension (ypp)	-	-
property income (ypr)	Concise Statistical Yearbook of Poland ; NOMINAL INCOME OF THE HOUSEHOLDS SECTOR ; Property	-
main private transfer (ypt00)	-	-
received maintenance payment (yptmp)	-	"do 30 września 2008 r. — zaliczka alimentacyjna", więc już tego nie ma
Maintenance obligation (xmp)	-	"do 30 września 2008 r. — zaliczka

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

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Earnings (ils_earns)													
employment income, permanent job (employment contract) (yempj)	N	647,319	705,963	800,254	880,721	728,160	826,212	NaN	NaN	0.89	0.85	NaN	NaN
employment income, temporary job (different than employment contract) (yemtj)	N	196,638	214,453	243,096	267,539	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
self-employment income from agriculture (yseag)	N	21,823	23,800	26,978	29,691	24,873	29,095	NaN	NaN	0.88	0.82	NaN	NaN
self-employment income from business (non-agricultural) (ysebs)	N	95,986	104,682	118,663	130,595	29,474	33,039	NaN	NaN	3.26	3.17	NaN	NaN
covid-19 compensation paid by the firm (yemmc_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other original income (ils_origy - ils_earns)													
investment income (yiy)	N	1,587	1,821	2,108	2,243	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
other incomes (yot)	N	319	365	404	430	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income : private pension (ypp)	N	22	22	24	23	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property income (ypr)	N	3,764	4,320	5,001	5,322	49,870	85,779	NaN	NaN	0.08	0.05	NaN	NaN
main private transfer (ypt00)	N	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
received maintenance payment (yptmp)	N	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maintenance obligation (xmp)	N	3,440	3,930	4,360	4,630	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

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

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
Personal income tax (tin_s)	Y	23,852	16,232	18,743	18,707	0	0	0	0	0.00	0.00	0.00	0.00	26,019	26,132	NaN	NaN	0.92	0.62	NaN	NaN
Agricultural tax (tag_s)	Y	1,040	1,040	1,040	1,040	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Health insurance contributions (non-agricultural ZUS-->NFZ) (thl_s)	Y	22,997	22,388	22,805	22,783	0	0	0	0	0.00	0.00	0.00	0.00	25,329	25,424	24,957	NaN	0.91	0.88	0.91	NaN
tax : capital taxation : simulated (tkr_s)	Y	272	272	272	272	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Health insurance contributions (agricultural KRUS-->NFZ) (tfrhl_s)	Y	2,642	2,642	2,642	2,642	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Property tax (tpr)	N	11,102	11,102	11,102	11,102	11,102	11,102	11,102	11,102	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
Employee's social insurance contributions (ZUS old-age and disability + sickness) (tscee_s)	Y	14,655	14,655	14,655	14,655	0	0	0	0	0.00	0.00	0.00	0.00	10,985	10,994	11,097	NaN	1.33	1.33	1.32	NaN
Employee's social insurance contributions on maternity leave (tscmaee_s)	Y	244	244	244	244	0	0	0	0	0.00	0.00	0.00	0.00	263	251	236	NaN	0.93	0.97	1.03	NaN
Self-employed Social Insurance Contributions (ils_sicse)																					
Farmers' social insurance contributions (KRUS) (tscfr_s)	Y	1,692	1,692	1,692	1,692	0	0	0	0	0.00	0.00	0.00	0.00	875	1,123	1,076	NaN	1.93	1.51	1.57	NaN
Self-employed social insurance contributions (ZUS old-age and disability + sickness) (tsce_s)	Y	1,827	1,821	1,829	1,874	0	0	0	0	0.00	0.00	0.00	0.00	1,619	1,566	1,611	NaN	1.13	1.16	1.14	NaN
Employer Social Insurance Contributions (ils_sicer)																					
Employers' social contributions (tsceer_s)	Y	14,655	14,655	14,655	14,655	13,388	13,388	13,388	13,388	1.09	1.09	1.09	1.09	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employer's social insurance contributions on maternity leave (tscmaer_s)	Y	244	244	244	244	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Credited Contributions (ils_sicct)																					
tax : sic : unemployed : employer : simulated (tscuner_s)	Y	176	176	176	176	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
COVID credited employee SIC (tscctee_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
COVID credited employer SIC (tsccter_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
COVID credited self-employed SIC (tscctse_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other Contributions (ils_sicot)																					
social security contribution unemployed (tscunee_s)	Y	176	176	176	176	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	162	NaN	NaN	NaN	1.08	NaN

Continued...

