

# EUROMOD

## COUNTRY REPORT

SLOVAK REPUBLIC (SK)  
2018-2021

Martin Mikloš

December 2021

EUROMOD version I4.0

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

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

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

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

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

JRC B2 head of unit: Salvador Barrios

EUROMOD project leader: Alberto Tumino/Fidel Picos

EUROMOD coordination assistant: Daniela Hupteva/Marta Jędrych

EUROMOD software developer: Estefanía Vázquez Torres

EUROMOD developer responsible for Slovak Republic: Adrián Hernández Martín

National team for Slovak Republic: Martin Mikloš, Marek Mišutka, Dušan Paur

The results presented in this report are derived using EUROMOD version I4.0. EUROMOD is continually being improved and the results presented here may not match those that would be obtained with earlier or later versions of EUROMOD.

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

The information contained within this document does not necessarily reflect the position or opinion of the European Commission.

**CONTENTS**

<b>1.</b>	<b>BASIC INFORMATION</b>	<b>4</b>
1.1	Basic information about the tax-benefit system	4
1.2	Social Benefits	5
1.3	Social contributions	9
1.4	Taxes	9
1.5	Temporary measures introduced in reaction to the COVID-19 pandemic	10
<b>2.</b>	<b>SIMULATION OF TAXES, SOCIAL INSURANCE CONTRIBUTIONS AND BENEFITS IN EUROMOD</b>	<b>11</b>
2.1	Scope of simulation	11
2.2	Main policy changes	13
2.3	Order of simulation and interdependencies	15
2.4	Policy extensions	18
2.5	Benefits	19
2.5.1	Parental allowance ( <i>bcc00_sk</i> )	19
2.5.2	Unemployment benefit ( <i>bunct_sk</i> )	20
2.5.3	Child birth allowance( <i>bchba_sk</i> )	22
2.5.4	Child benefit ( <i>bch_sk</i> )	23
2.5.5	Maternity benefit ( <i>bmacl_s</i> )	24
2.5.6	Pregnancy benefit ( <i>bprct_s</i> )	26
2.5.7	Material need benefits ( <i>bsa_sk</i> )	27
2.6	Social insurance contributions	31
2.6.1	Employee social contributions ( <i>tscee_sk</i> )	31
2.6.2	Employer social contributions ( <i>tscer_sk</i> )	32
2.6.3	Self-employed social contributions ( <i>tscse_sk</i> )	34
2.6.4	Health insurance contributions ( <i>tschl_sk</i> )	35
2.6.5	Credited insurance contributions ( <i>tsccthl_sk</i> )	36
2.6.6	Compulsory private pension (2 <sup>nd</sup> pillar) insurance contributions ( <i>tscpepi_sk</i> )	37
2.7	Personal income tax ( <i>tin_sk</i> )	38
2.7.1	Tax unit	38
2.7.2	Exemptions	38
2.7.3	Tax allowances	38
2.7.4	Tax base	39
2.7.5	Tax schedule	40
2.7.6	Tax credits	40
2.8	Other taxes	41
2.8.1	Withholding tax	41
2.8.2	Tax on dividend income	42
2.9	Other COVID-19 related temporary compensation measures	42

## **EUROMOD Country Report – SLOVAK REPUBLIC**

---

2.9.1	Pandemic nursing benefit ( <i>bccmc_sk</i> )	42
2.9.2	Kurzarbeit - percentage ( <i>yemcomp_sk</i> )	43
2.9.3	Self-employment grant ( <i>ysecomp_sk</i> )	44
<b>3.</b>	<b>DATA</b>	<b>47</b>
<b>3.1</b>	<b>General description</b>	<b>47</b>
<b>3.2</b>	<b>Data adjustment</b>	<b>48</b>
<b>3.3</b>	<b>Imputations and assumptions</b>	<b>48</b>
3.3.1	Time period	48
3.3.2	Gross incomes	48
3.3.3	Disaggregation of harmonized variables	48
<b>3.4</b>	<b>Updating</b>	<b>49</b>
<b>4.</b>	<b>VALIDATION</b>	<b>49</b>
<b>4.1</b>	<b>Aggregate Validation</b>	<b>49</b>
4.1.1	Components of disposable income	49
4.1.2	Validation of incomes inputted into the simulation	50
4.1.3	Validation of outputted (simulated) incomes	52
<b>4.2</b>	<b>Income distribution</b>	<b>54</b>
4.2.1	Income inequality	54
4.2.2	Poverty rates	54
<b>4.3</b>	<b>Validation of minimum wage</b>	<b>55</b>
<b>4.4</b>	<b>Summary of “health warnings”</b>	<b>55</b>
<b>5.</b>	<b>REFERENCES</b>	<b>56</b>
<b>ANNEX 1. UPRATING FACTORS</b>		<b>57</b>
<b>ANNEX 2. POLICY EFFECTS IN 2020-2021</b>		<b>59</b>
<b>ANNEX 3. VALIDATION TABLES</b>		<b>61</b>

## **1. BASIC INFORMATION**

### **1.1 Basic information about the tax-benefit system**

- The tax-benefit system is largely a unified, national system. All major tax components and benefits are governed at the central level. Share of the personal income tax is contributed to municipalities and administration units. A few taxes are set at the local level, such as the real estate tax and tax on specific services, but their share in the overall taxation is negligible.
- The fiscal year is January 1 – December 31.
- State pension age is 62 years for men and between 59 and 62 for women, depending on the number of children. The pension age will continue to rise with growth in life expectancy from 2017, but was constitutionally capped at 64 years in 2019.
- Compulsory education starts at age 6 and continues for 10 years. The minimum school leaving age is 16. A child is considered to be dependent (for tax and benefit purposes) not only if they are under 16, but also if they are under 18 and have long term unfavourable health condition, or are under 26 and studying at an approved institution and have not yet finished post-secondary education or are under 26 and cannot study because of illness or injury.
- Lone parents are not socially protected for tax and benefit purposes. In case of long term unfavourable health conditions of the person or child in the custody, duration of some benefits is extended.
- Taxation of income is done at the individual level. However, an individual may be entitled to a spouse tax allowance if the spouse satisfies certain conditions.
- Incomes from dependent activity and self-employment are taxed at rates of 19% and 25%, depending on the amount of income. Before 2013, the rate was set at a uniform level (19%). Income from certain non-standard temporary contracts<sup>1</sup> receive beneficial treatment. Types of income that fall under the withholding tax are taxed at a flat rate of 19%. Higher 35% tax rate is applicable to payments from countries which do not have a Double Taxation Treaty with the Slovak Republic. Since 2020, there is a reduced 15% rate on self-employment income for individuals with low turnover.
- Tax advances are paid monthly or quarterly based on the previous tax liability. The taxpayer must fill in a tax return and pay any tax liabilities left after the tax clearing by the 31<sup>st</sup> March of the following year.
- The Minimum Subsistence Level on which the tax allowances and social benefits eligibility depend, is adjusted automatically on 1<sup>st</sup> July either to the cost of living of low income families or the net income growth of low income families (most frequently the former is used). Components of the social assistance scheme and state social support benefits are adjusted by government regulation (usually on the 1<sup>st</sup> September). Pensions, already in payment, are automatically indexed on 1<sup>st</sup> January.
- Social assistance benefits are awarded on a monthly basis. The income base that is assessed refers to the income in the previous month.
- The pension system is built on three separate pillars: 1st pillar – mandatory pension insurance defined by benefits, funded on a pay-as-you-go basis and administered by the Social Insurance Agency; 2nd pillar – old age pension saving defined by contributions and fully funded insurance administered by private pension fund management companies; and 3rd pillar - voluntary supplementary pension saving defined by contributions and fully funded insurance administered by supplementary pension companies.

---

<sup>1</sup> Agreements on work performed outside employment relationship - *Dohody o prácach vykonávaných mimo pracovného pomeru*

### 1.2 Social Benefits

The Slovak benefit system is made up of three components, namely contributory benefits, social assistance benefits and state social support. Each component consists of several programs.

- **Contributory benefits**

**Old-age pension (*Starobný dôchodok*):** Entitlement arises when an insured person reaches the retirement age and has contributed for at least 15 years. Three variables determine the amount of the old age pension paid from first pillar: length of career in years, average personal wage point (the individuals average lifetime position relatively to the average wage) and current point value, which was set so that a person with 40 years of service and average personal wage will receive a pension with approximately 50% replacement rate. In order to keep the replacement rate stable, the current point value is annually indexed by the average wage growth. Since 2005, there is a fully funded second pillar. Participation in the 2<sup>nd</sup> pillar is voluntary. If one participates in both pillars, the pension benefit awarded from the first pillar is reduced by a percentage of social security contributions paid (redirected) to the private pension funds for the years of participation in both pillars.

**Early old-age pension (*Predčasný starobný dôchodok*):** A person is eligible if she has contributed for minimum 15 years, is no more than 2 years below the statutory retirement age and is entitled to a pension higher than 1.2 times the minimum subsistence level. It cannot be combined with old-age pension. The pension amount is lowered by 0.5% for every 30 days remaining until the person's retirement age.

**Disability pension (*Invalidný dôchodok*):** A person is defined as disabled if she has long term unfavourable health conditions with more than 40% work capability decrease. A person is not eligible during temporary work incapacity. The benefit amount depends on the number of accumulated pension points, number of years contributions have been made, number of years until reaching retirement age, current pension point value and percentage loss of working capability. The full disability pension is granted if the ability to work decreased by more than 70 %.

**Widow`s and widower`s pension (*Vdovský a vdovecký dôchodok*):** The entitlement arises to a widow/ widower if her/his deceased spouse was a recipient of, or entitled to old-age pension, early retirement pension or disability pension or dies as a result of an occupational disease or accident. The entitlement lasts for 1 year after the decease, unless the recipient takes care of a dependent child, is disabled (more than 70% loss of working capacity), reaches the pensionable age, has raised more than 3 children or reaches 52 years and has raised 2 children. The entitlement expires if the widow/ widower becomes married. The benefit amounts to 60% of the old-age pension, early old-age pension or disability pension of the deceased. If the widow or widower was a pensioner already, he/she will receive the higher pension in full amount and 50% of the lower pension.

**Orphan`s pension (*Sirotský dôchodok*):** The entitlement arises to a dependent child whose parent (or guardian) has died. The entitlement arises only if the parent was an old-age pension, early old-age pension or disability pension recipient (or an entitled person), or dies as a result of an occupational disease or accident. A dependent child in foster care cannot receive the pension. The benefit amounts to 40% of the old-age pension, early old-age pension or disability pension of the deceased parent.

**Minimum pension (*Minimálny dôchodok*):** Old-age pensioners and disability pensioners after reaching the retirement age are entitled to a minimum pension if the sum of their pension benefits is lower than a predefined level, have paid social insurance for at least 30 years and applied for all pensions to which they might be entitled. The level of the minimum pension is based on the number of years an individual has worked and paid pension insurance.

**Thirteenth pension (*Trinásty dôchodok*):** A thirteenth pension is a benefit paid once a year, in December. All pensioners are eligible for the benefit, though its value decreases with higher pensions. If an individual's benefit is below the value of the subsistence level, he/she is eligible to a thirteenth pension of maximum 300 euros. The minimum benefit is set to be 50 euros.

**Sickness benefit (*Nemocenské*):** The benefit provides compensation for loss of income during own temporary sickness. A person is eligible for this benefit immediately when she has sickness insurance. The entitlement arises due to the illness or injury on the 11<sup>th</sup> day of work incapability and lasts until the end of work incapability or until the end of the 52<sup>nd</sup> week. It cannot be combined with the maternity benefit. The benefit amount is 55% of the daily assessment base (gross income subject to the sickness insurance contributions, with the maximum assessment base being equal to double the average wage from two years ago).

**Nursing benefit (*Ošetrovné*):** This benefit is supposed to cover income loss due to nursing a close family member (mostly child below 10 years of age). A person is eligible for this benefit immediately when she has sickness insurance. The entitlement arises on the first nursing day and expires on the last, with the maximum number of 10 nursing days. It cannot be combined with the maternity benefit. The benefit amount is 55% of the daily assessment base (gross income subject to the sickness insurance, with the maximum assessment base being equal to double the average wage from two years ago). From April 2021 the maximum number of days is increased to 14. Moreover, another type of long-term nursing benefit is created for nursing a family member after medical operation or when providing palliative care. This long-term nursing benefit can be paid for a maximum of 90 days.

**Accident benefits (*Úrazové dávky*):** Insurance against accidents is a mandatory insurance, which aims to protect an employer against an economic loss in case of responsibility for employees' health damage or death caused by a work accident or occupational disease. Insurance against accidents includes 13 different benefits. Employees are eligible for accident pension if their work abilities decrease by more than 40%, owing to a work accident or occupational disease. The amount of the pension is based on the employees' income and a percentage rate of decrease of their work abilities.

**Equalization allowance (*Vyrovnávacía dávka*):** Equalization allowance is designed to compensate reduced income of a pregnant woman, who had to be moved to a different job position with a lower wage. The equalization allowance is 55% of the difference between the monthly assessment base before and after moving to the other position.

**Maternity benefit (*Materská dávka*):** This benefit is paid to a pregnant woman or to another person (typically father) who takes care of a newborn child (up to 3 years of age). The person is eligible for the benefit if she contributed to the insurance system for at least 270 days within the last 2 years prior to the delivery or prior to the start when the other caretaker (typically father) begins to provide full-time care for the dependent child below 3 years of age. The benefit can start being paid 8 weeks before the delivery for a total of 34 weeks. However, the duration is extended to 37 weeks when the woman is a single mother and to 43 weeks if the woman gives birth to two or more children. It is 28 weeks for the second caretaker – father. The minimum duration is 14 weeks in case of a stillbirth. The benefit is 75% of the daily assessment base (gross income subject to sickness insurance, with the maximum assessment base being equal to double the average wage from two years ago).

**Pregnancy benefit (*Tehotenská dávka*):** This benefit is paid to a pregnant woman in order to cover increased spending associated with pregnancy (clothes, nutrition, medicine etc.). The person is eligible for the benefit if she contributed to the insurance system for at least 270 days within the last 2 years before the start of the 13<sup>th</sup> week of pregnancy. The benefit is paid from the 13<sup>th</sup> week until the end of pregnancy. The benefit is 15% of the daily assessment base (gross income subject to sickness insurance, with the maximum assessment base being equal to double the average wage from two years ago), but it must be at least 10 % of the universal daily assessment base which equals to the average wage from 2 years ago.

**Unemployment insurance benefit (*Dávka v nezamestnanosti*):** An insured person is eligible to receive the benefit if she has contributed for a minimum of two years during the four years prior and she is listed in the unemployment registry. Entitlement ceases if the person reaches pensionable age, or if the person is de-listed from the unemployment registry. The maximum duration of the benefit is 6 months. Accumulation with sickness or maternity benefits, benefit for nursing a sick relative, parental allowance, or a pension is not permitted. The benefit is 50% of the daily assessment base (gross incomes subject to unemployment insurance contributions).

- *Social assistance benefits*

**Material need benefits (*Dávka v hmotnej núdzi a príspevky k dávke*):** Material needs benefits are means-tested benefits for families, whose income is below the minimum subsistence and cannot be increased by claimants themselves. The benefit consists of several components (material needs allowance, activation allowance, housing allowance, protection allowance, allowance for dependent child). The amount depends on the structure and incomes of the family and is calculated as the difference between the eligible maximum material need benefits and the income of all assessed individuals.

**Subsidies (*Dotácie*):** Two types of subsidies are aimed to promote school attendance. One is to cover school supplies (books, pens, etc.) and is paid twice a year to families in need of material assistance. Another subsidy is aimed to pay for lunches of socioeconomically disadvantaged students 6-15 years old. Temporarily, a policy of universal free lunches was in place from September 2019 to the end of August 2021. All children in the last year of nursery school and all students from elementary schools were eligible for this subsidy. Starting from August 2021 the eligibility is again restricted only to socioeconomically disadvantaged students.

**Special Allowance (*Osobitný príspevok*):** Additional temporary allowance is provided to a person who has not worked for at least 12 months, was a recipient of the material need assistance, and finds a job paying at least 50% of the minimum wage and at most double the minimum wage. The allowance is paid during the duration of this employment contract but for a maximum of 18 months. The amount is fixed at €126,14 for the first 12 months and €63,07 for the last 6 months.

- *State support benefits*

**Child birth allowance (*Príspevok pri narodení dieťaťa*):** It is a one-off payment to parents to cover the needs of their new-born once the child survives 28 days after delivery. Another condition for this allowance is permanent residency in the Slovak Republic. It is higher for the first, second and third child and then the level decreases. In the case of a multiple birth, another surcharge is provided.

**Multiple birth allowance (*Príspevok na viac súčasne narodených detí*):** The benefit is an annual allowance paid to parents with at least three children born at the same time or parents who have within two years repeatedly twins or more children born at the same time.

**Child benefit (*Prídavok na dieťa*):** It is a universal monthly social benefit aimed to support care of every dependent child. Only one parent per child is eligible for the benefit. There is no conditionality to this grant other than permanent residency both of the entitled parent and the dependent child in the Slovak Republic. This benefit is increased when the dependent child starts going to elementary school. It is only a one-time increase aimed to cover increased costs associated with starting going to school (school bag, pens, pencils, books, etc.).