	Source	Comments
Direct taxes (ils_tax)		
Personal income tax (tin_s)	Concise Statistical Yearbook of Poland ; THE STATE BUDGET ; personal income	-
Agricultural tax (tag_s)	Concise Statistical Yearbook of Poland ; LOCAL GOVERNMENT UNIT BUDGETS ;	-
Health insurance contributions (non-agricultural ZUS-->NFZ) (thl_s)	zestawienie ubezp zdrowotne wg grup tytułów ubezp ; OSOBY OBJĘTE OBOWIĄZKOWYM UBEZPIECZENIEM ZDROWOTNYM	-
tax : capital taxation : simulated (tkt_s)	-	-
Health insurance contributions (agricultural KRUS-->NFZ) (tfrhl_s)	INFORMACJA O ŚWIADCZENIACH PIENIĘŻNYCH Z UBEZPIECZENIA SPOŁECZNEGO ROLNIKÓW ; PRZYPIIS SKŁADEK NA UBEZPIECZENIE ZDROWOTNE	-
Property tax (tpr)	-	-
Employee Social Insurance Contributions (ils_sicee)		
Employee's social insurance contributions (ZUS old-age and disability + sickness) (tscee_s)	zestawienie ubezp emer-rent wg grup tytułów ubezp	-
Employee's social insurance contributions on maternity leave (tscmaee_s)	zestawienie ubezp chorobowe wg grup tytułów ubezp	-
Self-employed Social Insurance Contributions (ils_sicse)		
Farmers' social insurance contributions (KRUS) (tscfr_s)	KWARTALNA INFORMACJA STATYSTYCZNA ; PRZYPIIS I WPŁYWY NALEŻNOŚCI Z TYTUŁU SKŁADEK NA UBEZPIECZENIE SPOŁECZNE ROLNIKÓW WEDŁUG	-
Self-employed social insurance contributions (ZUS old-age and disability + sickness) (tscse_s)	zestawienie ubezp emer-rent wg grup tytułów ubezp , zestawienie ubezp chorobowe wg grup tytułów ubezp , zestawienie ubezp wypadkowe wg grup tytułów ubezp	-
Employer Social Insurance Contributions (ils_sicer)		
Employers' social contributions (tscer_s)	Concise Statistical Yearbook of Poland ; NOMINAL INCOME OF THE HOUSEHOLDS SECTOR	-
Employer's social insurance contributions on maternity leave (tscmaer_s)	-	-

Continued...

	Source	Comments
Credited Contributions (ils_sicct)		
tax : sic : unemployed : employer : simulated (tscuner_s)	-	-
COVID credited employee SIC (tscctee_s)	-	-
COVID credited employer SIC (tsccter_s)	-	-
COVID credited self-employed SIC (tscctse_s)	-	-
Other Contributions (ils_sicot)		
social security contribution unemployed (tscunee_s)	-	-

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

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Direct taxes (ils_tax)																					
Personal income tax (tin_s)	Y	84,556	31,827	44,696	51,889	0	0	0	0	0.00	0.00	0.00	0.00	73,606	68,107	91,666	NaN	1.15	0.47	0.49	NaN
Agricultural tax (tag_s)	Y	2,154	2,262	2,725	3,298	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1,649	1,694	1,963	NaN	1.31	1.34	1.39	NaN
Health insurance contributions (non-agricultural ZUS-->NFZ) (thl_s)	Y	82,395	87,709	100,800	106,761	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	96,818	116,185	135,992	NaN	0.85	0.75	0.74	NaN
tax : capital taxation : simulated (tkt_s)	Y	301	346	400	426	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Health insurance contributions (agricultural KRUS-->NFZ) (tfrhl_s)	Y	599	599	599	599	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	3,602	3,602	4,022	NaN	0.17	0.17	0.15	NaN
Property tax (tpr)	N	3,581	4,091	4,538	4,819	3,581	3,581	3,581	3,581	1.00	1.14	1.27	1.35	26,117	28,058	31,250	NaN	0.14	0.15	0.15	NaN
Employee Social Insurance Contributions (ils_sicee)																					
Employee's social insurance contributions (ZUS old-age and disability + sickness) (tscee_s)	Y	107,078	116,978	132,816	146,322	0	0	0	0	0.00	0.00	0.00	0.00	194,648	202,877	232,601	NaN	0.55	0.58	0.57	NaN
Employee's social insurance contributions on maternity leave (tscmaee_s)	Y	523	547	622	691	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	2,469	2,502	2,645	NaN	0.21	0.22	0.24	NaN
Self-employed Social Insurance Contributions (ils_sicse)																					
Farmers' social insurance contributions (KRUS) (tscfr_s)	Y	3,033	3,550	4,305	4,672	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	2,047	2,271	2,562	NaN	1.48	1.56	1.68	NaN
Self-employed social insurance contributions (ZUS old-age and disability + sickness) (tscse_s)	Y	18,905	21,198	24,819	28,372	0	0	0	0	0.00	0.00	0.00	0.00	13,757	15,461	20,131	NaN	1.37	1.37	1.23	NaN
Employer Social Insurance Contributions (ils_sicer)																					
Employers' social contributions (tscer_s)	Y	166,654	182,040	206,663	227,661	73,260	73,260	73,260	73,260	2.27	2.48	2.82	3.11	158,894	178,625	NaN	NaN	1.05	1.02	NaN	NaN
Employer's social insurance contributions on maternity leave (tscmaer_s)	Y	755	790	898	998	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Credited Contributions (ils_sicct)																					
tax : sic : unemployed : employer : simulated (tscuner_s)	Y	253	266	304	339	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	405	375	387	NaN	0.62	0.71	0.79	NaN
COVID credited employee SIC (tscctee_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
COVID credited employer SIC (tsccter_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
COVID credited self-employed SIC (tscctse_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Other Contributions (ils_sicot)																					
social security contribution unemployed (tscunee_s)	Y	175	184	211	235	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	280	259	268	NaN	0.62	0.71	0.79	NaN