**Child benefit surcharge (*Príplatok k prídavku na dieťa*):** The entitlement arises if the caretaker of the child is not entitled to the tax credit for dependent children, does not work or is a recipient of pension (old-age, early old-age, disability, or military if standard retirement age has been reached) or the benefit for caring for a disabled relative.

**Parental allowance (*Rodičovský príspevok*):** A monthly benefit for parents taking care of at least one child aged up to 3 years (6 in the case of a disabled child). Only one parent is eligible, and is

allowed to work if the child is at grandparents or in a kindergarten. It cannot be combined with the sickness benefit and is reduced in case of receiving the maternity benefit. The benefit is decreased in case other older children do not comply with the compulsory school attendance. The allowance is higher for parents who were working and receiving maternity benefit before the eligibility period for the parental allowance. The allowance is also increased by 25 % per second and every other children in case of a multiple birth. The parent can decide whether she wants to receive the parental or childcare allowance, these two are mutually exclusive.

**Childcare allowance (*Príspevok na starostlivosť o dieťa*):** A monthly benefit for parents utilizing formal childcare for children below 3 years of age (6 in the case of a disabled child). The parent can decide whether she wants to receive the parental or childcare allowance, these two are mutually exclusive.

**Replacement care benefits (*Náhradná starostlivosť*):** Caretakers are eligible for cash transfers in case they provide replacement care to a dependent child (for example adoption or guardianship). These benefits are supposed to help cover living costs for nutrition, clothing, education and housing of one or more dependent children. Caretakers are eligible for a replacement care surcharge in case of providing care to a disabled dependent child or children.

**Compensation of severe disability (*Kompenzácia ťažkého zdravotného postihnutia*):** Several cash allowances are provided to compensate the increased costs of severe disability. Two mainly used benefits are cash transfer for nursing (*PP na opatrovanie*) and cash transfer for personal assistance (*PP na osobnú asistenciu*). The former is paid to a family member providing care to a disabled person, the latter is used to pay for a formal social workers and they are mutually exclusive per disabled person. Then there is additional set of cash transfers to cover living expenses for nutrition, guide animals, medical devices, reconstruction of house, flat or garage etc. Eligibility for one or more of these transfers is assessed case by case and can be paid off on top of the cash transfer for guardianship or personal assistance.

**Compensatory allowance for miners (*Kompenzačný príspevok baníkom*):** A person is eligible, if her underground mining employment has been terminated as a consequence of the mining attenuation program approved by the government and this employment had lasted for at least three years. The amount and duration of the allowance depends on the duration of the mining employment. The person is not eligible if she is receiving pension or the special allowance for miners.

**Special allowance for miners (*Osobitný príspevok baníkom*):** A person is eligible if she has reached the highest possible exposure to underground mining employment, is not able to perform a job due to occupational disease, or has worked in underground mines for at least 15 years and is at least 55 years old. The person is no longer eligible if she is receiving pension or has reached the standard retirement age.

**Funeral allowance (*Príspevok na pohreb*):** One-off benefit that covers expenses for a burial of a family member.

**Scholarships (*Štipendiá*):** Monthly benefit for pupils and students in secondary schools from low-income families. The amount of benefit depends on the average grade received. Scholarships for university students are granted monthly for a period of the academic year (typically from September until June). The amount depends on family income and rises if student is handicapped or lives far away from university.

- *Not strictly benefits*

**Private pensions (*Dôchodky z tretieho piliera*):** Private pensions are derived from supplementary pension insurance (SPI) also known as the third pillar. The SPI operates on the principle of regular mutual contributions of employers and employees and are valorised on the account of the insured, maintained by supplementary pension companies. The SPI is generally voluntary, with the exception of employees performing the so-called hazardous work.

**Alimony (*Výživné a Náhradné výživné*):** In case of a divorce or separation of parents, the parent who becomes the primary caretaker is eligible for alimony payments from the other parent. Only courts can decide on the alimony payment (benefit amount and payments schedule). In case the parent is not able to pay the amount of alimony decided by the court, then the caretaker is eligible to receive these payments in the form of a replacement benefit paid for by the government.

**Termination pay (*Odchodné*):** Benefit provided by the employer based on the provisions of the Labour code in Slovakia. Upon the first termination of employment relationship upon acquiring entitlement to an old-age pension invalidity pension, or pension for years of service an employee is entitled to receive termination pay of at least the amount of his/her average monthly earnings.

**Severance payments (*Odstupné*):** Benefit provided by the employer based on the provisions of the Labour code in Slovakia. An employee is eligible to receive severance payments upon termination of employment (for reason stated in the Labour code). The amount of payments varies from one to five times of average monthly earnings according to the years in service.

**Educational allowances (*Štipendiá a granty*):** Students may receive scholarships and educational grants paid by the university they attend. Rules determining eligibility and amounts are set by universities.

### 1.3 Social contributions

**Social insurance contributions (*Sociálne odvody*):** Social insurance contributions (SICs) finance pensions, and other contributory benefits (e.g. sickness and maternity). Conditions regarding contributions in the past determine eligibility and amount of contributory benefits. SICs cover seven types of insurances: old-age, disability, sickness, unemployment, and accidents as well as guarantee and reserve solidarity fund. SICs are assessed on gross incomes up to a maximum. The calculation of assessment base for the self-employed is slightly different.

**Health insurance contributions (*Zdravotné odvody*):** Health insurance contributions are compulsory for individuals with permanent residence in the Slovak republic. The government pays insurance for dependent children and persons who fulfil certain conditions. Contributions are assessed on gross income up to a maximum. The assessment base is calculated slightly differently for the self-employed. Others pay voluntary given minimum amount of contributions.

### 1.4 Taxes

**Personal income tax (*Daň z príjmu fyzických osôb*):** The base of the personal income tax covers income from dependent activity and self-employment as well as income from rent, fringe benefits, severance and termination payment. Social contributions and social benefits are exempted. It is applied at the individual level, but an individual may be entitled to a spouse tax allowance. There is basic tax allowance, supplementary pension savings allowance (savings in the third pension pillar) and allowance on expenses for spa treatment, and three types of tax credits (for employees, on dependent children, and on mortgage interest). The flat-rate system was abolished and since 2013 there are two progressive tax rates according to the amount of income. Since 2020, self-employment income is taxed separately with an additional reduced rate for the self-employed with low turnover.

**Withholding tax (*Daň vyberaná zrážkou*):** Income from dividends and interest at bank accounts, funds and investments from domestic sources are taxed with withholding tax. The rate is set at a uniform level. Although withholding tax is recorded separately, it is a part of the PIT.

**Value added tax (*Daň z pridanej hodnoty*):** VAT is levied on all goods and services supplied (including imported goods) in the Slovak Republic. It is the most important income source for the general budget. The rate is set uniformly at 20%, with exemption for some goods (e.g. basic foodstuffs, medicine, books), which are taxed at a lower rate (10%).

**Excise taxes (*Spotrebné dane*):** Excise taxes are indirect taxes, selectively levied on certain products – beer, wine, spirits, tobacco products, mineral oil, coal, natural gas and electricity.

**Local taxes (*Miestne dane*):** They are set and governed at the municipal level. Local taxes include real estate tax and tax on specific services (charges for dog owners, accommodation tax, tax on non-win gambling machines, etc.).

### 1.5 Temporary measures introduced in reaction to the COVID-19 pandemic

**Kurzarbeit (*Prvá pomoc - zamestnávateľia*):** Two mutually exclusive versions of compensation were introduced for employers facing business restrictions that retain work positions for one month during the state of emergency and for two months after its end. First, if workers are unable to perform work assignments at all due to business closures, they receive 80% of their gross salaries (at least the minimum wage) which are fully covered by the government. A monthly cap per employee is set at €1100 in the case of businesses that were compulsorily closed by the order of the government and €880 for businesses that remained closed voluntarily due to other business restrictions. Employers remain liable for the employer part of the SIC on the 80% of the gross wage. In October 2020, the amount that the government compensates was increased to 80% of total labour cost (gross income + employer contributions) and the monthly cap was increased to €1100 for all employees. From February to June 2021, the government covers 100% of the total labour cost. The employees continue to receive 80% of their initial salaries. Since July 2021, the conditions have returned to the initial setup valid in 2020.

The second alternative is a lump-sum subsidy per each eligible employee to firms that suffered revenue loss, even when they were able to continue working. The monthly subsidy depends on the percentage revenue loss in the given month. Only private sector firms are eligible. The amounts were increased in October 2020 and February 2021. Since September 2021, this scheme is no longer provided.

**Self-employment grant (*Prvá pomoc - SZČO*):** Two types of lump-sum grants to the self-employed and sole owner-managers of incorporated corporations with loss of business income. The first is provided to those who were previously paying social insurance contributions, had their business closed by the order of the government or suffered a loss in revenue, and are not employed at the same time. The monthly grant depends on the percentage revenue loss in the given month. Starting in October 2020, these self-employed might also be employed at the same time and the net income from this employment will be deducted from the original lump-sum grant. The grant amount was increased in October 2020 and then again in February 2021. Since July 2021, the amounts have returned to the initial sums.

Second, those who were not paying social insurance contributions and lost all income are eligible for a lump-sum monthly amount of €210 (€105 for March 2020). The amount was increased to €315 in October 2020 and then to €360 again in February 2021. These self-employed and corporation owner-managers cannot have any other income from business activity or employment.

**SOS subsidy (*Prvá pomoc - SOS dotácia*):** Monthly transfer of €210 (€105 for March 2020) to individuals who lost all income from business activity or employment. The transfer has been increased to €300 starting in October 2020.

**Pandemic sickness cash benefit (*Pandemické nemocenské*):** Extends the standard sickness cash benefit to workers subjected to quarantine measures. Entitlement arises from the 1<sup>st</sup> day of quarantine and the benefit amount is 55% of the daily assessment base (gross income subject to sickness insurance contributions with the maximum assessment base being equal to double the average wage from two years ago). In April 2021 the wage replacement rate was temporarily increased to 75 % of the daily assessment base.

**Pandemic nursing benefit (*Pandemické ošetrovné*):** Extends the standard benefit for nursing a sick relative to parents looking after their children during compulsory school closure even when they are not sick. The duration is not limited and the benefit amount remains 55% of the daily assessment base (gross income subject to sickness insurance contributions with the maximum assessment base being equal to double the average wage from two years ago). In April 2021 the wage replacement rate was temporarily increased to 75 % of the daily assessment base.

**Unemployment benefit prolongation (*Dávka v nezamestnanosti*):** In 2020, the standard unemployment benefit duration was prolonged by a maximum of five months for those whose unemployment benefit expired during the state of emergency. In 2021, all those, whose unemployment benefit expired during the emergency, are eligible for unemployment benefit extension by two additional months. This eligibility is only limited until May 31 2021.

**Parental allowance prolongation (*Rodičovský príspevok*):** During the pandemic the eligibility period for the parental allowance is not restricted to parents whose children turn 3 years of age (or 6 in special cases). Parents are eligible for the allowance as long as the country is still in a state of emergency.

**SIC abatement (*Odpustenie sociálnych odvodov*):** Employers (both public and private sector) and self-employed whose businesses were compulsorily closed by the order of the government do not have to pay their social insurance contributions for April 2020.

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

### 2.1 Scope of simulation

Table 2.1 Simulation of benefits in EUROMOD

	Variable name(s)	Treatment in EUROMOD 2018-2021	Comments
Old age pension	poa00	I	No data on contributions records
Military, police old age pension	poaml	I	No data on contributions records
Early old age pension	pyr	I	No data on contributions records
Disability pension	pdi00	I	No data on contributions records
Widows and widowers pension	psuwd (psu00)	I	No data on contributions records
Orphan's pension	psuor (psu00)	I	No data on contributions records
Sickness benefit	bhlsi (bhl)	I	Short-term benefit, no data on sick days; included in health related benefits
Nursing benefit	bhlcc (bhl)	I	Short-term benefit, no data on sick days of relatives; included with sickness benefits
Accident benefits	bhlot (bhl)	I	
Equalization allowance	bmapr (bfa)	I	No data on pregnancy related changes in pay; included in other family benefits
Maternity benefit	bma/bmact_s	I/S	No data on contribution records. Its simulation can be switched on by activating PBE extension. The default for the baseline is off, i.e. the non-simulated component is being used (bma).
Pregnancy benefit	bprct_s	S	No data on contribution records. Its simulation can be switched on by activating PBE extension. The default for the baseline is off.
Unemployment benefit	bunct_s	PS	No data on contributions records
Material need benefits	bsa00_s	S	Missing data about participation in training/ community work; no information about child disability
Special allowance	bsarw	I	
Child birth allowance	bchba_s	S	
Multiple birth allowance	bchba	IA	Marginal and negligible benefit
Child benefit	bch_s	S	

## EUROMOD Country Report – SLOVAK REPUBLIC

	Variable name(s)	Treatment in EUROMOD 2018-2021	Comments
Child benefit surcharge	bch_s	S	
One-off child benefit	bch_s	S	
Parental allowance	bcc00_s	S	Missing data about child disability
Childcare allowance	bccot (bfa)	I	
Replacement care benefits	bfaot	IA	
Nursing allowance	bcrdi	I	No data on sickness of a relative
Residual disability benefits	bdiot	I	Residual benefits not possible to be simulated
Compensatory allowance for miners			
Funeral benefit	bsu	IA	No data on deceased relatives; included in other survivors benefits
Scholarships	bsaot & bed	IA	No information about grades; means-tested scholarships included in bsaot
Tax refunds	tinrf_s	S	
Housing benefit	bho	IA	
Residual unemployment benefits	bunot	I	Residual benefits not possible to be simulated
Residual family benefits	bfaot	I	Residual benefits not possible to be simulated
Pandemic nursing benefit (Covid-19)	bccmc_s	S (2020;2021)	This benefit can only produce results if the model is run in combination with the LMA add-on.
Wage compensation scheme (Covid-19)	bwkmcee_s	S (2020;2021)	This benefit can only produce results if the model is run in combination with the LMA add-on.
Self-employment compensation (Covid-19)	bwkmcse_s	S (2020;2021)	This benefit can only produce results if the model is run in combination with the LMA add-on.

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; “IA”: *included* in the micro-data in an *aggregate* variable, but not simulated; “PS” *partially simulated* as some of its relevant rules are not simulated; “S” *simulated* although some minor or very specific rules may not be simulated.

Table 2.2 Simulation of taxes and social contributions in EUROMOD

	Variable name(s)	Treatment in EUROMOD 2018 - 2021	Comments
Personal income tax	tin_s	S	
Withholding tax	tin_s	PS	Simulated together with personal income tax
Property tax	tpr	I	No information on value of real estate
Value added tax		E	Beyond the scope of Euromod; no data on expenditures
Excise taxes		E	Beyond the scope of Euromod; no data on expenditures
Local taxes		E	Beyond the scope of Euromod; no detailed data on locality
<b>Employee social insurance contributions</b>	ils_sicee		
Sickness contributions	tsceesi_s	S	
Old-age contributions	tsceepi_s	S	
Disability contributions	tsceedi_s	S	
Unemployment contributions	tsceei_s	S	
Health contributions	tsceeh_s	S	
SICs from agreements	tsceej_s	S	
<b>Employer social insurance contributions</b>	ils_sicer		
Sickness contributions	tscersi_s	S	
Old-age contributions	tscerpi_s	S	
Disability contributions	tscerdi_s	S	
Unemployment contributions	tscerui_s	S	
Health contributions	tscerhl_s	S	
Guarantee contributions	tscersf_s	S	

## EUROMOD Country Report – SLOVAK REPUBLIC

	Variable name(s)	Treatment in EUROMOD 2018 - 2021	Comments
Accident contributions	tscerac_s	S	
Reserve solidarity fund	tscerot_s	S	
2 <sup>nd</sup> pillar component	tscpcpi_s	S	Data on participation in 2 <sup>nd</sup> pillar only available since 2019 SILC. For previous datasets, participation is simulated randomly based on probabilities derived from external data.
SICs from agreements	tsceraj_s	S	
<b>Self-employed social insurance contributions</b>	ils_sicse		Based on current income; no data about previous income
Sickness contributions	tscsesi_s	S	
Old-age contributions	tscsepi_s	S	
Disability contributions	tscsedl_s	S	
Reserve solidarity fund	tscseot_s	S	
Health contributions	tscsehl_s	S	
2 <sup>nd</sup> pillar component	tscpcpitv_s	S	Data on participation in 2 <sup>nd</sup> pillar only available since 2019 SILC. For previous datasets, participation is simulated randomly based on probabilities derived from external data.
Voluntary health insurance contributions (inactive)	tshlfx_s	S	
Credited health insurance contributions	tscctl_s	S/PS	Since 2020, the government no longer pays credited health insurance contributions in the form of a percentage of the assessment base. Instead, a fixed amount is paid each month based on the total amount of resources allocated to the healthcare system in the state budget
Credited employer contributions for beneficiaries of the wage compensation scheme (Covid-19)	tscct_s	S (2021)	SIC paid by the employer and credited by the government to firms beneficiaries of the wage compensation scheme. Assumed only to be credited if the compensation paid by the government (bwkmcee_s) is below the compensation cap. Otherwise, the total cost of the scheme is already accounted in bwkmcee_s

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

### 2.2 Main policy changes

- *Changes between 2017 and 2018*

The health care insurance contribution (HIC) allowance for employers has been abolished. Currently only employees are eligible for the HIC allowance.

The allowance on social security contributions of pensioners paid on income from agreements has been increased and unified at EUR 200 per month.

Transformation of support for mortgage interest for young people from subsidy to tax credit: since 2018 taxpayers will be allowed to deduct mortgage interest (maximum amount is EUR 400 per year for a maximum of 5 years in a row) from their own tax liability. Only taxpayers younger than 35 years old and with average income below 1.3 times the average wage two years prior are eligible.

The period of contribution required for eligibility for the unemployment benefit has changed from the minimum of 2 out of the last 3 years to a minimum of 2 out of the last 4 years.

- ***Changes between 2018 and 2019***

Since 2019, the tax credit on dependent children is doubled for each child below the age of 6 years.

A new one-off child benefit was approved from September 2019 for children starting elementary school.

Extended eligibility for lunch subsidies to all children between 6-15 from September 2019.

- ***Changes between 2019 and 2020***

The basic tax allowance was raised from 19.2 \* the Minimum Subsistence Level (MLS) to 21\*MLS. The threshold when the tax allowance is phased out was adjusted accordingly to 92.8\*MLS.

Higher parental allowance is provided to parents who were in receipt of the maternity benefit before claiming the parental allowance.

Self-employment income is now taxed separately. If the annual turnover is less than or equal to €100 000, a lower flat rate of 15% is applied. If the turnover is higher, the standard progressive tax schedule applies on self-employment income separately. Tax allowances are first used to reduce the tax base on employment income. If employment income is lower than the tax allowances, the left-over allowances then reduce the separate self-employment income tax base.

Credited health insurance contributions are no longer paid in the form of a percentage of the assessment base. Instead, the government pays a fixed amount each month based on the total amount of resources allocated to the healthcare system in the state budget and the expected health insurance contributions paid by the economically active. The implied percentage rate is now calculated from these aggregate payments by the government.

Besides, and as result of the COVID-19 pandemic, three main income compensation schemes are simulated in 2020: the COVID-19 nursing benefit (*Pandemické ošetrovné*), for parents looking after their children during compulsory school closure; a wage compensation scheme (*Prvá pomoc – zamestnávateľia*) for employees unable to perform work assignments at all due to business closures; and a lump-sum grant for self-employed (*Prvá pomoc – SZČO*) whose business closed by the order of the government or suffered a loss in revenue.

- ***Changes between 2020 and 2021***

Introduction of the contributory pregnancy benefit for women from the 13<sup>th</sup> week until the end of their pregnancy.

The pandemic nursing benefit has a higher income replacement rate in April 2021.

Abolition of the universal free lunches policy for children between 6-15 from August 2021 and return to the prior setup<sup>2</sup>.

The replacement rate of the wage compensation scheme *Kurzarbeit* was increased from 80% of gross wage to 80% of total labour cost in October 2020 and then again to 100% of the labour cost in February 2021. The monthly cap per employee was also unified at €1100 for all workers in October 2020. In July 2021, the conditions have changed again back to the initial setup.

---

<sup>2</sup> Change not simulated in EUROMOD as it is beyond the scope of the model.

The number of brackets and amounts for the self-employment grant were increased both in October 2020 and in February 2021. In July 2021, the conditions have changed again back to the initial setup.

The children tax credit was increased to 1.7 times the basic amount for children 6 to 15 years old from July 2021.

The revenue threshold for the 15% reduced PIT rate on self-employment income was reduced from €100 000 to €49 790.

### 2.3 Order of simulation and interdependencies

Table 2.3 shows the order in which the policies are simulated. The order is the same for all years. Minimum wage is simulated first, as the simulation of this policy affects employment income which is subsequently an input to social insurance contributions, personal income tax and means-tested benefits. However, note that minimum wage is turned off in all years. The simulation of the pandemic nursing benefit, parental leave benefits and unemployment benefit follows thereafter. In particular, the eligibility for the unemployment benefit is conditional upon receipt of the parental allowance and the maternity benefit. As a result, the maternity benefit<sup>3</sup> and the parental allowance are simulated before the unemployment insurance benefit.

The simulation of the COVID-19 compensation schemes is then implemented as employment incomes and the number of months in employment will be recalculated for those spending at least one month under any compensation scheme. The simulated outputs of the COVID-19 schemes are also used by subsequent policies (i.e. wage compensations for employees are taxable and subject to social insurance contributions)<sup>4</sup>.

Taxable income excludes all social insurance contributions paid. Therefore, social insurance contributions are simulated before the personal income tax.

Means-tested social assistance (material need benefit) is the last benefit to be simulated as the income that is assessed is net of all social insurance and taxes paid, while including social security benefits and regular state support benefits with the exception of the child benefit.

Finally, credited health contributions are simulated last as eligibility depends on receipt of the material need benefit. In 2021, this policy also includes employers' credited contributions for beneficiaries of wage compensation, as the scheme simulated in 2021, which was in place until July, compensates total labour costs up to a specific compensation cap (see section 2.9.2 for more details).

---

<sup>3</sup> Even though its simulation is switched off in the baseline. See section 2.4 and the corresponding policies' descriptions for more information.

<sup>4</sup> Please, note that these policies can only produce results if the model is run in combination with the LMA add-on. For more information about the modelling of labour market transitions, please consult the "Simulating labour market transitions in EUROMOD" document.

**Table 2.3 EUROMOD Spine: order of simulation**

<b>Policy</b>	<b>SK_2018</b>	<b>SK_2019</b>	<b>SK_2020</b>	<b>SK_2021</b>	<b>Description of the instrument and main output</b>
setdefault_sk	on	on	on	on	DEF: SET DEFAULT
uprate_sk	on	on	on	on	DEF: UPRATING FACTORS
constdef_sk	on	on	on	on	DEF: Constants
ilsdef_sk	on	on	on	on	DEF: INCOME CONCEPTS
ilsUDBdef_sk	on	on	on	on	DEF: UDB INCOME CONCEPTS
ildef_sk	on	on	on	on	DEF: NON-STANDARD INCOME CONCEPTS
random_sk	on	on	on	on	DEF: Random assignment for tscpcpi_sk, bsa_sk & covid-19-related policies
TransLMA_sk	n/a	n/a	off	off	DEF: Modelling labour market transitions (DO NOT SWITCH ON; ONLY WORKS WITH THE LMA ADD-ON)
tundef_sk	on	on	on	on	DEF: ASSESSMENT UNITS
yem_sk	switch	switch	switch	switch	INC: Minimum Wage (Minimálna mzda)
neg_sk	on	on	on	on	DEF: recode negative incomes (e.g. self-employment income) to zero
bccmc_sk	n/a	n/a	on	on	BEN: Covid-19 Pandemic nursing benefit (Pandemické ošetrovné) (ONLY WORKING WITH LMA ADD-ON)
yemcomp_sk	n/a	n/a	on	on	BEN: Covid-19 wage compensation scheme "Kurzarbeit" (Prvá pomoc - zamestnávateľa) (ONLY WORKING WITH LMA ADD-ON)
ysecomp_sk	n/a	n/a	on	on	BEN: Covid-19 self-employment lump-sum grant (Prvá pomoc - SZČO) (ONLY WORKING WITH LMA ADD-ON)
bmact_sk	switch	switch	switch	switch	BEN: Maternity benefit (Materská dávka)
bprct_sk	switch	switch	switch	switch	BEN: Pregnancy benefit (Tehotenská dávka)
bcc00_sk	on	on	on	on	BEN: Parental Allowance (Rodičovský príspevok)
bunct_sk	on	on	on	on	BEN: Unemployment benefit (Dávka v nezamestnanosti)
tscer_sk	on	on	on	on	SIC: Employer social insurance contributions (Zamestnávateľ sociálne poistenie)
tscee_sk	on	on	on	on	SIC: Employee social insurance contributions (Sociálne poistenie - zamestnanec)
tscse_sk	on	on	on	on	SIC: Self-employed social insurance contributions (Sociálne poistenie - samostatne zárobkovo činné osoby)
tschaj_sk	on	on	on	on	SIC: Social insurance contributions paid from income from agreements (since 2013)
tscpcpi_sk	switch	switch	switch	switch	SIC: Second pillar pension insurance contributions (Príspevky na starobné dôchodkové sporenie)
tschl_sk	on	on	on	on	SIC: Health insurance contributions (Zdravotné poistenie)
tin_sk	on	on	on	on	TAX: Personal Income tax (Daň z príjmu fyzických osôb)

## EUROMOD Country Report – SLOVAK REPUBLIC

---

Policy	SK_2018	SK_2019	SK_2020	SK_2021	Description of the instrument and main output
bchba_sk	on	on	on	on	BEN: Child birth allowance (Príspevok pri narodení dieťaťa)
bch_sk	on	on	on	on	BEN: Child Benefit (Prídavok na dieťa)
bsa_sk	on	on	on	on	BEN: Means-tested social assistance (Dávka v hmotnej núdzi a príspevky k dávke)
tsccthl_sk	on	on	on	on	SIC: Credited & 'voluntary' health insurance contributions (Zdravotné poistenie platené štátom a samoplatcami)
output_std_sk	on	on	on	on	DEF: STANDARD OUTPUT INDIVIDUAL LEVEL
output_std_hh_sk	off	off	off	off	DEF: STANDARD OUTPUT HOUSEHOLD LEVEL

### 2.4 Policy extensions

There are four extensions included in the Slovak model:

- **Minimum Wage Adjustment (MWA)**, allowing the user to switch on/off the minimum wage simulation. The default for the baselines is off.
- **Parental Benefits Extension (PBE)**, allowing the user to choose between the observed (non-simulated) parental leave benefits (extension off) or the simulated ones (extension on). The default for the baselines is off.
- **Full Year Adjustment (FYA)**, allowing the user to choose between policies as of 30<sup>th</sup> June (extension off) or modelling annual policies (extension on), taking into account within-year policy changes. The default for the baselines is off.
- **Benefit Take-up Adjustments (BTA)**, allowing the user to apply non-take-up corrections (if extension is on). The extension is used for the simulation of the material need benefits. The default for the baselines is on. Otherwise, full take-up is assumed.
- **2<sup>nd</sup> Pillar Pension Insurance Contributions (2PC)**, allowing the user to switch on/off the compulsory private pension (2<sup>nd</sup> pillar) insurance contributions. The default for the baselines using 2019 SILC data is on. The default for other datasets/systems combinations is off<sup>5</sup>.

Apart from the above-mentioned policy extensions, the Slovak model also includes one policy that is switched off in the baseline, but can be used for specific purposes:

- **TransLMA\_sk**. This policy defines the individuals that are selected to undergo transitions to monetary compensation schemes and/or unemployment. The transitions are only enabled if used together with the Labour Market Adjustments (LMA) add-on (i.e. the LMA add-on switches on this policy automatically). The transitions are based on a random allocation of individuals and they might be triggered by feeding the parameters of this policy with official or hypothetical information<sup>6</sup>. This policy, in combination with the LMA add-on, enables the simulation of the wage compensation scheme (*yemcomp\_sk*), the lump-sum grant for self-employed (*ysecomp\_sk*) and the pandemic nursing benefit (*bccmc\_sk*).

---

<sup>5</sup> For more information about the modelling of this policy, please consult the section 2.6.6 of this report.

<sup>6</sup> For more information about the modelling of labour market transitions, please consult the “Simulating labour market transitions in EUROMOD” document. The data on transitions to unemployment is obtained from the Labour Force Survey and administrative data. The impact across different categories of individuals and the duration of unemployment 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 \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1). The data on transitions to monetary compensation schemes was obtained from national sources and are described in section 2.9.2.

## 2.5 Benefits

### 2.5.1 Parental allowance (*bcc00\_sk*)

- **Definitions**

There is a special unit of analysis (*tu\_bcc\_sk*) for parental allowance, which contains parents and their children up to 3 years old or up to 6 years old in case of long term unfavourable health conditions.

- **Eligibility conditions**

Only one parent can claim the allowance. It cannot be combined with the sickness benefit. Maternity benefit reduces the amount of the allowance.

**EUROMOD modelling:** The loss of entitlement due to receiving sickness benefits is actually not simulated in the model due to the short-term nature of sickness benefits, which are usually received only for a few days or weeks.

- **Income test**

Not applicable

- **Benefit amount**

During 2006 – 2009 the amount of the benefit was fixed independently from the number of children in the tax unit. In 2010 a second higher amount of the parental allowance was defined. Entitled to the higher amount was the parent of a child up to 2 years old, who was receiving the maternity benefit before child birth or had paid sickness insurance contributions at least for a period of 270 days during the two years before the child birth. The parent was not eligible for the allowance in years 2009 and 2010 if she was earning employment or self-employment income. Since 2011, a flat amount is provided to eligible families which increases by 25% for every child born at the same time as the one considered. The parental allowance is decreased by 50% if some other dependent child in the same family has not attended school for 3 months. Since 2020, a higher parental allowance is provided again if the parent was receiving the maternity benefit before claiming the parental allowance.

Table 2.4. Parental allowance benefit amounts (€ per month)

	2017	2018	2019	2020	2021
Per family	€ 213.2	€ 214.7	€ 220.7	€ 270.0	€ 275.9
After maternity	-	-	-	€ 370.0	€ 378.1

**EUROMOD modelling:** The reduction in allowance due to other children not attending school is not modelled. The simulation of the higher allowance after maternity is only simulated for parents receiving maternity benefit in the income reference period.

- **Subject to taxes/SIC**

Exempt.

- **Take up**

Nearly all eligible parents take parental allowances.

#### Changes in 2018

No changes

### Changes in 2019

No changes

### Changes in 2020

Higher allowance is provided to parents who were receiving the maternity benefit before.

### Changes in 2021

No changes

## **2.5.2 Unemployment benefit (*bunct\_sk*)**

- ***Definitions***

The unit of analysis is an individual.

- ***Eligibility conditions***

A person is entitled to receive unemployment benefit if they have contributed for at least two years within the last three (since 2018 within the last four years). After the end of an unemployment spell, the insured person must contribute for another two years before a new claim can be made. They must be listed on the unemployment registry and be under the retirement age. The benefit cannot be combined with sickness, nursing or maternity benefit, or parental allowance. The maximum length of receiving unemployment benefit is 6 months.

- ***Income test***

No income test is applied

- ***Benefit amount***

The amount of unemployment benefit is 50% of the daily assessment base, which is calculated as the sum of all the bases on which unemployment insurance contributions have been paid, divided by the corresponding number of days. The benefit is provided with respect to the number of days in unemployment. The maximum monthly assessment base is 2 times the average wage two years prior.

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

Table 2.5. Characteristics of the unemployment benefit

		2018	2019	2020	2021
<b>Eligibility</b>	Contribution period	2 years out of the last 4			
	Other conditions	listed on the unemployment register and under retirement age	listed on the unemployment register and under retirement age	listed on the unemployment register and under retirement age	listed on the unemployment register and under retirement age
	Eligibility of self-employed <sup>a</sup>	no	no	no	no
<b>Payment</b>	Contribution base	gross employment income + company shares + termination and severance pay divided by number of days in employment	gross employment income + company shares + termination and severance pay divided by number of days in employment	gross employment income + company shares + termination and severance pay divided by number of days in employment	gross employment income + company shares + termination and severance pay divided by number of days in employment
	Basic amount	50% of daily contribution base			
	Additional amount	N/A	N/A	N/A	N/A
	Floor	N/A	N/A	N/A	N/A
	Ceiling	50% of 2 times the average wage two years prior	50% of 2 times the average wage two years prior	50% of 2 times the average wage two years prior	50% of 2 times the average wage two years prior
<b>Duration</b>	Standard (in months)	6 months	6 months	6 months	6 months
	Special cases (in month)	N/A	N/A	Up to 10 months	Up to 8 months
<b>Subject to</b>	Taxes	no	no	no	no
	SIC	no	no	no	no

Notes: <sup>a</sup> Contributions to unemployment insurance is voluntary for the self-employed. Only those contributing to unemployment insurance are eligible to get the benefit.

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

Unemployment duration (lunmy\_s) is set equal to the minimum between the maximum duration according to the national rules or the maximum of observed unemployment duration (lunmy) and observed benefit receipt (bunmy). If modelling unemployment benefit for those currently employed, unemployment duration is set equal to the minimum between the maximum duration

according to the national rules or the reported number of months in employment in the current year (*liwmy*), once contribution history (see the next step) is modelled. It is effectively also assumed that unemployment spells start in the reference year.

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

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

At this point, people who are unemployed ( $lunmy\_s > 0$ ), have not reached retirement age yet and have sufficient contribution history are considered eligible. It is assumed that all of them are involuntary unemployed and capable and available for work (there is a variable in the SILC data identifying the latter but only filled in for those currently unemployed).

Benefit duration (*bunmy\_s*) is simply set equal to the unemployment duration (*lunmy\_s*) as long as this is smaller than the maximum duration according to the national rules. The maximum duration is 6 months.

Benefit entitlement is calculated based on the variable “previous wage” which is used as the daily assessment base. In case the value is missing imputed wage is used. Previous wage for the simulation of the unemployment benefit is calculated reverting the unemployment benefit rules from the benefit amount reported in data.

The prolongation of the benefit duration (to maximum of 10 months in 2020, or 8 months in 2021) during the COVID-19 pandemic is not simulated because the expiration date of the benefit cannot be identified.

### 2.5.3 Child birth allowance(*bchba\_sk*)

- **Definitions**

There is special unit of analysis (*tu\_bchba\_sk*) containing parents and their dependent children up to 1 year old.