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

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
Disability pension (agricultural and non-agricultural) (pdi00)	N	996	996	996	996	996	996	996	996	1.00	1.00	1.00	1.00	847	804	747	NaN	1.18	1.24	1.33	NaN
Social pension (pdinw)	N	268	268	268	268	268	268	268	268	1.00	1.00	1.00	1.00	289	291	293	NaN	0.93	0.92	0.91	NaN
Retirement pension (agricultural and non-agricultural) (poa00)	N	8,347	8,347	8,347	8,347	8,347	8,347	8,347	8,347	1.00	1.00	1.00	1.00	7,101	7,140	7,266	NaN	1.18	1.17	1.15	NaN
old-age pension from abroad (poaab)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Farmer's structural pension (poafr)	N	19	19	19	19	19	19	19	19	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : old age : other (poaot)	N	49	49	49	49	49	49	49	49	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
orphan pension (psuor)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Survivors pension (agricultural and non-agricultural) (psu00)	N	666	666	666	666	666	666	666	666	1.00	1.00	1.00	1.00	1,333	1,320	1,305	NaN	0.50	0.50	0.51	NaN
pension : survivors : other (psuot)	N	3	3	3	3	3	3	3	3	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Pre-retirement allowance and benefit (pyr)	N	62	62	62	62	62	62	62	62	1.00	1.00	1.00	1.00	60	49	39	NaN	1.04	1.28	1.59	NaN
Means-tested benefits (ils_benmt)																					
Family allowance (bch00_s)	Y	542	461	419	354	631	631	631	631	0.86	0.73	0.66	0.56	679	553	453	NaN	0.80	0.83	0.93	NaN
Supplement to the family allowance due to giving birth to a child (bchba_s)	Y	41	36	36	29	36	36	36	36	1.15	1.02	1.00	0.82	83	62	47	NaN	0.50	0.58	0.76	NaN
Supplement to the family allowance due to education and rehabilitation of a disabled child (bchdied_s)	Y	77	61	54	46	0	0	0	0	0.00	0.00	0.00	0.00	107	100	92	NaN	0.73	0.61	0.58	NaN
Supplement to the family allowance due to beginning of a school year (bched_s)	Y	420	355	321	272	0	0	0	0	0.00	0.00	0.00	0.00	1,679	1,438	1,238	NaN	0.25	0.25	0.26	NaN
Supplement to the family allowance due to single parenthood (bchlp00_s)	Y	25	23	23	23	53	53	53	53	0.47	0.44	0.44	0.44	73	64	56	NaN	0.34	0.37	0.42	NaN
Supplement to the family allowance due to multi-children parenthood (bchlg_s)	Y	153	125	102	77	127	127	127	127	1.20	0.99	0.80	0.60	258	249	218	NaN	0.59	0.50	0.47	NaN
nursing allowance (only children - until 31st of August 2008) (bcrchdi_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	Y	206	206	206	206	155	155	155	155	1.33	1.33	1.33	1.33	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Special attendance allowance (implemented in 2013) (bdinc_s)	Y	9	7	7	7	24	24	24	24	0.37	0.31	0.31	0.29	22	13	9	NaN	0.41	0.56	0.85	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Social assistance benefits : permanent benefit (bsapm_s)	Y	166	169	167	168	109	109	109	109	1.53	1.55	1.54	1.55	174	167	163	NaN	0.96	1.01	1.03	NaN
Social assistance benefits : temporary benefit (bsatm_s)	Y	49	51	45	32	63	63	63	63	0.77	0.80	0.71	0.51	251	228	214	NaN	0.19	0.22	0.21	NaN
Housing allowance (bho_s)	Y	86	96	97	100	179	179	179	179	0.48	0.54	0.54	0.56	207	221	234	NaN	0.42	0.43	0.41	NaN
other child benefits (bchot)	N	347	347	347	347	347	347	347	347	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Supplement to the family allowance due to taking care of a child during child-care leave (bcc)	N	11	11	11	11	11	11	11	11	1.00	1.00	1.00	1.00	32	26	19	NaN	0.35	0.44	0.60	NaN
benefit for unemployed lone parents (bchunlp)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : social assistance : other (bsaot)	N	84	84	84	84	84	84	84	84	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
One-off subsidy due to giving birth to a child ("becikowe" means-tested since 2013) (bchbamtna_s)	Y	215	183	150	138	0	0	0	0	0.00	0.00	0.00	0.00	190	152	114	NaN	1.13	1.20	1.32	NaN
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	Y	4,131	4,131	4,131	4,131	3,746	3,746	3,746	3,746	1.10	1.10	1.10	1.10	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maternity allowance due to parental leave (reform in 2016) (bchba01_s)	Y	54	54	49	48	0	0	0	0	0.00	0.00	0.00	0.00	73	62	52	NaN	0.74	0.86	0.94	NaN