- **Eligibility conditions**

Only one parent (usually the mother) can receive the allowance. There is no conditionality other than permanent residency of both the entitled parent and the dependent child in the Slovak Republic. The child should be older than 28 days. The additional birth grant was introduced in 2007 and was paid for each new-born child whose mother was at her first childbearing. Since 2009 a higher amount is paid for the first three children. In the case of a multiple birth, an additional amount is paid for each child.

**EUROMOD modelling:** The benefit is simulated as a yearly amount for all parents, who have a dependent child up to 1 year old.

- **Income test**

No income test is applied

- **Benefit amount**

Benefit amount depends on the number of children and childbirths:

- EUR 829.86 for the first three childbirths
- EUR 151.37 for the child from the fourth or more childbirths
- For two or more children born at the same time there is additional benefit EUR 75.69 per child.

Table 2.6. Child birth allowance benefit amounts (€ per year)

	2017	2018	2019	2020	2021
First 3 children	€ 828.86	€ 828.86	€ 828.86	€ 828.86	€ 828.86
Fourth and more children	€ 151.37	€ 151.37	€ 151.37	€ 151.37	€ 151.37
Multiple birth surcharge	€ 75.69	€ 75.69	€ 75.69	€ 75.69	€ 75.69

#### 2.5.4 Child benefit (*bch\_sk*)

- **Definitions**

The unit of analysis is the family (*tu\_family\_sk*), which contains parents and their dependent children. Dependent child is defined as a child up to 16 years old, or up to 18 years old and disabled or up to 25 years old and studying at university (not yet finished post-secondary education), or up to 25 years old and cannot study because of illness or injury.

- **Eligibility conditions**

There is no conditionality to the child benefit other than permanent residency in the Slovak republic of both the entitled parent and the dependent child. Since 2008, a surcharge has been introduced. Eligible individuals are those meeting the whole set of the following requirements:

- Recipient of pension (old-age, early old-age, disability, or military if standard retirement age has been reached) or of the benefit for caring for a disabled relative,
- Not receiving any earnings,
- Not entitled to the tax credit on dependent child.

**EUROMOD modelling:** The extension of benefit for children, who are younger than 25 and not studying at an approved institution because of illness or injury, is not modelled.

- **Income test**

No income test is applied

- **Benefit amount**

The amount of the benefit is indexed every year based on the growth of the Minimum Subsistence Level (MLS). The monthly amounts in the following table are per child. Since September 2019, an additional one-off benefit is given when the child starts elementary school for the first time.

Table 2.7. Child benefit amounts per child (€ per month)

	2017	2018	2019	2020	2021
Child benefit	€ 23.52	€ 23.68	€ 24.34	€ 24.95	€ 25.50
Surcharge	€ 11.02	€ 11.10	€ 11.41	€ 11.70	€ 11.96
One-off benefit	-	-	€ 100.00	€102.50	€104.76

**EUROMOD modelling:** The one-off benefit approved in September 2019 is simulated for that year using the Full Year Adjustment extension. The default for the baseline is off, i.e. the benefit is simulated as of June 30. The one-off benefit is simulated only for children 6 years old, which is the standard school entry age.

### 2.5.5 Maternity benefit (*bmact\_s*)

- **Definitions**

This is a contributory benefit for the period of maternity leave. Available to employees and insured self-employed persons. The benefit can also be claimed by the father (or other second caretaker) of the child if he is a substitute carer due to taking care of the child. The benefit is paid to mothers/substitute carers of adopted/foster children, but we cannot simulate it for these categories due to the lack of data on adoption/foster status of children.

- **Eligibility conditions**

Giving birth or being a substitute carer (incl. fathers).

- At least 270 days of contributions to sickness payment during the 2 years preceding the take up of maternity benefit. Within this period is included interruption due to the parental allowances.
- Loss of earnings for the period of leave (the woman must not have a paid position and may not run her own business).

- **Income test**

No.

- **Benefit duration**

The maternity leave begins 6-8 weeks before expected birth and lasts a total of 34 weeks, or 37 weeks in case of single mother and 43 weeks in case of multiple births. The minimum duration is 14 weeks (if the child is stillborn).

- **Benefit amount**

The amount equals 75 % of the Daily Assessment Base (*Denný vymeriavací základ*), paid during the period of maternity leave. The maximum amount of DAB is calculated as follows: at first it is important to calculate the maximum assessment base (MAB) per month which is  $2 * \text{average wage two years before}$ . Subsequently the maximum maternity benefit per day is calculated as  $MAB * 12 / 365 * 75 \%$ .

Table 2.8. Detailed calculation of maternity benefit per month

	2017	2018	2019	2020	2021
AW t-2	€ 883.00	€ 912.00	€ 954.00	€ 1013.00	€ 1 092.00
multiplication coefficient	2.00	2.00	2.00	2.00	2.00
DAB	€1 766.00	€1 824.00	€ 1 908.00	€ 2 026.00	€ 2 184.00
Percentage of gross wage	75%	75%	75%	75%	75%
<b>Maximum Maternity benefit</b>					
per day	€ 43.55	€ 44.98	€ 47.05	€ 49.96	€ 53,85
month (30 days)	€1 306.36	€1 349.26	€ 1 411.40	€ 1 498.69	€ 1 615,56
month (31 days)	€1 349.90	€1 394.24	€ 1 458.44	€ 1 548.65	€ 1 669,42

The father of the child can claim maternity benefit but no earlier than when the child is 6 weeks or older and only if the mother forfeits the benefit and leaves the childcare to the father. The amount of the maternity benefit of the father is calculated on the basis of his DAB in the same way as for the mother. The duration of the benefit is 28 weeks or 31 weeks in case of a single father or 37 weeks in case of multiple births.

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

Exempt.

- ***Take up***

Nearly all eligible mothers take maternity leave.

#### Changes in 2017

Increase in number of percentage from 70% to 75% of gross wage (May 2017).

Increase in MAB from 1.5 times to 2 times (January 2017).

#### Changes in 2018

No changes

#### Changes in 2019

No changes

#### Changes in 2020

No changes

#### Changes in 2021

No changes

### ***EUROMOD modelling***

In the EUROMOD Public Release of 2021 (I4.0) this benefit is only simulated from 2015 to 2021. The simulation is, however, switched off as part of the baselines, i.e., the non-simulated components (bma) is being used.

The previous insurance record is simulated based on the ratio of months in work in the income reference period to the months of the qualifying period and a minimum work history of 9 months (270 days).

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

Besides, the simulation assumes that the mother starts the leave 8 weeks before the birth and takes 26 weeks after.

### 2.5.6 Pregnancy benefit (*bprct\_s*)

- **Definitions**

This is a contributory benefit for pregnant women for the duration of the pregnancy from the 13<sup>th</sup> week onward, introduced in April 2021. Available to employees and insured self-employed persons. During the last 6-8 weeks of pregnancy, the benefit is received together with the maternity benefit.

- **Eligibility conditions**

Being pregnant and having contributed to sickness insurance for at least 270 days during the 2 years preceding the 13<sup>th</sup> week of the pregnancy.

- **Income test**

No.

- **Benefit duration**

From the 13<sup>th</sup> week until the end of pregnancy (assumed to be the 40<sup>th</sup> week).

- **Benefit amount**

The amount equals 15 % of the woman's daily assessment base (DAB) and is at least 10% of the universal DAB calculated as  $average\ wage\ two\ years\ before * 12 / 365$ . The maximum pregnancy benefit per day is calculated as  $MAB * 12 / 365 * 15 \%$ , where the maximum assessment base per month (MAB) is  $2 * average\ wage\ two\ years\ before$ .

Table 2.9. Detailed calculation of the pregnancy benefit per month

	2018	2019	2020	2021
AW t-2	-	-	-	€ 1 092.00
<b>Minimum pregnancy benefit</b>				
Universal DAB	-	-	-	€ 35.90
Percentage of DAB	-	-	-	10%
per day	-	-	-	€ 3.59
month (30 days)	-	-	-	€ 107.70
month (31 days)	-	-	-	€ 111.29
<b>Maximum pregnancy benefit</b>				
AW multiple	-	-	-	2.00
Maximum DAB	-	-	-	€ 71.80
Percentage of DAB	-	-	-	15%
per day	-	-	-	€ 10.77
month (30 days)	-	-	-	€ 323.1
month (31 days)	-	-	-	€ 333.87

- **Subject to taxes/SIC**

Exempt.

### **EUROMOD modelling**

Pregnancy is assumed during the current year if there is a child born in the income reference period ( $dag = 0$ )

The previous insurance record is simulated based on the ratio of months in work in the income reference period to the months of the qualifying period and a minimum work history of 9 months (270 days).

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

The simulation of this benefit is switched off in the baseline as not all the rules can be simulated accurately. Its simulation can be switched on, jointly with other parental leave benefits, through the PARBEN extension.

### **2.5.7 Material need benefits ( $bsa_{sk}$ )**

- **Definitions**

The unit of analysis is the family ( $tu_{bsa_{sk}}$ ) but with a slightly different definition of dependent child, as for child benefit. The dependent child conditions are following:

A person is defined as dependent child if he/she is aged below 16, or below 18 if disabled, or below 26 if still in education, or below 26 if his/her income is below the minimum wage and does not receive income from disability pensions and unemployment. Besides, children cannot be married to be considered dependent.

- **Eligibility conditions**

The family unit is eligible to receive material need benefit, if its assessed income is below the minimum subsistence level corresponding to its family structure.

The monthly amounts of the minimum subsistence level can be seen in the following table:

Table 2.10. Minimum subsistence level (€ per month)

	2018	2019	2020	2021
Head	€ 199.48	€ 205.07	€ 210.20	€ 214.83
Every next adult	€ 139.16	€ 143.06	€ 146.64	€ 149.87
Dependent child	€ 91.06	€ 93.61	€ 95.96	€ 98.08

- **Income test**

The assessed income consists of:

- 75% of the net employment and self-employment income
- 75% of old-age and early old-age pension for a pensioner with working history up to 25 years For each additional year of working history beyond 25 years, the parameter is decreased by 1 %
- 75% of the maternity benefit
- 75% of the disability benefit
- 75% of the orphan pension
- 75% of the widow and widower pension
- unemployment insurance benefit
- sickness insurance benefit
- private pensions
- property income
- investment income
- maintenance payments
- parental allowance
- termination pay
- severance pay
- equalization allowance
- private transfers

Incomes exempt from the assessed income are:

- One-off state support payments (child birth allowance, multiple birth allowance, foster care allowances, funeral benefit)
- Child benefit and child benefit surcharge
- Scholarships
- Tax credit on a dependent child and employee tax credit
- Income from occasional activities up to twice the minimum subsistence level
- Student income up to 3 times the minimum subsistence level
- Contribution for graduation practice

**EUROMOD modelling:** Assessed income is derived from original market income (ils\_origy) by adding the above named benefits and subtracting simulated social security contributions and income tax, income from occasional activities, educational allowances and 25% of net earnings,

maternity benefit and all pensions. The coefficient for old-age pension is adjusted according to length of working history.

- **Benefit amount**

The amount of the material need benefits is calculated summing the **basic benefit for material need** and all the **allowances for material need** to which a family is entitled to, and subtracting the family's assessed income.

The amount of **basic material need benefit** is set according to the structure of the family as in the following table.

Table 2.11. Basic benefit amounts for material need benefit (€ per month)

	2014-2018	2019	2020	2021
Individual	€ 61.60	€64.70	€ 66.30	€ 67.80
Single parent, 1-4 children	€117.20	€123.10	€ 126.20	€ 129.00
Single parent, 5+ children	€171.20	€179.80	€ 184.30	€ 188.40
Couple, no children	€ 107.10	€112.50	€ 115.30	€ 117.80
Couple, 1-4 children	€160.40	€168.40	€ 172.60	€ 176.40
Couple, 5+ children	€ 216.10	€226.90	€ 232.60	€ 237.70

The monthly amount of **health care allowance** is 2 euro per individual. Before 2009 the amount was 50 SKK. This allowance covers care expenditures of a person in state of material need and has no eligibility condition. Since 2014 the allowance has been abolished.

**EUROMOD modelling:** Basic material needs benefit and health care allowance are simulated for every tax unit. The supplement for pregnant women is not simulated.

The **housing allowance** aims to cover the housing related costs of a household in material need. At least one member must be the owner or tenant of the flat or house and the family must prove she is paying housing costs. Only one person in household is entitled to receive housing allowance. The amount of the allowance depending on the size of the household is shown in the following table. The amount is indexed annually in line with the basic material need benefit.

Table 2.12. Housing allowance amount (€ per month)

	2010-2019	2020	2021
1 member	€ 55.80	€ 57.20	€ 58.50
2+ members	€ 89.20	€ 91.40	€ 93.40

**EUROMOD modelling:** Housing allowance is simulated for every household and it is allocated to the head of the tax unit. We assume the head is responsible for housing.

The **protection allowance** is given to individuals in material need who are above retirement age or disabled (lost more than 70% of work capability), to lone parents taking care of a child up to the age of 31 weeks, or persons taking care of disabled individuals. Lower amounts are given to pregnant women, parents taking care of a child up to the age of 1 year, or individuals who have been sick for a period of more than 30 days. The amount of the allowance is shown in the following table.

Table 2.13. Protection allowance amount (€ per month)

	2009-2013	2014-2018	2019	2020	2021
Individuals above retirement age, disabled, lone parents, carers of individuals with disability	€63.07	€63.07	€ 66.20	€ 67.90	€ 69.40
Individuals with sickness (not simulated)	€ 34.69	€ 34.69	€ 36.40	€ 37.30	€38.10
Pregnant women in the last 8 weeks of pregnancy	-	-	€ 36.40	€ 37.30	€38.10
Pregnant women from the 4 <sup>th</sup> month of pregnancy, parents taking care of a child <1 old	-	€ 13.50	€ 14.20	€ 14.60	€14.90

**EUROMOD modelling:** Protection allowance is simulated for persons in retirement age or disabled or lone parents with children up to 1 year or pregnant women. If there is a disabled person in tax unit, one additional amount of protection allowance is simulated for carers. The carer is the oldest adult in tax unit not already eligible for protection allowance. Pregnancy is assumed during the year if a child was born in the reference period. The higher amount (since 2019) is simulated for the last 2 months of pregnancy and the lower amount for the preceding 4 months (last 6 months before 2019), taking into account the month of birth of the child. The allowance for individuals with temporary sickness is not simulated due to lack of information.

The **activation allowance** aims at obtaining, retaining or increasing the level of qualification, work skills, or work habits of individuals or households in order to encourage them to retain or to look for a job during the period in which they are in material need. The activation allowance cannot be received simultaneously with the protection allowance. The entitlement expires if the person does not participate in programs (part-time attendance in educational activities, training and work programs organized by the municipality or the Labour Office). Since 2019, a higher amount is given to an individual earning at least the minimum wage. The amount of the activation allowance is displayed in the following table.

Table 2.14. Activation allowance amount (€ per month)

	2009-2018	2019	2020	2021
Basic	€63.07	€ 66.20	€ 67.90	€ 69.40
For employees earning at least the minimum wage	-	€132.40	€ 135.70	€ 138.70

**EUROMOD modelling:** Activation allowance is simulated for every adult not eligible for protection allowance, since there is no information in data about participation in programs mentioned above.

**Allowance for dependent child** aims at education and progress of the child in household. The household receive the allowance for a child which is fulfilling compulsory school attendance. The allowance is paid per child in the amount shown in the following table.

Table 2.15. Allowance for dependent child amount (€ per month)

	2010-2018	2019	2020	2021
Per child	€ 17.20	€ 18.10	€ 18.60	€ 19.00

**EUROMOD modelling:** Allowance for dependent child is simulated for every dependent child in education and it is allocated to the head of the tax unit.

- **Take up**

Even though external data on the rate of take-up of the benefit are not available, non-take-up is modelled for baseline simulations (best possible combination between policy rules year and input data) using the BTA extension (see section 2.4). The rate is calculated as the ratio between the actual expenditure based on administrative data and the expenditure simulated by EUROMOD using the latest dataset and without correcting for non-take-up. When administrative data are not yet available for the current year, the last known take-up rate is used. The rates used in the model are shown in the following table.

Table 2.16. Take-up rate for the material need benefits

	2018	2019	2020	2021
Take-up rate	48.4%	42.7%	34.6%	34.6%

## 2.6 Social insurance contributions

### 2.6.1 Employee social contributions (*tscee\_sk*)

- **Liability to contributions**

Every employee is obliged to pay social contributions. Pensioners are exempted from contributions for disability and unemployment insurance. Recipients of disability pension, who lost more than 70% of their work capability, are exempted from paying unemployment insurance contributions and during 2006 and 2007 they were exempted also from paying disability insurance contributions.

Employees working on agreements were exempted until 2013. Since 2013, temporary workers, that work on the basis of an agreement of service or agreement of student work, should also pay social contributions. Students are entitled to social insurance contribution allowance in monthly amount of 8.39% of average wage two years prior up to 18 years of age, and in monthly amount of 19.72% of average wage two years prior up to 26 years of age. Since 2014, the allowance is in amount of EUR 200 per month for both groups. There is also exemption for recipients of old-age, early old-age or disability pension. The exemptions are different if a person is receiving regular or irregular income. The exact rates for each category are shown in the table below. Since 2018 the allowance on social security contributions of pensioner paid on income from agreements has been increased and unified at EUR 200 per month.

- **Income base used to calculate contributions**

The assessment base consists of gross wage and profit shares. Since 2011, assessment base includes also termination and severance payments. Since 2013, employee social contributions are paid from income from agreements as well (the allowance for students is applicable). The upper limit of the assessment base is unified since 2013 at 5 times the average wage two years prior. Since 2017 the upper limit of the assessment base is at 7 times the average wage two years prior. Before 2013, the maximum assessment base for sickness insurance was set to 1.5 times the average wage two years prior and for other types of insurance to 4 times (3 times during 2006 and 2007) the average wage two years prior.

- *Contribution rates*

Table 2.17. Employee contribution rates

Type of insurance	Old-age	Disability	Unemployment	Sickness
rate	4%	3%	1%	1.4%

Table 2.18. Contribution rates on income from agreement

	Regular income	Regular income and recipient of early old age pension	Irregular income	Irregular income and recipient of early old age pension	Student	Recipient of disability pension	Recipient of old age pension
Health insurance	4.00%	4.00%	4.00%	4.00%	0.00%	0.00%	0.00%
Pension insurance	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Disability insurance	3.00%	0.00%	3.00%	0.00%	3.00%	3.00%	0.00%
Sickness insurance	1.40%	1.40%	0.00%	0.00%	0.00%	0.00%	0.00%
Unemployment insurance	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Sum</b>	<b>13.40%</b>	<b>9.40%</b>	<b>11.00%</b>	<b>8.00%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>4.00%</b>

**EUROMOD modelling:** The difference between regular and irregular income is not modelled. Everyone pays social contributions as with regular income. For persons who are observed as changing their status from employee to old-age or disability pensioner during the income reference period, all employment income is considered to have been generated during their ‘employee period’. The contributed number of months are imputed as 1 for those individuals with positive assessment base but without any number of months in employment.

## 2.6.2 Employer social contributions (*tscer\_sk*)

- *Liability to contributions*

Employers pay social contributions for all employees. The same exemption for pensioners and disabled are in force as in the case of employee social insurance contributions. In addition, there is an exemption for employers in the public sector from paying the guarantee insurance.

Employers had to pay contributions to guarantee and accident insurance on income from agreements during all years. Since 2013, the rules changed and now all types of insurance contributions are paid also on income from agreements, with some exemptions for pensioners and students as in the case of employee social contributions paid from income from agreements. The exact rates for all categories are shown in the table below. The same social insurance contribution allowance is applied for students as well as employees.

- *Income base used to calculate contributions*

Employers’ social contributions assessment base is equal to that of employees except in the case of accident rates because there is no maximum assessment base.

- *Contribution rates*

Table 2.19. Employer contributions rates

Type of insurance	Old-age	Disability	Unemployment	Sickness	Reserve solidarity fund	Guarantee	Accident
rate	14%	3%	1%	1.4%	4.75%	0.25%	0.8%

Table 2.20. Contribution rates on income from agreement

	Regular income	Regular income and recipient of early old age pension	Irregular income	Irregular income and recipient of early old age pension	Student	Recipient of disability pension	Recipient of old age pension
Health insurance	10.00%	10.00%	10.00%	10.00%	0.00%	0.00%	0.00%
Pension insurance	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
Disability insurance	3.00%	0.00%	3.00%	0.00%	3.00%	3.00%	0.00%
Sickness insurance	1.40%	1.40%	0.00%	0.00%	0.00%	0.00%	0.00%
Unemployment insurance	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Reserve solidarity fund	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
Guarantee insurance	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Accident insurance	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%
<b>Sum</b>	<b>35.20%</b>	<b>31.20%</b>	<b>32.80%</b>	<b>29.80%</b>	<b>22.80%</b>	<b>22.80%</b>	<b>19.80%</b>

**EUROMOD modelling:** The difference between regular and irregular income is not modelled. Everyone pays social contributions as with regular income. The exemption from guarantee insurance for the public sector is modelled based on the industry of the workers (*lindi* = 9: public administration and defence).

The one-off abatement during the COVID-19 pandemic is simulated in the baseline based on the industry of the workers (*lindi*). The random share of workers eligible for the abatement are given by the following table:

Table 2.21. Share of industries (*lindi*) eligible for SIC abatement

<i>lindi</i>	Share
2: mining, manufacturing, utilities	2.2%
3: construction	3.2%
4: wholesale & retail	13.8%
5: hotels & restaurants	61.5%
6: transport & communication	7.5%
8: real-estate & business activities	6.8%
9: public administration	24.2%
10: education	76.9%
11: health & social work	3.5%
12: other	30.2%

**2.6.3 Self-employed social contributions (*tscse\_sk*)**

- ***Liability to contributions***

Self-employed workers are obliged to contribute to the Social Insurance Agency if their earnings (without deducting the expenses) in the previous year were higher than a given low limit. The lower limit was equal to the minimum wage in 2006-07, 44.2% of the average wage two years prior in 2008-2012 and, since 2013, the limit is set at 50% of the average wage two years prior. The self-employed in their first year of business activity therefore do not pay social contributions. Liability starts from July (or October in the case of a postponed filing of tax return) of the year after the earnings threshold was reached. If the self-employed is a pensioner, he is exempted from paying disability insurance contributions.

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

The assessment base is half of the net profit in the previous year, which is calculated as revenues reduced by costs and deductible expenses. Since 2013, the assessment base is net profit plus social and health insurance contributions paid in the previous year, all divided by a coefficient. The coefficient is 1.9 in 2013, 1.6 in 2014, and 1.486 since 2015. The maximum assessment base is equal to 5 times the average wage two years prior for all type of insurance. Since 2017 the maximum assessment base is equal to 7 times the average wage two years prior for all type of insurance. Before 2013, the maximum was defined as 1.5 times the average wage two years prior for sickness insurance and 4 times (3 times in 2006 and 2007) the average wage two years prior for other types of insurance.

- ***Contribution rates***

Table 2.22. Self-employed contribution rates

Type of insurance	Old-age	Disability	Reserve solidarity fund	Sickness
rate	18%	6%	4.75%	4.4%

***EUROMOD modelling:*** We assume that every self-employed contribute at least the minimum. As the input database does not contain information about the turnover, the condition about earnings higher than 50% of the average wage two years prior cannot be verified and modelled. Without information on previous income, the contributions are calculated based on income in the given year. This also means that the exemption in the first year of business activity cannot be modelled. Besides, self-employed who are observed to be in receipt of old-age or disability pension for less than 12 months during the income reference period are assumed to have generated all their self-employment income outside periods of pension receipt.

The one-off abatement during the COVID-19 pandemic is simulated based on the industry (*lindi*). The random share of self-employed eligible for the abatement are given by the following table:

Table 2.23. Share of industries (*lindi*) eligible for SIC abatement

<i>lindi</i>	Share
2: mining, manufacturing, utilities	2.2%
3: construction	3.2%
4: wholesale & retail	13.8%
5: hotels & restaurants	61.5%
6: transport & communication	7.5%
8: real-estate & business activities	6.8%
9: public administration	24.2%
10: education	76.9%
11: health & social work	3.5%
12: other	30.2%

**EUROMOD modelling:** The one-off abatement for self-employed is simulated as part of the EUROMOD 2020 baseline, whereas COVID-19 compensation schemes, including the self-employment grant, can be only triggered by using the LMA add-on.

#### 2.6.4 Health insurance contributions (*tschl\_sk*)

- **Liability to contributions**

Everyone is obliged to be insured. Employees, employers and the self-employed pay a fixed rate from a defined assessment base. Government pays health insurance contributions for students, unemployed, etc. (the exact conditions are described in the next section). Others, who are not entitled to receive credited health insurance contributions and are not either employees or self-employed are also obliged to pay and are registered under the category of “voluntary payers”.

- **Income base used to calculate contributions**

The assessment base for employees and employers consists of the assessment base for social contributions and income from occasional activities and other payments made by the employer. The minimum assessment base is equal to the minimum wage and the maximum assessment base has been abolished (5 times the average wage two years prior before 2017 and 3 times before 2013).

Since 2011, health insurance contributions are also paid from income from dividends with the rate of 10%. In 2013, the rate was increased to 14%. The maximum assessment base is set at 10 times the average wage two years prior. Before 2013, the maximum was fixed at 3 times the average wage two years prior. Receivers of income from dividends were entitled to HIC allowance before 2013, which could be deducted from income from dividends, in the amount of 44.2% of the average wage two years prior. Since 2017 health insurance contributions from dividend have been abolished.

Since 2013, health insurance contributions are paid from income from agreements if a person is not entitled to receive credited health insurance contributions (see below). The minimum assessment base doesn't apply. The rate is the same as for the employee and employer.

The self-employed assessment base is the same as in the case of the social insurance contributions. However, the contributions paid based on the previous year income are then assessed against income in the given year and cleared after filing of a tax return. All self-employed are required to pay health insurance contributions at least from the minimum assessment base, which is 50% (44.2% before 2013) of the average wage two years prior. This is true regardless of earnings in the previous year. Since 2017 the maximum assessment base has been abolished (5 times before 2017 and 3 times before 2013 the average wage two years prior).

In 2015, the HIC allowance for low income employees was introduced. The allowance, in amount of EUR 380 (minimum wage in 2015) per month, reduces the assessment base for both employees and employers. The allowance decreases by €2 with every €1 increase in wage and is equal to zero with income at EUR 570 per month. Since 2018, the HIC allowance for employers has been abolished. Currently only employees are eligible for the HIC allowances.

Everyone in the Slovak Republic has to be insured. So people, who are not employees or self-employed and who are not entitled to credited health insurance contributions (see below), must pay a fixed rate of 14% of 50% of the average wage two years prior. Before 2011, the fixed rate was paid on the minimum wage adjusted by a given coefficient.

- **Contribution rates**

The health insurance contribution rates are presented in the following table for different categories of payers. People with disabilities pay only half of the standard rate.

Table 2.24. Health insurance contribution rates

	<b>Employee</b>	<b>Employer</b>	<b>Self-employed</b>	<b>Voluntary</b>
Standard rate	4%	10%	14%	14%
Disabled	2%	5%	7%	7%

**EUROMOD modelling:** The reduced rate for people with a disability is not simulated.

### 2.6.5 Credited insurance contributions (*tsccthl\_sk*)

- **Eligibility**

The Government pays health insurance contributions for persons, who fulfil at least one of the following conditions:

They are dependent children (student up to 30 years old, only until master degree claim), pensioners, disabled, receivers of parental allowance, maternity benefit, sickness or care benefits, or entitled to the material need benefit or registered unemployed.

The second condition is to have the annual income below a given threshold, which is calculated as 15 times the minimum subsistence for a single person. Before 2011, the threshold was calculated on a monthly basis as 44.2% of the average wage two years prior multiplied by a fixed coefficient. This policy was not in force in 2011 and 2012. During these years, the government paid the HIC for everyone, who fulfilled one of the first conditions listed above, no matter how high their income.

- **Contribution base**

Assessment base is equal to the average wage two years prior.

- **Contributed rates/ amounts**

The Government pays a rate of approximately 4% of the assessment base. The rate slightly differs each year. The rates of the credited health insurance contributions are presented in the following table.

Table 2.25. Contribution rates for credited health insurance contributions

2017	2018	2019			2020	2021
		Jan-May	Jun-Oct	Nov-Dec	<i>implied</i>	<i>implied</i>
3.78%	3.71%	3.20%	3.44%	5.00%	3.19%	3.62%

Since 2020, the government no longer pays credited health insurance contributions in the form of a percentage of the assessment base. Instead, the contributions are paid as 12 equal monthly instalments. The sum is based on the difference between the total amount of resources allocated to the healthcare system in the state budget and the forecast revenue from the economically active population.

**EUROMOD modelling:** The change in the system since 2020 is modelled based on the same principle of *rate\*assessment base*. The implied rate is calculated based on the total HIC payments by the state in the given year, the average monthly number of eligible recipients and the average wage two years prior.

### 2.6.6 Compulsory private pension (2<sup>nd</sup> pillar) insurance contributions (*tscpci\_sk*)

A mandatory, private, funded pension pillar was introduced in January 2005. Within that system, 9 percentage points of the pension contributions paid by the employer flow directly to private pension funds and not to the Social Insurance Agency as in the previous years. The employer's contributions to the first public PAYG pillar are correspondingly reduced, from 14% to 5% of the employee's gross income. Similarly, 9 percentage points of the pension insurance contributions of the self-employed may be directed to the second pillar. In that case, 9% of the social insurance contributions assessment base is directed to the public PAYG system, and 9% to the private, funded pillar. Since 2013, the part of the contributions paid to private pension funds has been reduced from 9% to 4%. Contrary, the part contributed to the first public PAYG pillar increased by 5 percentage points. Since social insurance contributions on income from agreements were introduced, also part of old-age insurance contribution on this type of income can be directed to the second pillar. Since 2017, employer contributions to the privately-managed pension pillar (II. pillar) increase by 0.25 pp. each year while contributions to I. pillar decrease by 0.25 pp. each year until 2024 when the rates reach 6% and 8% respectively (as presented in the following table).

- **Contribution rates to II. Pillar**

 Table 2.26. Contribution rates for compulsory private pension (2<sup>nd</sup> pillar)

	2017	2018	2019	2020	2021	2022	2023	2024
<b>II. pillar</b>	4.25%	4.50%	4.75%	5.00%	5.25%	5.50%	5.75%	6.00%
<b>I. pillar</b>	9.75%	9.50%	9.25%	9.00%	8.75%	8.50%	8.25%	8.00%

**EUROMOD modelling:** Information on the participation to the second pillar is only available since the 2019 wave of SILC. Therefore, the policy is set to on by default when using 2019 data in combination with 2018-2021 systems (*best matches*). For the remaining systems and datasets combinations the policy is switched off due to lack of information on the participation to the second pillar. Nevertheless, the policy can be also switched on in those cases and the participation will be modelled randomly based on probabilities derived from external data in 2006. For the

purpose of switching on/off the policy the country-specific extension “2PC – 2<sup>nd</sup> Pillar Pension Insurance Contributions” can be used.

### 2.7 Personal income tax (*tin\_sk*)

The main tax simulated for Slovakia is the personal income tax. All residents are required to file income tax returns (or ask their employer to do the tax clearing on their behalf) if their annual taxable income exceeds 50% of the basic tax allowance.

#### 2.7.1 Tax unit

The tax unit is the individual.

#### 2.7.2 Exemptions

There are several tax exemptions i.e. income components that are part of pre-tax income, but do not have to be declared to the tax authorities, and thus are not included in the concept of taxable income:

- (a) all health-care and social insurance benefits,
- (b) social assistance benefits (material need benefits),
- (c) state social support benefits (child birth grant, child benefit, multiple birth benefit, parental allowance, social assistance benefits for severely disabled people, foster care allowances, funeral benefit, nursing allowance),
- (d) scholarships except graduate scholarship,
- (e) income from transferred, gifted or inherited immovable property,
- (f) alimonies,
- (g) luncheon vouchers (including contribution to meals consumed at canteen),
- (h) winnings in lotteries and other similar games operated under a license.

#### 2.7.3 Tax allowances

**The basic tax allowance** can be deducted from positive tax base of each taxpayer. It is applied on a monthly basis. In case of receipt of old-age pension, early old-age pension and service pension, the basic tax allowance is reduced by the amount of the pension received. If the pensions mentioned above exceed the basic tax allowance, there is no entitlement to the basic tax allowance.

The formula to calculate annual basic tax allowance is the following:

Table 2.27. Annual basic tax allowance calculation

Formula	Years in force
$21.0 * \text{MSL} - \text{poa00} - [\max(\text{Tax base before allowances} - 92.8 * \text{MSL}; 0) * 0.25]$	2020-2021
$19.2 * \text{MSL} - \text{poa00} - [\max(\text{Tax base before allowances} - 100 * \text{MSL}; 0) * 0.25]$	2007-2008; 2011-2019
$22.5 * \text{MSL} - \text{poa00} - [\max(\text{Tax base before allowances} - 86 * \text{MSL}; 0) * 0.25]$	2009 – 2010

Note: MSL = minimum subsistence level

**The spouse tax allowance** can be deducted from the positive tax base of each taxpayer living with his/her spouse if he/she satisfies one of following conditions: Takes care of child up to 3 years old or receives caring benefit or is disabled or is registered unemployed at Labour office. Before 2013, no income, or income below the basic tax allowance, of spouse was the only condition. When computing the income of the spouse, the following types of income are taken into account: gross market income (employment, self-employment, investment and property income, private pensions, alimonies etc.), health and social insurance benefits. The tax credit, state social support benefits and scholarships are not assessed as part of the spouse's income. The spouse tax allowance is applied on a monthly basis. Since 2011, not active earnings are not used in computation the allowances. Not active earnings include income from property and investment income. The formula for deriving spouse tax allowance is:

Table 2.28. Spouse tax allowance calculation

Formula	Years in force
$19.2 * \text{MSL} - [\max(\text{Tax base before allowances} - 176.8 * \text{MSL}; 0) * 0.25] - \text{income of the spouse}$	2007-2008; 2011-2021
$22.5 * \text{MSL} - [\max(\text{Tax base before allowances} - 176 * \text{MSL}; 0) * 0.25] - \text{income of the spouse}$	2009 – 2010

Note: MSL = minimum subsistence level

**The supplementary pension saving allowance** was in force during years 2006 – 2010. Each taxpayer could lower his tax base by deducting the amount of supplementary pension savings, special purpose savings and life insurance during the tax year. The three types together couldn't exceed € 398.33 (SKK 12 000) yearly. The supplementary pension saving allowance was applied only on annual basis, i.e. during tax clearing. Since January 2011, the allowance is not valid. The supplementary pension saving allowance in the yearly amount of €180 has been reintroduced as of 2014. However the saver has to fulfil certain conditions. The allowance is not simulated. As of 2013 voluntary contributions to the privately managed fully funded pillar up to 2 % of gross earnings net of employee social security contributions are tax-deductible. Maximum yearly limit for this tax relief is calculated as:  $2 \% \times 60 \times \text{AW}(t-2)$ , where  $\text{AW}(t-2)$  is the average wage two years ago. It is legislated that this relief will be automatically abolished as of 2017.