Parental supplementary benefit ("Mama 4+" implemented in March 2019) (poa04_s)	Y	76	76	76	76	0	0	0	0	0.00	0.00	0.00	0.00	55	56	57	NaN	1.39	1.36	1.33	NaN
Supplementary benefit for persons incapable of independent existence ("500+" implemented in October 2019) (bsvca_s)	Y	553	577	642	741	0	0	0	0	0.00	0.00	0.00	0.00	387	388	385	NaN	1.43	1.49	1.67	NaN
Non-means-tested benefits (ils_bennt)																					
One-off subsidy due to giving birth to a child ("becikowe" non-means-tested until 2012) (bchuc_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Unemployment benefit (bun_s)	Y	176	176	176	176	176	176	176	176	1.00	1.00	1.00	1.00	114	115	119	NaN	1.54	1.53	1.48	NaN
Nursing allowance (pdiuc_s)	Y	561	561	561	561	376	376	376	376	1.49	1.49	1.49	1.49	912	924	949	NaN	0.62	0.61	0.59	NaN
Nursing supplement to old-age pension (poacm_s)	Y	3,154	3,154	3,154	3,154	2,172	2,172	2,172	2,172	1.45	1.45	1.45	1.45	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	Y	206	206	206	206	155	155	155	155	1.33	1.33	1.33	1.33	191	218	238	NaN	1.08	0.95	0.86	NaN
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	Y	4,131	4,131	4,131	4,131	3,746	3,746	3,746	3,746	1.10	1.10	1.10	1.10	6,480	6,876	6,857	NaN	0.64	0.60	0.60	NaN
Family Care Capital (implemented in 2022) (bchscs_s)	Y	0	438	438	438	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
other benefits (bot)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maternity allowance (bma)	N	244	244	244	244	244	244	244	244	1.00	1.00	1.00	1.00	669	635	610	NaN	0.36	0.38	0.40	NaN
scholarships (bed)	N	134	134	134	134	134	134	134	134	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : health (bhl)	N	126	126	126	126	126	126	126	126	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
severance payment (ysv)	N	7	7	7	7	7	7	7	7	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
"Good Start" benefit (since July 2018) (bed00_s)	Y	3,303	3,303	3,303	3,303	2,516	2,516	2,516	2,516	1.31	1.31	1.31	1.31	4,391	4,635	4,643	NaN	0.75	0.71	0.71	NaN
Thirteenth pension (boa13_s)	Y	10,249	10,249	10,249	10,249	0	0	0	0	0.00	0.00	0.00	0.00	9,800	9,700	9,800	NaN	1.05	1.06	1.05	NaN
Fourteenth pension (boa14_s)	Y	9,692	9,670	9,911	9,736	0	0	0	0	0.00	0.00	0.00	0.00	9,200	9,000	9,000	8,900	1.05	1.07	1.10	1.09
covid-19 compensation paid by the state (bwkmcee_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
demurrage (bwkmcst_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Pensions (ils_pen)		
Disability pension (agricultural and non-agricultural) (pdi00)	Concise Statistical Yearbook of Poland ; RETIREES AND PENSIONERS / 10 ³ * AVERAGE MONTHLY GROSS RETIREMENT AND OTHER PENSIONS * 12 ; non-	-
Social pension (pdinw)	Concise Statistical Yearbook of Poland ; GROSS SOCIAL PENSION ; Average	-
Retirement pension (agricultural and non-agricultural) (poa00)	Concise Statistical Yearbook of Poland ; RETIREES AND PENSIONERS / 10 ³ * AVERAGE MONTHLY GROSS RETIREMENT AND OTHER PENSIONS * 12 ; (non-	-
old-age pension from abroad (poaab)	-	-
Farmer's structural pension (poafr)	-	-
pension : old age : other (poaot)	-	-
orphan pension (psuor)	-	-
Survivors pension (agricultural and non-agricultural) (psu00)	Concise Statistical Yearbook of Poland ; RETIREES AND PENSIONERS Annual averages / 10 ³ * AVERAGE MONTHLY GROSS RETIREMENT AND OTHER	-
pension : survivors : other (psuot)	-	-
Pre-retirement allowance and benefit (pyr)	Concise Statistical Yearbook of Poland ; GROSS UNEMPLOYMENT BENEFITS, PRE-RETIREMENT ALLOWANCES AND BENEFITS ; pre-retirement allowance + pre-	-
Means-tested benefits (ils_benmt)		
Family allowance (bch00_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-
Supplement to the family allowance due to giving birth to a child (bchba_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-
Supplement to the family allowance due to education and rehabilitation of a disabled child (bchdied_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-