#### 2.7.4 Tax base

Income liable to personal income tax includes wages, salaries, income from business activities, fringe benefits, capital incomes less dividends, interests and rental income. The tax base for employees is computed as taxable income less social insurance contributions (also applies to compulsory contributions to the second pillar). For the self-employed, the tax base is computed as taxable income minus social insurance contributions and minus tax-deductible expenses. The self-employed are allowed to deduct previous losses (going back up to seven years) from their taxable income. For the other taxpayers, the tax base is formed by deducting tax deductible expenses from taxable income.

If a taxpayer who is not a VAT taxable person (i.e. has an annual turnover<sup>[1]</sup> that is less than 49 790 Euro) and does not deduct documented expenses, he/she shall be free to deduct flat-rate expenses equal to 60% (40% before 2017) of the aggregate income from self-employment. The ceiling for the flat-rate expenses amounts to €20 000 per year (€420 per month before 2017). The flat-rate deduction covers all expenses except social security contributions. The taxpayer who applies flat-rate expenses shall in addition be free to deduct documented social security contributions.

Since 2016, capital income is excluded from the main tax base and taxed separately at a flat rate of 19%. No allowances or deductions are applicable to the tax base except for the compulsory social security contributions levied on this income.

Since 2020, self-employment income is also treated as a separate tax base. The tax allowances are first used to reduce the employee tax base. The self-employed tax base is then reduced only by the sum of the allowances exceeding the employment income.

**EUROMOD modelling:** Capital income is all assumed to be cleared through the withholding tax (see below for details), and is thus treated separately from all other calculations even before 2016.

### 2.7.5 Tax schedule

Before 2013, a flat rate of 19% was applied.

In 2013, two rates were introduced, with threshold defined on annual basis:

Table 2.29. Tax schedule

Bracket number	Lower limit	Upper limit	Rate
1	0	176.8*MSL	19%
2	176.8*MSL	-	25%

Note: MSL = minimum subsistence level

In 2020, two alternative tax schedules were introduced for self-employment income depending on the annual turnover:

Table 2.30. Self-employment tax schedule

Annual turnover		Bracket number	Lower limit	Upper limit	Rate
2020	2021				
<= €100 000	<= €49 790	1	0	-	15%
> €100 000	> €49 790	1	0	176.8*MSL	19%
		2	176.8*MSL	-	25%

Note: MSL = minimum subsistence level

**EUROMOD modelling:** Input data do not include information on turnover. The condition is therefore approximated by profit (*yse*) and self-employment contributions (*ils\_sicse*), assuming everyone applies the 60% flat-rate deductions, by the formula  $turnover = (yse + ils\_sicse)/(1-0.6)$

### 2.7.6 Tax credits

There are three types of tax credits, which are a form of negative tax. The amount of the tax credit is deducted from the tax liability. If the tax liability is lower than the tax credit, the difference is received by the tax payer.

<sup>[1]</sup> The turnover for twelve consecutive months is considered

- 1) **Tax credit on dependent child** can be claimed by only one parent of a dependent child if she/he fulfils one of the following conditions:
  - a. was employed and earned annually at least 6 times the minimum wage
  - b. was self-employed and had an annual gross revenue from self-employment at least 6 times the minimum wages and positive tax base

The tax credit is applied on a monthly basis (therefore the eligible person must earn at least half of the minimum wage during the month to be eligible to claim the tax credit for the respective month). If she or he fails to fulfil the condition on a monthly basis but does fulfil it on an annual basis, the taxpayer is able to apply for under-payments of the tax credit through the annual tax clearing or by filling a tax return. The monthly amounts of the tax credit per child are:

Table 2.31. Dependent child tax credit amounts (€ per month)

year	2017	2018	2019	2020	2021
amount	€21.41	€21.56	€22.17	€22.72	€23.22

Since 2019, the tax credit on dependent children is doubled for each child below the age of 6 years. Since July 2021, 1.7-times the basic amount is provided for children 6 to 15 years old. This multiple is set to increase to 1.85 since January 2022.

- 2) **Employee tax credit** can be claimed by employees, who have worked at least 6 months during the year and their annual earnings are at least 6 times the minimum wage. The formula for deriving the employee tax credit depends on annual income. If the income is below 12 times the minimum wage, the tax credit is computed as 19% of the difference between the basic tax allowance and the minimum wage less social insurance contributions. If the annual income exceeds 12 times the minimum wage, the tax credit amount is calculated as 19% of the difference between the individual basic tax allowance and taxable income. The tax credit becomes zero when taxable income is equal to the basic tax allowance. The employee tax credit is in force since 2009. Due to the introduction of the HIC allowance and high amount of minimal wage the effective employee tax credit is now equal to 0.
- 3) **Tax credit on mortgage interest.** Since 2018, the taxpayer will be allowed to deduct mortgage interest from their own tax liability (maximum amount is EUR 400 per year for maximum 5 years in row). Only taxpayers younger than 35 years old and with average income below 1.3 times the average wage two year prior are eligible.

**EUROMOD modelling:** All individuals with self-employment income are eligible to the tax credit on dependent child in the simulation.

## 2.8 Other taxes

### 2.8.1 Withholding tax

Withholding tax is part of the PIT, although it is recorded as a separate tax. It is levied on income originating from sources in the territory of the Slovak Republic:

- interests, winnings and other income from deposits
- interests, bonuses and other forms of yield from bonds and similar securities
- prizes in cash won in lotteries and other similar games without license
- incomes earned under a supplementary pension savings scheme
- paid under an insurance policy for the attainment of a certain age

- incomes of authors for their articles for newspapers, magazines, radio, or television, unless they are treated as artistic performances

These incomes are taxed at a 19% flat rate. The tax base for the incomes mentioned above (except incomes of authors) shall correspond to the income alone, with no deductions possible. The tax base in the case of incomes of authors shall correspond to the income, less 40%. Once withheld, the tax is considered cleared and does not enter the tax returns. However, the tax withheld can also be treated as a tax advance and the taxpayer can deduct such tax advances from the tax in their tax return. If the tax which was withheld exceeds the tax calculated by the taxpayer in their tax return, the taxpayer shall be entitled to a refund of the tax overpayment. In practice, more than 90% of all capital income is processed through the withholding tax and does not further figure in the tax returns.

**EUROMOD modelling:** All capital income is assumed to be subject to the withholding tax and does not enter other PIT calculations.

### 2.8.2 Tax on dividend income

In 2017 the tax on dividend income was introduced. The tax rate on dividend income is 7 %.

**EUROMOD modelling:** Tax on dividend income is simulated as part of the personal income.

## 2.9 Other COVID-19 related temporary compensation measures

### 2.9.1 Pandemic nursing benefit (*bccmc\_sk*)

- **Definitions**

There is a special unit of analysis (*tu\_bccmc\_sk*) for the nursing benefit, which contains parents and their children up to 11 years old.

- **Eligibility conditions**

Only one parent can receive the benefit per eligible child during school closures. The parent must have been contributing to the sickness insurance in the past. It cannot be combined with the Kurzarbeit benefit.

**EUROMOD modelling:** It is assumed that the parent with lower income applies for the benefit. 3 month duration of the benefit is assumed for both 2020 and 2021. The nursing benefit is simulated before Kurzarbeit because it is assumed to be the preferred option. The simulation of the pandemic nursing benefit can be activated switching on the policy *bccmtime\_sk*, where the pre-defined random allocation of recipients to this scheme is included. Users can, anyway, feed this policy with different external data or hypothetical information. Importantly, this policy must be run with the LMA add-on, as the number of months in employment and employment incomes need to be adjusted according to the duration during which the individual receives the nursing benefit. This adjustment only takes place when running the LMA add-on.

- **Benefit amount**

The amount equals 55 % of the Daily Assessment Base (Denní vymeriavací základ) for sickness insurance. The maximum amount of the DAB is calculated from  $2 * \text{average wage two years before}$ . No employment income is received during the receipt of the benefit. In April 2021 the wage replacement rate increased to 75 % of the DAB.

**EUROMOD modelling:** Policy changes over the year are not implemented due to lack of information on when individuals started to receive the scheme. Therefore, the policy rules implemented in EUROMOD correspond to those in place on June 30 of each year. The increase in the replacement rate to 75 % is not implemented in the model because most of the take-up in 2021 took place before the legislative change.

- **Subject to taxes/SIC**

Exempt.

- **Take up**

In 2020, 35% of eligible families are assumed to take up the benefit based on random assignment and in 2021 the take-up is assumed to be 10%.

## 2.9.2 Kurzarbeit - percentage (*yemcomp\_sk*)

- **Definitions**

The unit of analysis is the individual. Only the percentage compensation of the gross income of employees in closed business is simulated. The second alternative of a lump-sum subsidy is not simulated because it is meant to compensate income losses of the firms rather than the employees themselves.

- **Eligibility conditions**

The individual is currently an employee working in a private business that closed during the pandemic, and he/she is not already in receipt of the pandemic nursing benefit.

**EUROMOD modelling:** The nursing benefit is simulated before Kurzarbeit because it is assumed to be the preferred option. 7 month duration of the support is assumed in both 2020 and 2021. Closed businesses are distinguished between compulsorily and voluntarily closed. Eligibility is simulated as a random share of workers in different sectors (*lindi*) based on the following table:

Table 2.32. Share of workers in different industries (*lindi*) receiving percentage Kurzarbeit

<i>lindi</i>	Share (2020)	Share (2021)
Compulsory closure		
4: wholesale & retail	38%	51%
5: hotels & restaurants	26%	18%
8: real-estate & business activities	2%	2%
12: other	4%	5%
Voluntary closure		
1: agriculture & fishing	1%	1%
2: mining, manufacturing, utilities	53%	38%
6: transport & communication	9%	10%
8: real-estate & business activities	1%	1%

**EUROMOD modelling:** this policy can only produce results if the model is run in combination with the LMA add-on. The individuals that are selected to undergo transitions to monetary compensation schemes are defined in the TransLMA\_sk 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.

### - *Benefit amount*

Employees in closed businesses receive 80% of their initial gross wages from the employer. The benefit amount then equals 80% of the initial gross wages (i.e. 100% of the new reduced salary) and, in practice, works as a reimbursement to the firm. Employers continue to pay the employer contributions levied on this reduced salary. The benefit was increased to 80% of total labour cost (gross wages + employer contributions) calculated from the reduced wages in October 2020 and to 100% of labour cost in February 2021. The monthly cap is €1100 for compulsorily closed and €880 for voluntarily closed businesses (unified at €1100 since October 2020). The employer continues to pay any wages and employer SIC in excess of this limit. Since July 2021, the conditions have returned to the initial setup valid until September 2020.

**EUROMOD modelling:** Policy changes over the year are not implemented due to lack of information on when individuals started to receive the scheme. Therefore, the policy rules implemented in EUROMOD correspond to those in place on June 30 of each year. The compensation paid by the government is stored in *bwkmcee\_s* and is limited to the compensation cap. The part of the reduced wage exceeding the compensation cap is still paid by the firm and is stored in *yemmc\_s*. In 2021, the employer contributions are assumed to be credited if the compensation paid by the government is below the compensation cap. Therefore, the total benefit equals the sum of *bwkmcee\_s* and the credited contributions, up to the compensation cap. Otherwise, *bwkmcee\_s* already includes the maximum reimbursement possible of €1100. The credited contributions do not take into account certain exemptions and reduced rates of the employer contributions and assume the full rate of 35.2% (social + health contributions) for all workers.

- *Subject to taxes/SIC*

Yes – treated as standard wages.

- *Take up*

Once eligibility is determined by the random assignment, full take-up is assumed.

### 2.9.3 Self-employment grant (*ysecomp\_sk*)

- *Definitions*

The unit of analysis is the individual.

- *Eligibility conditions*

The individual is currently self-employed, has been paying social insurance contributions, is not an employee at the same time, and has suffered revenue loss during the pandemic.

**EUROMOD modelling:** There is no distinction in the data between the self-employed and sole owner-managers of incorporated corporations. At the same time, Euromod assumes that all self-employed pay at least the minimum social insurance. Therefore, only the grant based on revenue loss is simulated and not the second alternative of a lump-sum transfer for other individuals who lost all their income. Duration of the policy is assumed to be 7 months in 2020 and 6 months in 2021. Take-up is simulated as a random share of eligible self-employed in different sectors (*lindi*) based on the following table:

Table 2.33. Share of self-employed in different industries (*lindi*) receiving the grant

<i>lindi</i>	Share (2020)	Share (2021)
1: agriculture & fishing	2%	1%
2: mining, manufacturing, utilities	14%	7%
3: construction	20%	11%
4: wholesale & retail	17%	8%
5: hotels & restaurants	5%	3%
6: transport & communication	6%	3%
7: financial intermediation	2%	1%
8: real-estate & business activities	1%	0%
10: education	2%	1%
12: other	11%	6%

**EUROMOD modelling:** this policy can only produce results if the model is run in combination with the LMA add-on. The individuals that are selected to undergo transitions to monetary compensation schemes are defined in the TransLMA\_sk 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.

- **Benefit amount**

The size of the grant depends on the percentage fall in revenue in that month. The decrease is estimated either relative to the average for the last year, the same month in the last year, or to February 2020. The monthly amounts are:

Table 2.34. Monthly self-employment grant based on revenue loss

Revenue loss	Amount		
	Apr-Sept 2020, Jul-Dec 2021	Oct 2020 – Jan 2021	Feb-Jun 2021
< 20%	€0	€0	€0
20% - 29,99%	-	-	€330
30% - 39,99%	-	-	€420
20% - 39,99%	€180	€ 270	-
40% - 49,99%	-	-	€510
50% - 59,99%	-	-	€600
40% - 59,99%	€300	€ 450	-
60% - 69,99%	-	-	€690
70% - 79,99%	-	-	€780
60% - 79,99%	€420	€ 630	-
80% - 100%	€540	€ 810	€870

**EUROMOD modelling**

The size of the revenue loss is simulated as the mid-point loss in the given brackets based on the share of recipients falling into those brackets as shown in the following table. Euromod simulates the loss directly to profits (*yse*) because of the lack of data on revenue. This should be a fairly accurate approximation given that the majority of the self-employed use the flat-rate expense deductions.

Policy changes over the year are not implemented due to lack of information on when individuals started to receive the scheme. Therefore, the policy rules implemented in EUROMOD correspond to those in place on June 30 of each year.

Table 2.35. Share of eligible self-employed with simulated loss of income (*yse*)

<b>Income loss</b>	<b>Share (2020)</b>	<b>Share (2021)</b>
10%	1%	0%
20%	17%	3%
30%	2%	2%
40%	33%	5%
50%	0%	3%
60%	18%	6%
70%	0%	3%
80%	29%	79%

- *Subject to taxes/SIC*

Exempt.

- *Take up*

Once eligibility is determined by the random assignment, full take-up is assumed.

### **3. DATA**

#### **3.1 General description**

The input database for the Slovak Republic is based on a national version of the EU-SILC. The official name of the product is “EU SILC 2019 (UDB 31/08/2020)”, but it will be referred to as SK-SILC in this document. EU-SILC is an annual household income and living conditions survey based on a random sample and collected throughout the year by national statistical offices in a number of European countries (in April in the Slovak Republic). In the Slovak Republic the survey has been carried out since 2005.

The survey collects information on household income, housing conditions, living conditions, employment, health status, access to health care, financial problems, housing problems and possibility to meet certain needs. SK-SILC contains more detailed information compared to the UDB version of the EU-SILC which is an advantage for micro simulation modelling. This chapter is in large portion based on the intermediate quality report of the EU-SILC by the Statistical Office of the Slovak Republic.

The observation units are private households. The 2019 sample design is two-stage stratified sampling with 48 strata. Proportional number of households was selected from each stratum using simple random sampling based on two stratification criteria. The first is geographical stratification based on 8 self-governing regions corresponding to the NUTS 3 level. The second refers to the degree of urbanization and is based on 7 categories of a municipality’s population size.

The survey has a four year rotational panel survey design. In the first year of the survey (EU SILC 2005) the sample was divided into four rotational groups. There were approximately 1500 households in each sub-group. In the year 2006 households of the 1st rotational group from the year 2005 were excluded and replaced by new households and in the year 2007 households of the 2nd rotational group from the year 2006 were excluded and replaced by a new one. In 2014 households from 4th rotational group were excluded and replaced by new households. In 2015 households from 3<sup>rd</sup> rotational group were excluded and replaced by new one. 2016 represent the beginning of the new 4 year panel with last four group replaced by new households.

The SK-SILC data is provided with weights attempting to correct for differential non response while scaling up sample numbers to the overall population. The correction was done in relation to the response rate, i.e. multiplying the weights by inverse value of response rate. Households were divided into strata (regional and rotational group) and it was assumed that each household in a stratum has the same probability of response. The empirical value of the response rate within the stratum yields the estimate of the probability of response for each household in the stratum.