Continued...

	Source	Comments
Supplement to the family allowance due to beginning of a school year (bched_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-
Supplement to the family allowance due to single parenthood (bchlp00_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-
Supplement to the family allowance due to multi-children parenthood (bchlg_s)	Concise Statistical Yearbook of Poland ; FAMILY BENEFITS	-
nursing allowance (only children - until 31st of August 2008) (bcrchdi_s)	-	-
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	-	-
Special attendance allowance (implemented in 2013) (bdinc_s)	-	-
Social assistance benefits : permanent benefit (bsapm_s)	Sprawozdanie MRIPS-03	-
Social assistance benefits : temporary benefit (bsatm_s)	Sprawozdanie MRIPS-03	-
Housing allowance (bho_s)	BDL ; Number and amount of dwelling allowances paid to the users	-
other child benefits (bchot)	-	-
Supplement to the family allowance due to taking care of a child during child-care leave (bcc)	-	-
benefit for unemployed lone parents (bchunlp)	-	-
benefit : social assistance : other (bsaot)	-	-
One-off subsidy due to giving birth to a child ("becikowe" means-tested since 2013) (bchbamtna_s)	-	-
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	BDL ; ŚWIADCZENIA Z PROGRAMU RODZINA 500 PLUS ; Świadczenie wychowawcze	500+ / 800+
Maternity allowance due to parental leave (reform in 2016) (bchba01_s)	-	-
Parental supplementary benefit ("Mama 4+" implemented in March 2019) (poa04_s)	INFORMACJA O ŚWIADCZENIACH PIENIĘŻNYCH ; RODZICIELSKIE ŚWIADCZENIA UZUPEŁNIAJĄCE	-
Supplementary benefit for persons incapable of independent existence ("500+" implemented in October 2019) (bsvca_s)	INFORMACJA O ŚWIADCZENIACH PIENIĘŻNYCH ; ŚWIADCZENIA UZUPEŁNIAJĄCE DLA OSÓB NIEZDOLNYCH DO SAMODZIELNEJ EGZYSTENCJI	-

Continued...		
	Source	Comments
Non-means-tested benefits (ils_bennt)		
One-off subsidy due to giving birth to a child ("becikowe" non-means-tested until 2012) (bchuc_s)	-	-
Unemployment benefit (bun_s)	Concise Statistical Yearbook of Poland ; GROSS UNEMPLOYMENT BENEFITS, PRE-	-
Nursing allowance (pdiuc_s)	-	-
Nursing supplement to old-age pension (poacm_s)	-	-
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	-	-
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	BDL ; ŚWIADCZENIA Z PROGRAMU RODZINA 500 PLUS ; Świadczenie wychowawcze	-
Family Care Capital (implemented in 2022) (bchsc_s)	-	-
other benefits (bot)	-	-
Maternity allowance (bma)	INFORMACJA O WYBRANYCH ŚWIADCZENIACH PIENIĘŻNYCH ; ZASIŁKI	-
scholarships (bed)	-	-
benefit : health (bhl)	INFORMACJA O WYBRANYCH ŚWIADCZENIACH PIENIĘŻNYCH ; ABSENCJA	-
severance payment (ysv)	-	-
"Good Start" benefit (since July 2018) (bed00_s)	BDL ; Dobry Start	-
Thirteenth pension (boa13_s)	https://alebank.pl/13-emerytura-tegoroczny-koszt-swadczenia-to-131-mln-zl-	-
Fourteenth pension (boa14_s)	-	-
covid-19 compensation paid by the state (bwkmcee_s)	Ważniejsze informacje z zakresu ubezpieczeń społecznych	-
demurrage (bwkmcst_s)	-	-

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

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Pensions (ils_pen)																					
Disability pension (agricultural and non-agricultural) (pdi00)	N	16,502	16,939	18,174	17,715	16,502	16,502	16,502	16,502	1.00	1.03	1.10	1.07	19,854	20,053	22,026	NaN	0.83	0.84	0.83	NaN
Social pension (pdinw)	N	3,789	3,889	4,172	4,067	3,789	3,789	3,789	3,789	1.00	1.03	1.10	1.07	4,275	4,595	5,417	NaN	0.89	0.85	0.77	NaN
Retirement pension (agricultural and non-agricultural) (poa00)	N	224,373	230,314	247,103	240,861	224,373	224,373	224,373	224,373	1.00	1.03	1.10	1.07	219,281	241,408	289,581	NaN	1.02	0.95	0.85	NaN
old-age pension from abroad (poaab)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Farmer's structural pension (poafr)	N	318	326	350	341	318	318	318	318	1.00	1.03	1.10	1.07	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
pension : old age : other (poaot)	N	263	270	289	282	263	263	263	263	1.00	1.03	1.10	1.07	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
orphan pension (psuor)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Survivors pension (agricultural and non-agricultural) (psu00)	N	16,576	17,015	18,256	17,795	16,576	16,576	16,576	16,576	1.00	1.03	1.10	1.07	38,163	40,952	46,796	NaN	0.43	0.42	0.39	NaN
pension : survivors : other (psuot)	N	13	13	14	14	13	13	13	13	1.00	1.03	1.10	1.07	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Pre-retirement allowance and benefit (pyr)	N	774	794	852	831	774	774	774	774	1.00	1.03	1.10	1.07	883	768	713	NaN	0.88	1.03	1.19	NaN
Means-tested benefits (ils_benmt)																					
Family allowance (bch00_s)	Y	127	104	93	76	2,695	2,695	2,695	2,695	0.05	0.04	0.03	0.03	1,992	1,683	1,392	NaN	0.06	0.06	0.07	NaN
Supplement to the family allowance due to giving birth to a child (bchba_s)	Y	40	35	35	26	400	400	400	400	0.10	0.09	0.09	0.07	65	62	36	NaN	0.62	0.56	0.95	NaN
Supplement to the family allowance due to education and rehabilitation of a disabled child (bchdied_s)	Y	102	78	70	59	0	0	0	0	0.00	0.00	0.00	0.00	133	124	116	NaN	0.77	0.63	0.60	NaN
Supplement to the family allowance due to beginning of a school year (bched_s)	Y	75	62	56	46	0	0	0	0	0.00	0.00	0.00	0.00	97	83	71	NaN	0.77	0.75	0.79	NaN
Supplement to the family allowance due to single parenthood (bchlp00_s)	Y	83	80	79	79	429	429	429	429	0.19	0.19	0.18	0.18	166	147	128	NaN	0.50	0.54	0.62	NaN
Supplement to the family allowance due to multi-children parenthood (bchlg_s)	Y	245	199	169	132	2,036	2,036	2,036	2,036	0.12	0.10	0.08	0.06	285	275	244	NaN	0.86	0.72	0.69	NaN
nursing allowance (only children - until 31st of August 2008) (bcrchdi_s)	Y	NaN	NaN	NaN	NaN	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	Y	4,862	5,228	6,064	7,371	3,234	3,234	3,234	3,234	1.50	1.62	1.88	2.28	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Special attendance allowance (implemented in 2013) (bdinc_s)	Y	66	55	55	52	207	207	207	207	0.32	0.27	0.27	0.25	162	99	65	NaN	0.41	0.56	0.85	NaN
Social assistance benefits : permanent benefit (bsapm_s)	Y	1,070	1,246	1,223	1,914	531	531	531	531	2.01	2.35	2.30	3.60	948	1,016	976	NaN	1.13	1.23	1.25	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Social assistance benefits : temporary benefit (bsatm_s)	Y	150	189	168	157	293	293	293	293	0.51	0.64	0.57	0.53	531	527	487	NaN	0.28	0.36	0.35	NaN
Housing allowance (bho_s)	Y	452	613	687	742	289	289	289	289	1.57	2.12	2.38	2.57	615	731	879	NaN	0.73	0.84	0.78	NaN
other child benefits (bchot)	N	3,736	3,736	3,736	3,736	3,736	3,736	3,736	3,736	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Supplement to the family allowance due to taking care of a child during child-care leave (bcc)	N	158	166	189	210	158	158	158	158	1.00	1.05	1.19	1.32	145	114	84	NaN	1.09	1.45	2.24	NaN
benefit for unemployed lone parents (bchunlp)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : social assistance : other (bsaot)	N	95	109	121	128	95	95	95	95	1.00	1.14	1.27	1.35	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
One-off subsidy due to giving birth to a child ("becikowe" means-tested since 2013) (bchbamtna_s)	Y	216	184	151	139	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	190	152	114	NaN	1.14	1.21	1.32	NaN
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	Y	40,011	40,011	40,011	64,017	34,601	34,601	34,601	34,601	1.16	1.16	1.16	1.85	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maternity allowance due to parental leave (reform in 2016) (bchba01_s)	Y	301	300	289	286	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	784	679	567	NaN	0.38	0.44	0.51	NaN
Parental supplementary benefit ("Mama 4+" implemented in March 2019) (poa04_s)	Y	1,142	1,222	1,450	1,626	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	462	495	597	NaN	2.47	2.47	2.43	NaN
Supplementary benefit for persons incapable of independent existence ("500+" implemented in October 2019) (bsvca_s)	Y	773	1,158	1,416	2,757	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	2,114	2,152	2,142	NaN	0.37	0.54	0.66	NaN
Non-means-tested benefits (ils_bennt)																					
One-off subsidy due to giving birth to a child ("becikowe" non-means-tested until 2012) (bchuc_s)	Y	NaN	NaN	NaN	NaN	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Unemployment benefit (bun_s)	Y	1,127	1,185	1,355	1,510	1,116	1,116	1,116	1,116	1.01	1.06	1.21	1.35	1,827	1,533	1,738	NaN	0.62	0.77	0.78	NaN
Nursing allowance (pdiuc_s)	Y	1,501	1,501	1,501	1,501	1,063	1,063	1,063	1,063	1.41	1.41	1.41	1.41	2,352	2,396	2,459	NaN	0.64	0.63	0.61	NaN
Nursing supplement to old-age pension (poacm_s)	Y	9,070	9,705	11,141	12,492	5,831	5,831	5,831	5,831	1.56	1.66	1.91	2.14	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Nursing benefit (children & adults - since 31st of August 2008, no longer means-tested since 2010) (bcrdi_s)	Y	4,862	5,228	6,064	7,371	3,234	3,234	3,234	3,234	1.50	1.62	1.88	2.28	4,460	5,463	6,934	NaN	1.09	0.96	0.87	NaN
Child-raising benefit ("500+" implemented in April 2016) (bchcc_s)	Y	40,011	40,011	40,011	64,017	34,601	34,601	34,601	34,601	1.16	1.16	1.16	1.85	39,892	42,044	41,647	NaN	1.00	0.95	0.96	NaN
Family Care Capital (implemented in 2022) (bchscs_s)	Y	NaN	2,675	2,675	2,675	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	3,300	2,400	NaN	NaN	0.81	1.11	NaN
other benefits (bot)	N	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Maternity allowance (bma)	N	4,641	4,859	5,521	6,140	4,641	4,641	4,641	4,641	1.00	1.05	1.19	1.32	9,023	9,131	9,538	NaN	0.51	0.53	0.58	NaN
scholarships (bed)	N	359	359	359	359	359	359	359	359	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
benefit : health (bhl)	N	872	913	1,038	1,154	872	872	872	872	1.00	1.05	1.19	1.32	24,527	25,488	26,743	NaN	0.04	0.04	0.04	NaN