**Table 3.1 EUROMOD database description**

EUROMOD database	SK_2019_a1
Original name	EU SILC 2019 (UDB 31/08/2020)
Provider	The Statistical Office of the Slovak Republic
Year of collection	2019
Period of collection	04/02 to 15/06
Income reference period	2018
Sample size	5 591 households / 14 624 individuals
Response rate	82.4 %

### 3.2 Data adjustment

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

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

### 3.3 Imputations and assumptions

#### 3.3.1 Time period

The SK-SILC information on demographic variables refers to the time of data collection (April-June). All income information refers to the previous fiscal year (January-December) and is expressed in annual sums. In EUROMOD database, all monetary variables are transformed into monthly averages by dividing amounts by 12. We assume that income is received at the same rate throughout the year. Some of income variables have additional information about number of months per year, during which particular income was received. Thus we can refine the simulations. Compared to SK-SILC 2014, the national SK-SILC 2015 now contains information about EU-2020 indicators.

#### 3.3.2 Gross incomes

The SK-SILC contains information about gross monetary incomes. The net income is available only at the household level, and is calculated as the difference between household gross income (sum of gross incomes of members of households) and the amount of taxes and social insurance contributions paid on employment and self-employment income and property tax. The information about taxes and social contributions is available only at the household level.

#### 3.3.3 Disaggregation of harmonized variables

- In the national SK-SILC dataset, information about different types of employment income is available, namely employment income (py010g) consists of separate variables for gross wage from main and second job, employment income from abroad, income from agreements, other payments from employer and profit shares.
- Investment income has two subcategories: interest and profits and investment income from dividends.
- Fringe benefits are expressed in kind in six variables: meal vouchers, contributions for gas, electricity and water, contribution for phone, accommodation provision, benefit from company car, and other fringe benefits.
- Old age pension is divided into main, military and other.
- There is also available information about different types of survivor's pensions. In the national version of SILC, there are separate variables for widows, widowers and orphans pension.

### 3.4 Updating

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

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

## 4. VALIDATION

### 4.1 Aggregate Validation

EUROMOD results are validated against external benchmarks. Detailed comparisons of the number of people receiving a given income component and total yearly amounts are shown in Annex 3. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against external official data. The main discrepancies between EUROMOD results and external benchmarks are discussed in the following subsections. Factors that may explain the observed differences are also discussed.

#### 4.1.1 Components of disposable income

Comparison of the composition of disposable income used in EUROMOD and in SK-SILC is shown in the following table. The main difference in definitions is the exclusion in EUROMOD of non-monetary income from using a company car. In addition, the components of disposable income which are predominantly simulated in EUROMOD are shown in italics.

Table 4.1 Components of disposable income

	EUROMOD [2017-2020]	SK-SILC [2018]
	ils_dispy	HY020
Employee cash or near cash income	+	+
Employer's social insurance contribution	0	0
Company car	0	+
Contributions to individual private pension plans	0	0
Cash benefits or losses from self-employment*	+	+
Pension from individual private plans	+	+
<i>Unemployment benefits</i>	+	+
Old-age benefits	+	+
Early retirement pension	+	+
Military, police pension	+	+
Survivor' benefits	+	+
Sickness benefits	+	+
Disability benefits	+	+
Education-related allowances	+	+
Income from rental of a property or land	+	+
<i>Family/children related allowances</i>	+	+
<i>Social assistance</i>	+	+
Housing allowances	+	+
Regular inter-household cash transfer received	+	+
Interests, dividends, etc.	+	+
Income received by people aged under 16	+	+
Regular taxes on wealth	-	-
Regular inter-household cash transfer paid	-	-
<i>Tax on income and social contributions</i>	-	-
<i>Repayments/receipts for tax adjustment</i>	+	+

Note: \*Self-employment income only takes values greater or equal to 0, i.e. it ignores losses from self-employment in both SK-SILC and EUROMOD

#### 4.1.2 Validation of incomes inputted into the simulation

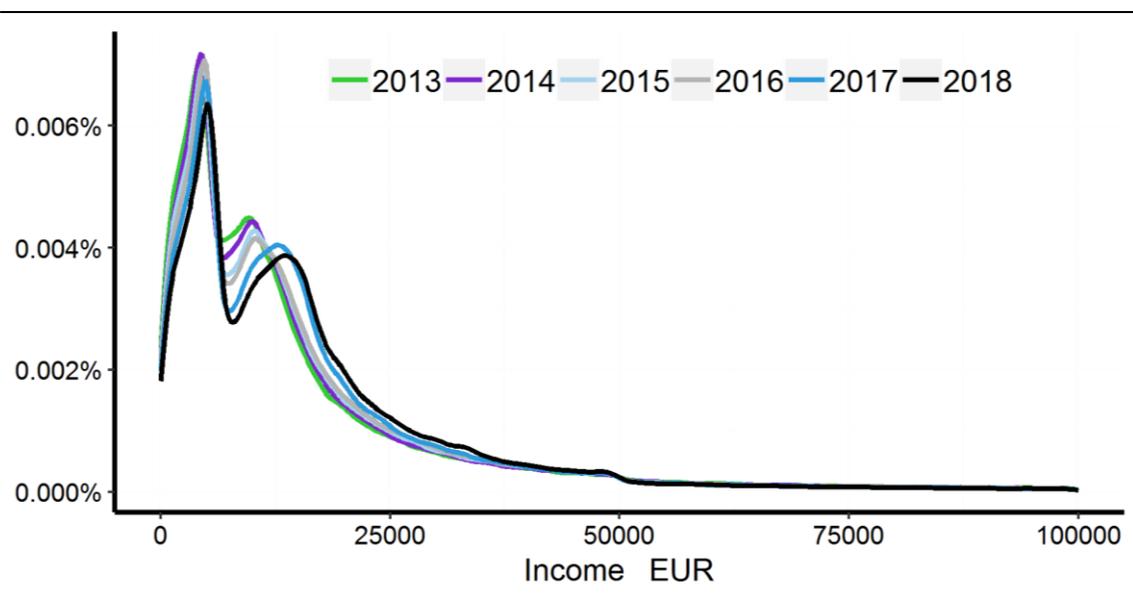
Table 4.2 in Annex 3 shows the number of employed and unemployed in the dataset used for EUROMOD simulations against external benchmarks. The database represents the number of people in work very well. However in contrast to the previous EUROMOD public release (I3.0), the number of unemployed is again significantly overrepresented.

The next table (4.3 in Annex 3) compares the number of recipients of either employment or self-employment income in EUROMOD's input database to the corresponding information obtained from the Social Insurance Agency and personal income tax returns. No adjustment is made to reflect employment/ self-employment trends in subsequent years. The number of people receiving employment income in SILC is in line with external statistics. The number of people with self-employment income in the input dataset is slightly higher than indicated by external information even though the discrepancy is not significantly different from the previous EUROMOD public release. The gap can be explained by the fact that a small fraction of people with low income are not required to file a tax return, which serve as the external statistic. For the year 2020, the discrepancy is slightly higher because of the economic downturn caused by the Covid-19 pandemic, which led to a significant drop in aggregate employment including the self-employed.

On the other hand, the aggregate amount of self-employment income remains highly overestimated in EUROMOD's input dataset compared to external data from the tax returns. One

reason is that for the self-employed, SK-SILC reports only non-negative profit from self-employment whereas the external statistics takes into account all self-employed filers. Aggregate profits from the tax returns are calculated as the difference between aggregate revenue and aggregate expenses, so it also includes those who make a loss. In the compared years, there were over 30,000 individuals or about 8-10% reporting a loss. Another reason is a high degree of tax evasion suspected among the self-employed. As seen in Figure 4.1 below, the distribution of self-employment income has changed very little over the past 5 years despite strong growth of the economy or average wages. This is especially pronounced around the first peak of the distribution, which represents those who declare income at the lower threshold for payment of social insurance contributions. In contrast, the aggregate amount of employment income remains well represented. The comparison is shown in Table 4.4 in Annex 3.

Figure 4.1: Distribution of self-employment income, estimated probability distribution (2013 - 2018)



*Source: Personal income tax returns of the self-employed*

A comparison of the total number of recipients of benefits not simulated by EUROMOD is shown in Table 4.5 in Annex 3. The number of old-age pensioners is very close to the official data in all years. On the other hand, there are some discrepancies between the number of recipients of the other benefits in the input dataset and in external statistics, which is likely due to sampling imperfections of SILC. Relative to the previous EUROMOD public release, the discrepancy has slightly worsened for survivor’s pensions and improved for maternity benefits. The fit of sickness benefits to external statistics is substantially worse than last year. Part of this is also likely explained by sampling imperfections, but for 2020, the policy reaction to the Covid-19 pandemic also plays a role. The introduction of the pandemic nursing and sickness benefits expanded the number of recipients captured by the external statistics.

Table 4.6 in Annex 3 presents a comparison of aggregate amounts of these non-simulated benefits, as derived from the input database and as reported by the Social Insurance Agency. Following the same pattern as the number of recipients, the aggregate expenditure on old-age pension is comparable to the external data, while the expenditure on survivor’s benefits and disability pensions is below the official statistics in line with the underestimation of the number of recipients. On the other hand, the two main short-term contributory benefits, namely sickness and maternity benefits, are seriously underreported in the input dataset just like in the previous

EUROMOD public release. In the case of maternity benefits, spending reported by EUROMOD represents only around 40% of the statistics from the Social Insurance Agency. In the case of sickness benefits, this is only about 20% and drops as low as 14% in 2020 due to the increase in spending on the pandemic nursing and sickness benefits in that year. However, it is generally not clear why both short term benefits are underestimated to such an extent and it is a problem that has persisted through several waves of the SILC survey. One possible explanation is that while the survey respondents know if they are receiving the benefits, they are not fully aware of the full extent of the support.

### 4.1.3 Validation of outputted (simulated) incomes

The numbers of recipients of simulated benefits and payers of simulated taxes and contributions are compared to external benchmarks in Table 4.7 in Annex 3. First, the recipients of unemployment benefits and the child benefit are very accurately simulated in EUROMOD, even though the latter is slightly overestimated both by EUROMOD and in the original SK-SILC data. The difference can be accounted for by the fact that the external statistics use yearly average of the monthly number of recipients whereas EUROMOD and SILC count the number of unique recipients who do not need to be identical in all months. However, the baseline model cannot accurately capture the sharp increase in the unemployment rate following the Covid-19 pandemic, which leads to substantial underestimation of the unemployment benefit in 2020.

Thanks to the reworked simulation of the child birth allowance, the fit of the number of recipients to official statistics has improved significantly relative to previous EUROMOD public releases.<sup>7</sup> There is still some underrepresentation present, which is likely cause by sampling of too few families with new-born children in the underlying dataset. Indeed, SK-SILC data show even larger underrepresentation of the number of recipients of the child birth allowance. Next, the number of recipients of the parental allowance is only slightly overrepresented by EUROMOD even though the original data represent the recipients accurately. However, the discrepancy is not significantly different from the previous EUROMOD public release despite completely revamped simulation.

Finally, following the introduction of the benefit take-up adjustment in the baseline, the number of recipients of the material need benefits (social assistance) has improved significantly relative to previous years. The model now over-estimates the number of recipients by at most 30% compared to the external benchmark. The remaining gap can be explained by the fact that calibration of the take-up rate is done based on aggregate expenditure and not the number of recipients. On the other hand, compared to the original data, the number of simulated recipients is slightly lower. This suggests that the benefit is overrepresented in SK-SILC this time, unlike in the previous EUROMOD public release.

The second part of Table 4.7 in Annex 3 deals with the number of tax and social security contributions payers, compared to administrative data from several different sources. The number of people paying income taxes is quite well simulated in EUROMOD. Similarly to the child benefit, the simulated tax credit on dependent children slightly oversimulates the number of recipients observed in the external statistics.

Next, the number of individuals paying employee as well as employer social security contributions are generally very accurately simulated by EUROMOD. The small discrepancies are likely only the result of uprating inaccuracies or inaccurate survey sampling of certain groups of people with various exceptions in the system of social insurance. On the other hand, the figures for some of the self-employment contributions are overestimated by up to 80%. This is caused by

---

<sup>7</sup> In the current EUROMOD public release (I4.0), the simulation of child-related benefits has been thoroughly reworked including several improvements, among them the use of the month of birth to account for the extent of the support over the year.

the fact that EUROMOD assumes every self-employed person pays social insurance. In reality, the self-employed are obliged to pay social insurance only starting in the second year of their self-employment and only if their previous year's revenue exceeds 50% of the annual average wage two years prior. In contrast, payment of health insurance is compulsory for all self-employed and these are well simulated in EUROMOD. Similarly, the inclusion of the II. pillar pension contributions in the baseline based on participation derived directly from the SK-SILC data proved very accurate for the self-employed even though it is somewhat underrepresented for the employees. Next, the number of payers of credited health insurance contributions is also represented quite well, with only minor underrepresentation of the eligible groups in the input data. Finally, the number of voluntary contributions payers is overestimated relative to the external data and the gap has somewhat increased relative to the previous EUROMOD public release. This is caused by the simulated non-take-up of the material need benefits whose recipients are eligible for the credited contributions instead.

Table 4.8 in Annex 3 presents a set of figures related to aggregate annual expenditure on social benefits and revenue from taxes and social security contributions. The child benefit as well as the parental allowance are well simulated relative to external statistics even though the original SK-SILC data slightly underestimate the expenditure on the latter. The only exception is the expenditure on the parental allowance in 2020 which is underestimated by 13%. This is most likely caused by the prolongation of the benefit duration beyond the child's 3<sup>rd</sup> birthday as a temporary measure during the pandemic. In contrast to the previous EUROMOD public release, the expenditure on the child birth allowance is now also very accurately represented thanks to the reworked simulation. This is also true for the material need benefits where the discrepancy of the simulated expenditure does not exceed 10% thanks to the correction for non-take-up. However, this pattern is broken by the spending on the unemployment benefits, which is underestimated by 70% to 80% even though EUROMOD accurately simulates the number of its recipients. Since EUROMOD uses simulated wages to estimate the benefit amount, the most likely explanation is that the imputed wages are poorly estimated and significantly underestimate the true income distribution. On the other hand, the expenditure simulated by EUROMOD quite closely matches the original SK-SILC numbers, so there is a large degree of underreporting of the benefit amount also in the survey data.

The second part of Table 4.8 shows simulated aggregate amounts of personal income tax, social and health insurance contributions by the type of taxpayer. Comparison with the original data is missing because these variables are not included in SK-SILC. First, simulated personal income tax is underestimated compared to the external statistics in all years even though the accuracy is slightly better than the previous EUROMOD public release. Given the progressivity of the Slovak PIT system, this can be attributed to the underrepresentation of high-income earners usually present in survey data. Next, the aggregate amount of the tax credit on dependent children is simulated quite accurately also thanks to the refined simulation.

Similarly, EUROMOD simulates the aggregate amounts of employee and employer social security contributions very well. The only exception is the guarantee insurance, which is slightly overestimated. Even though the exemption for workers in the public sector is accurately reflected in the number of payers, the average wages of these workers are probably higher in the underlying data compared to the actual income distribution. In contrast, the self-employment contributions remain significantly overestimated. This is a combination of high overestimation of aggregate self-employment income and the assumption that every self-employed person pays at least the minimum contribution. According to administrative microdata, many self-employed do not pay social insurance contributions at all and many end up closing their business in the first year in order to avoid paying the contributions from the second year onwards. The only exception here is the newly included II. pillar pension contributions, which are only slightly overestimated for the self-employed because eligibility is determined directly from the input dataset. For employees,

the underestimation is in line with the underrepresentation of the number of payers, so the simulation itself is pretty accurate given the shortcomings of the input data.

Finally, the credited health insurance contributions are quite well simulated by EUROMOD, with only slight underestimation in certain years. This is also true for 2020 despite the change in the way the government pays credited contributions. In contrast to the previous EUROMOD public release, voluntary health insurance contributions are also relatively well simulated. The improvement could be thanks to the adjustment of the material need benefits for non-take-up because this simulated benefit enters the eligibility condition. Recipients of the material need benefits are not obliged to pay “voluntary” health insurance contributions, which reduced the simulated revenue in past versions of the model.

### 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 is calculated as the sum of all income sources of all household members net of income tax and social insurance contributions. The weights in the OECD equivalence are: first adult=1; additional people aged 14+ = 0.5; additional people aged under 14 = 0.3.

#### 4.2.1 Income inequality

Measures of income distribution are present in Table 4.9 in Annex 3. Decile shares of total disposable income in EUROMOD are very similar to those produced by Eurostat. Compared to previous EUROMOD public releases, the slightly larger discrepancy in the first decile has also decreased in 2018, thanks to the simulation of reduced take-up of the material need benefits. For the same year, EUROMOD continues to produce a slightly more egalitarian distribution of the household disposable income. The share of income going to the lower deciles is approximately 2-3% larger in EUROMOD, whereas the share of the highest one is around 2% lower. The other inequality measures presented in the table, namely the Gini coefficient and the S80/S20 ratio confirm this pattern. Both are 3-4% lower in EUROMOD compared to the Eurostat statistics. Noticeably, this pattern reverses in 2019. Finally, figures for the mean and median household disposable income are very close with the external source of information.