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
severance payment (ysv)	N	76	85	97	111	76	76	76	76	1.00	1.12	1.27	1.46	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
"Good Start" benefit (since July 2018) (bed00_s)	Y	1,410	1,410	1,410	1,410	1,089	1,089	1,089	1,089	1.30	1.30	1.30	1.30	1,318	1,390	1,392	NaN	1.07	1.01	1.01	NaN
Thirteenth pension (boa13_s)	Y	12,820	13,718	16,280	18,253	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	12,259	13,100	15,300	NaN	1.05	1.05	1.06	NaN
Fourteenth pension (boa14_s)	Y	11,446	12,170	24,011	16,217	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	11,000	11,400	11,600	NaN	1.04	1.07	2.07	NaN
covid-19 compensation paid by the state (bwkmcee_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
demurrage (bwkmcst_s)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Table A3.7. Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Decile 1	3.46	3.38	3.34	3.30	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 2	5.49	5.48	5.43	5.32	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 3	6.66	6.65	6.62	6.53	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 4	7.69	7.70	7.64	7.55	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 5	8.60	8.63	8.58	8.47	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 6	9.63	9.64	9.60	9.59	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 7	10.76	10.73	10.70	10.70	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 8	12.22	12.12	12.11	12.16	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 9	14.29	14.19	14.24	14.35	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Decile 10	21.20	21.48	21.74	22.03	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Median	38,576	43,812	48,422	52,521	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Mean	41,686	47,188	52,581	56,452	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Gini	26.48	26.71	27.09	27.67	26.30	27.00	NaN	NaN	1.01	0.99	NaN	NaN
S80/20	3.97	4.03	4.10	4.23	3.91	4.06	NaN	NaN	1.01	0.99	NaN	NaN

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

	EUROMOD				External				Ratio			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
40% median HDI by sex												
Total	4.63	4.91	4.82	5.04	4.50	4.20	NaN	NaN	1.03	1.17	NaN	NaN
Males	4.94	5.18	5.12	5.21	5.00	4.50	NaN	NaN	0.99	1.15	NaN	NaN
Females	4.33	4.65	4.54	4.87	4.00	4.00	NaN	NaN	1.08	1.16	NaN	NaN
50% median HDI by sex												
Total	8.72	9.11	9.06	9.49	8.10	8.50	NaN	NaN	1.08	1.07	NaN	NaN
Males	8.68	8.95	9.00	9.01	8.30	8.50	NaN	NaN	1.05	1.05	NaN	NaN
Females	8.76	9.25	9.12	9.95	7.90	8.40	NaN	NaN	1.11	1.10	NaN	NaN
60% median HDI by sex												
Total	14.63	14.93	14.97	15.51	13.70	14.00	NaN	NaN	1.07	1.07	NaN	NaN
Males	13.80	13.97	14.11	14.33	13.20	13.50	NaN	NaN	1.05	1.03	NaN	NaN
Females	15.41	15.83	15.79	16.61	14.10	14.50	NaN	NaN	1.09	1.09	NaN	NaN
70% median HDI by sex												
Total	22.28	22.58	22.42	23.32	21.00	21.70	NaN	NaN	1.06	1.04	NaN	NaN
Males	21.00	21.31	21.08	21.81	20.10	20.80	NaN	NaN	1.04	1.02	NaN	NaN
Females	23.49	23.78	23.67	24.72	21.90	22.50	NaN	NaN	1.07	1.06	NaN	NaN
60% median HDI by age group												
0-15 years	12.94	13.31	14.34	11.02	13.50	13.70	NaN	NaN	0.96	0.97	NaN	NaN
16-24 years	18.99	19.30	19.49	18.45	18.00	17.50	NaN	NaN	1.05	1.10	NaN	NaN
25-49 years	11.59	11.86	11.88	11.12	11.50	11.60	NaN	NaN	1.01	1.02	NaN	NaN
50-64 years	16.74	16.69	16.39	18.09	14.50	14.90	NaN	NaN	1.15	1.12	NaN	NaN
65+ years	17.96	18.62	18.13	24.05	15.20	16.50	NaN	NaN	1.18	1.13	NaN	NaN

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

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics non-calibrated (ils_extstat_ittncal)													
Aggregate expenditures non-calibrated (ils_extstat_ittncal_il_itt_expnc)													
01 Food and non-alcoholic beverages (il_x01)	Y	207,218	233,951	259,885	279,989	276,281	326,479	326,479	326,479	0.75	0.72	0.80	0.86
02 Alcoholic beverages, tobacco, etc. (il_x02)	Y	22,322	25,217	28,068	30,281	95,257	108,264	108,264	108,264	0.23	0.23	0.26	0.28
03 Clothing and footwear (il_x03)	Y	43,349	49,038	54,599	59,479	69,702	85,585	85,585	85,585	0.62	0.57	0.64	0.69
04 Housing, water and fuel (exc. imputed rent) (il_x04)	Y	166,471	187,949	209,002	224,820	214,357	257,795	257,795	257,795	0.78	0.73	0.81	0.87
05 Furnishings, household equipment, etc. (il_x05)	Y	41,229	46,605	51,888	56,201	73,735	90,118	90,118	90,118	0.56	0.52	0.58	0.62
06 Health (il_x06)	Y	43,521	49,107	54,563	58,068	102,471	123,986	123,986	123,986	0.42	0.40	0.44	0.47
07 Transport (il_x07)	Y	75,954	85,931	95,577	104,010	198,711	235,007	235,007	235,007	0.38	0.37	0.41	0.44
08 Communications (il_x08)	Y	41,712	47,146	52,433	56,810	34,878	37,410	37,410	37,410	1.20	1.26	1.40	1.52
09 Recreation and culture (il_x09)	Y	50,882	57,616	64,225	69,926	88,451	106,997	106,997	106,997	0.58	0.54	0.60	0.65
10 Education (il_x10)	Y	7,377	8,441	9,436	10,437	11,471	13,065	13,065	13,065	0.64	0.65	0.72	0.80
11 Hotels and restaurants (il_x11)	Y	31,311	35,474	39,557	42,964	52,544	65,873	65,873	65,873	0.60	0.54	0.60	0.65
12 Miscellaneous good and services (il_x12)	Y	45,510	51,471	57,241	61,811	173,323	226,305	226,305	226,305	0.26	0.23	0.25	0.27
Revenue from indirect taxes (non calibrated) (ils_extstat_ittncal_il_itt_revnc)													
VAT Total Revenue (il_tva)	Y	96,640	83,249	111,399	135,756	225,140	223,395	NaN	NaN	0.43	0.37	NaN	NaN
Excises Total Revenue (il_tx)	Y	25,718	23,365	27,538	27,867	72,418	NaN	NaN	NaN	0.36	NaN	NaN	NaN
Total excises (non calibrated) (ils_extstat_ittncal_il_itt_excnc)													
Revenues Excises 0211 - Spirits (il_tx0211)	Y	13	14	16	17	9,269	NaN	NaN	NaN	0.00	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121)	Y	1	1	1	1	468	NaN	NaN	NaN	0.00	NaN	NaN	NaN

	Simulated	EUROMOD				External				Ratio			
	(Y / N)	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Revenues Excises 02122 - Sparkling Wine (il_tx02122)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213)	Y	6	8	9	9	3,285	NaN	NaN	NaN	0.00	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022)	Y	7,374	8,348	9,570	10,380	23,039	NaN	NaN	NaN	0.32	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045)	Y	3,422	1,858	1,837	2,975	763	NaN	NaN	NaN	4.48	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451)	Y	245	243	232	240	532	NaN	NaN	NaN	0.46	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521)	Y	315	288	250	256	165	NaN	NaN	NaN	1.91	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072)	Y	18,324	14,994	17,943	17,460	36,358	NaN	NaN	NaN	0.50	NaN	NaN	NaN

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

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Consumption-tax-related statistics calibrated (ils_extstat_ittcal)													
Revenue from indirect taxes (calibrated) (il_itt_revc)													
VAT Total Revenue (il_tva_na)	Y	179,019	171,593	202,787	255,833	225,140	223,395	249,805	NaN	0.80	0.77	0.81	NaN
Excises Total Revenue (il_tx_na)	Y	74,945	74,414	78,878	84,820	72,418	NaN	NaN	NaN	1.03	NaN	NaN	NaN
Total excises (calibrated) (il_itt_excc)													
Revenues Excises 0211 - Spirits (il_tx0211_na)	Y	54	62	60	70	9,269	NaN	NaN	NaN	0.01	NaN	NaN	NaN
Revenues Excises 02121 - Still Wine (il_tx02121_na)	Y	3	3	3	3	468	NaN	NaN	NaN	0.01	NaN	NaN	NaN
Revenues Excises 02122 - Sparkling Wine (il_tx02122_na)	Y	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Revenues Excises 0213 - Beer (il_tx0213_na)	Y	28	34	33	38	3,285	NaN	NaN	NaN	0.01	NaN	NaN	NaN
Revenues Excises 022 - Tobacco (il_tx022_na)	Y	31,468	35,841	36,916	42,916	23,039	NaN	NaN	NaN	1.37	NaN	NaN	NaN
Revenues Excises 045 - Energy (electricity, natural gas, coal-coke) (il_tx045_na)	Y	4,406	2,548	2,266	3,944	763	NaN	NaN	NaN	5.77	NaN	NaN	NaN
Revenues Excises 0451 - Electricity (il_tx0451_na)	Y	316	334	286	318	532	NaN	NaN	NaN	0.59	NaN	NaN	NaN
Revenues Excises 04521 - Natural Gas (il_tx04521_na)	Y	405	395	308	340	165	NaN	NaN	NaN	2.46	NaN	NaN	NaN
Revenues Excises All Energy (il_tx045_072_na)	Y	43,393	38,474	41,866	41,792	36,358	NaN	NaN	NaN	1.19	NaN	NaN	NaN

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