#### 4.2.2 Poverty rates

Poverty rates by gender and age derived using EUROMOD simulations and those published in Eurostat statistics are shown in Table 4.10 in Annex 3. In general, the simulated figures match the external statistics very well in 2018, with the gap usually not exceeding 5%. The only exceptions are the poverty rates measured at the 60% median HDI threshold, which is underestimated by up to 15% for the youngest (0-15) as well as oldest age group (65+). It is not entirely clear what produces these single discrepancies, which are persistent across several EUROMOD public releases. One possible explanation in the former case is that EUROMOD simulates higher family benefits than the original SK-SILC data captures. However, differences in the simulation cannot explain the latter case because pension income is not simulated. In 2019, however, the simulated poverty rates measured at the 40% median HDI threshold are somewhat overestimated, although they match better the poverty rates at 50 and 60% of the median HDI threshold. Potential discrepancies in this case might be explained by the use of uprating factors in EUROMOD, which might not be detailed enough to capture the extent of different income growth across the income distribution.

### 4.3 Validation of minimum wage

Baseline simulations in EUROMOD do not modify gross employment income in any way. However, the user may switch on a policy that ‘corrects’ employment income by ensuring it is not below the gross minimum wage corresponding to the number of hours the person has worked. Table 4.11 in Annex 3 presents a series of figures comparing results obtained under the two simulation scenarios. Changing employment income so as to incorporate the minimum hourly gross wage does not affect results in any substantive way.

### 4.4 Summary of “health warnings”

The final section summarizes particular aspects of the input dataset and of the way the Slovak tax-benefit system is implemented in EUROMOD which should be kept in mind when using the Slovak section of EUROMOD for doing analysis.

- 1) Self-employment income is highly overestimated in the dataset. This, together with the assumption that every self-employed person pays social insurance results in a significant over-simulation of self-employed social insurance contributions.
- 2) Sickness benefits, maternity benefits, disability benefits and unemployment benefits are strongly underestimated in the input dataset.
- 3) No adjustment is made for demographic and labour market changes taking place between reference year of the dataset and simulated policy years. This undermines the accuracy of the simulation especially for the year 2020, which was significantly affected by the Covid-19 pandemic.
- 4) Simulated unemployment benefits are significantly underestimated.
- 5) Simulated disposable income is more equally distributed than the disposable income reported in the data.
- 6) Simulated poverty rates are lower than the figures reported by Eurostat when measured at the 60% median HDI threshold and especially for the oldest age group (65+).
- 7) The maternity benefit (*bma*) is only simulated from 2015 to 2021 in EUROMOD I4.0. The benefit is defined in an extension (Parental Benefits Extension) that is switched off in the baselines, i.e. the non-simulated component (*bma*) is being used. When the extension is switched on, the non-simulated component is replaced by the simulated one (*bma\_s*). The simulated numbers might differ significantly from external statistics as some policy rules cannot be simulated accurately due to lack of information in the underlying data.
- 8) The simulation of monetary compensation schemes (*yemcomp\_sk* & *ysecomp\_sk*) and of the pandemic nursing benefit (*bccmc\_sk*) are triggered by the simulation of labour market transitions defined in policies *TransLMA\_sk* and *bccmctime\_sk*, respectively. Both policies become 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.
- 9) Labour market transitions are switched OFF in EUROMOD baselines. As a consequence, the simulation of monetary compensation schemes does not produce any effect in baseline simulations. Since all policies not linked to labour market transitions are fully functional, it is possible for disposable income in 2020 to be higher than disposable income in previous years.

## **5. REFERENCES**

Eurostat online Database

[http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)

ANNEX 1. UPRATING FACTORS

Table 3.2 – Up-rating factors used for dataset, based on SK-SILC 2018

Index	Reference	2018	2019	2020	2021	Source	Income components uprated
Harmonized consumer price index (index 2015=100)	\$HICP	103.46	106.33	108.47	110.11	Eurostat ( <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&amp;lang=en</a> ); 2015 - IMF forecasts (WEO April 2014, <a href="http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx">http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx</a> )	
Consumer price index	\$f_cpi	129.42	132.89	135.46	137.51	<a href="https://www.finance.gov.sk/en/finance/institute-financial-policy/economic-forecasts/macro-economic-forecasts/">https://www.finance.gov.sk/en/finance/institute-financial-policy/economic-forecasts/macro-economic-forecasts/</a>	afc, bcrdi, bdiot, bed, bfaot, bho, bsu, bunot, kfb, kfbcc, kivho, tad, tis, tpr, xhc, xhcmomi, xhcrt, xhcot, xmp, xpp, yfb00, yls, ypp, ypt, yot
HICP - actual rentals for housing (index 2005=100)	\$f_house	103.46	106.33	108.47	110.11	Eurostat ( <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&amp;lang=en</a> ); 2015 - IMF forecasts (WEO April 2014, <a href="http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx">http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx</a> )	ypr
Average nominal wage, EUR	\$f_yem	1013	1092	1133	1203	<a href="http://www.finance.gov.sk/en/Default.aspx?CatID=340">http://www.finance.gov.sk/en/Default.aspx?CatID=340</a>	yem, yemwg, yemot, yemcs, yemaj, yemab, yemtj, yem_a, yse, yse00, yse01, yiwg, ysv
Average 1 year-lagged nominal wage, EUR	\$f_yemlag 1	954	1013	1092	1133	<a href="http://finance.gov.sk/Default.aspx?CatID=10725">http://finance.gov.sk/Default.aspx?CatID=10725</a>	bhl, bma, bunct, yempv
Average 2 year-lagged nominal wage, EUR	\$f_yemlag 2	912	954	1013	1092	<a href="http://finance.gov.sk/Default.aspx?CatID=10725">http://finance.gov.sk/Default.aspx?CatID=10725</a>	
Interest rate for household deposit	\$f_yiy	0.21	0.18	0.13	0.11	<a href="http://www.finance.gov.sk/en/Default.aspx?CatID=340">http://www.finance.gov.sk/en/Default.aspx?CatID=340</a>	yiy, yiy00, yiydv

## EUROMOD Country Report – SLOVAK REPUBLIC

Index	Reference	2018	2019	2020	2021	Source	Income components updated
Average monthly old age pension, EUR	\$f_poa	444.26	460.39	487.37	500.7	<a href="https://www.socpoist.sk/646/1614s">https://www.socpoist.sk/646/1614s</a>	poa00, poaml, poaot, pyr
Average monthly disability pension, EUR	\$f_pdi	268.89	275.54	284.53	291.49	<a href="https://www.socpoist.sk/646/1614s">https://www.socpoist.sk/646/1614s</a>	pdi00
Average monthly survivors pension, EUR	\$f_psu	255.94	263.08	272.46	280.59	<a href="https://www.socpoist.sk/646/1614s">https://www.socpoist.sk/646/1614s</a>	psu00, psuor, psuwd
Minimum Subsistence level1, EUR	\$f_bsa	199.48	205.07	210.2	214.83	Statutory parameter	199.48
Parental allowance, EUR	\$f_bcc	214.7	220.7	270	275.9	Statutory parameter	214.7
Child benefit, EUR	\$f_bch	23.68	24.34	24.95	25.5	Statutory parameter	23.68
Average sickness benefit, EUR	\$f_bhl	268	297	316	331	<a href="http://www.socpoist.sk/priemerne-vysky-nemocenskych-davok-1pripad/1622s">http://www.socpoist.sk/priemerne-vysky-nemocenskych-davok-1pripad/1622s</a>	
Led index of employment income	\$f_yemLead	1092	1133	1203	1203	Calculated based on \$f_yem led by 1 year	ymwdt
Unit index	\$f_unit	1	1	1	1		Bchba, yds

**ANNEX 2. POLICY EFFECTS IN 2020-2021***Preliminary: Indexation based on projected HICP for 2021*

Table A3.1 and Figure A3.1 show the effect of 2021 policies on mean equivalised household disposable income by income component and income decile group. The effect is estimated as a difference between simulated household net income under the 2021 tax-benefit policies (deflating monetary parameters by projected Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2020 policies, as a percentage of mean equivalised household disposable income in 2020. It's important to note that the results presented here do not account for the Covid-19 labour market shocks and income protection schemes put in place for employees and self-employed in 2020 and 2021.

In comparison to 2020 policies, (deflated) 2021 policies increased mean household disposable income by approximately 0.12% in total. The change in household disposable income by deciles shows a progressive pattern, i.e., lower income groups gain more in relative terms. Households located in the second and third income deciles experiment the highest increase in disposable income across the income distribution at 0.57% and 0.54% respectively. The total increase of mean household disposable income is mainly due to changes in all benefits and public pensions.

First, changes in means-tested and non means-tested benefits accounted for an increase in household disposable income of 0.07% and 0.03% respectively. The effect is most likely driven by higher regular indexation of these benefits in comparison with the smaller growth of CPI. Most benefits increase annually by the growth of the Minimum Subsistence Level (MLS), which increased by 2.2% in 2021, from €210.20 to € 214.83 per month for single-person households, compared to the CPI inflation rate of 1.5%.

Second, changes in public pensions also contributed to the increase in disposable income as the real value of public pensions increased. This means that the indexation of pensions<sup>8</sup>, of 2.4% to 3.0%, was higher than the inflation rate of 1.5%. The distribution of gains across income deciles reflects where recipients of public pensions are located.

On the one hand, changes in social insurance contributions (SICs) caused income losses of -0.14% for self-employed, while the effect for employees was null. The income losses for the self-employed were partially caused by the increase in the average wage in the economy (lagged 2 years) which is used to calculate the maximum assessment base for SICs. What is more, there was a one-off abatement of the SICs for April 2020 as a response to the Covid-19 pandemic. Absence of this abatement in 2021 therefore also contributes to the relative increase in the SICs paid by the self-employed. Finally, increased direct taxes reduced disposable income by 0.08% on average. The biggest component of this change is most likely the reduction in the income threshold for the reduced 15% PIT rate on self-employment income.

---

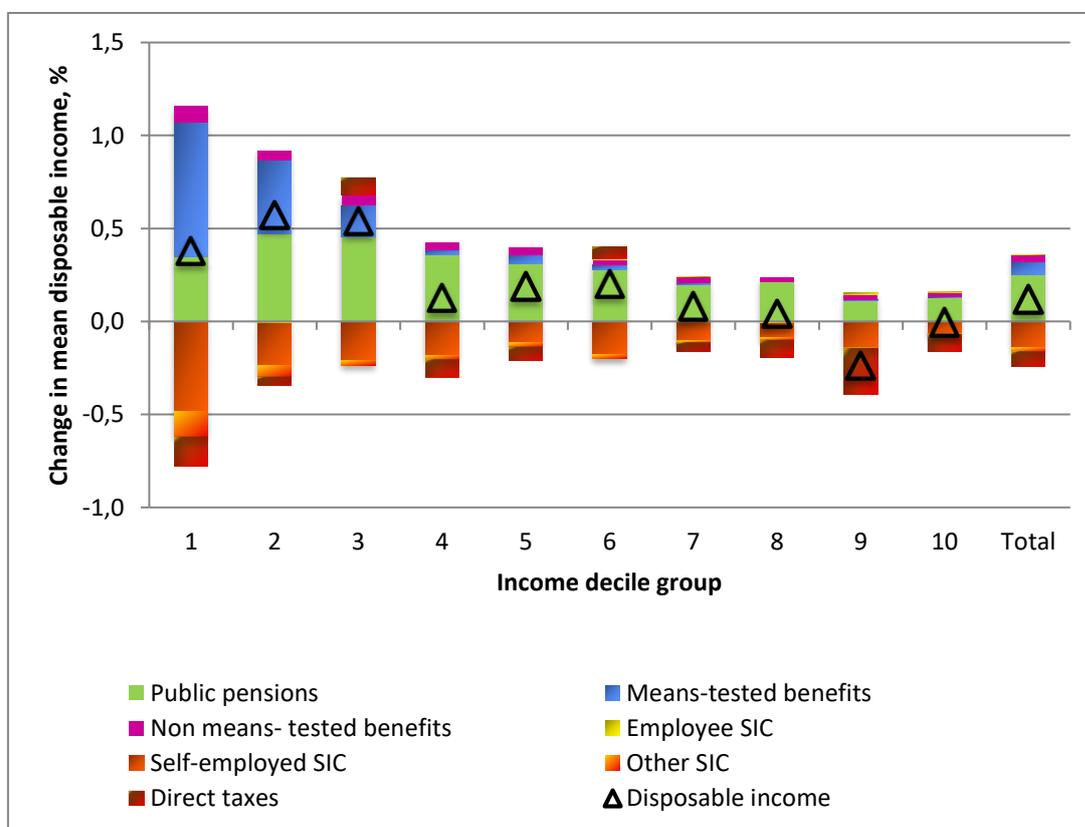
<sup>8</sup> Pensions in the model are indexed based on year-over-year change in the average monthly pension.

Table A3.1: Policy effects in 2020-2021, using the CPI-indexation (CPI = 1.01512), %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	0.35	0.72	0.09	-0.01	-0.48	-0.13	-0.16	0.38
2	0.00	0.47	0.40	0.05	-0.01	-0.23	-0.06	-0.05	0.57
3	0.00	0.46	0.17	0.06	-0.01	-0.20	-0.03	0.09	0.54
4	0.00	0.36	0.03	0.04	-0.01	-0.18	-0.02	-0.09	0.13
5	0.00	0.31	0.05	0.04	-0.01	-0.11	-0.02	-0.07	0.19
6	0.00	0.28	0.03	0.03	0.01	-0.18	-0.02	0.06	0.20
7	0.00	0.20	0.01	0.03	0.00	-0.10	-0.01	-0.05	0.08
8	0.00	0.21	-0.01	0.03	0.00	-0.08	-0.02	-0.09	0.04
9	0.00	0.11	0.00	0.02	0.01	-0.14	0.00	-0.25	-0.24
10	0.00	0.13	0.00	0.02	0.00	-0.07	0.00	-0.09	-0.01
Total	0.00	0.25	0.07	0.03	0.00	-0.14	-0.02	-0.08	0.12

Notes: shown as a percentage change in mean equivalised household disposable income by income component and income decile group. Income decile groups are based on equivalised household disposable income in 2020, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2021 policies by Eurostat’s Harmonized Index of Consumer Prices (HICP), i.e. 1.01512.

Figure A3.1: Policy effects in 2020-2021, using the CPI-indexation (CPI = 1.01512), %



ANNEX 3. VALIDATION TABLES

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

	EUROMOD	External				Ratio			
	2018	2018	2019	2020	2021	2018	2019	2020	2021
Number of employed	2,521.8	2,533.0	2,544.0	2,491.0	N/A	1.00	0.99	1.01	N/A
Number of unemployed	267.3	180.0	158.0	181.0	N/A	1.48	1.69	1.48	N/A

Notes: Number of employed and unemployed are computed based on months in employment/unemployment. Numbers computed as averages of monthly data over the year. N/A – not available.

Sources: External figures are taken from the Eurostat statistics database ( <https://ec.europa.eu/eurostat/data/database>).

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

	EUROMOD	External	Ratio						
	2018	2018	2019	2020	2021	2018	2019	2020	2021
Employment income	2,317.1	2,390.5	2,360.7	2,306.2	N/A	0.97	0.98	1.00	N/A
Self-employment income	420.0	345.5	349.4	308.0	N/A	1.22	1.20	1.36	N/A
Fringe benefits	1,887.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes: Based on the total number of employees paying social insurance contributions and the number of individuals reporting self-employment income.  
N/A – not available.

Sources: Social Insurance Agency; personal income tax returns

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

	EUROMOD				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Employment income	23,775	25,629	26,591	28,234	23,924	25,761	25,916	N/A	0.99	0.99	1.03	N/A
Self-employment income	4,634	4,996	5,183	5,504	2,213	2,496	2,327	N/A	2.09	2.00	2.23	N/A
Fringe benefits	1,056	1,084	1,105	1,122	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes: N/A – not available.

Sources: Social Insurance Agency; personal income tax returns

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

	EUROMOD	External	Ratio						
	2018	2018	2019	2020	2021	2018	2019	2020	2021
<b>Benefits</b>									
Old-age pension	1,067.3	1,084.1	1,101.5	1,105.4	N/A	0.98	0.97	0.97	N/A
Disability pensions	179.2	237.6	234.3	233.5	N/A	0.75	0.76	0.77	N/A
Survivor’s pension	270.8	363.4	362.6	360.3	N/A	0.75	0.75	0.75	N/A
Maternity benefit	38.5	32.4	34.6	33.1	N/A	1.19	1.11	1.16	N/A
Sickness benefits	80.1	135.9	138.8	202.3	N/A	0.59	0.58	0.40	N/A

Notes: N/A – not available.

Source: Social Insurance Agency

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

	EUROMOD				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
<b>Benefits</b>												
Old-age pension	5,529	5,729	6,065	6,231	5,567	5,840	6,187	N/A	0.99	0.98	0.98	N/A
Disability pensions	586	600	620	635	786	800	825	N/A	0.75	0.75	0.75	N/A
Survivor’s pension	478	492	509	524	695	717	746	N/A	0.69	0.69	0.68	N/A
Maternity benefit	107	114	123	128	254	300	309	N/A	0.42	0.38	0.40	N/A
Sickness benefits	95	101	109	113	455	508	782	N/A	0.21	0.20	0.14	N/A

Notes: N/A – not available.

Source: Social Insurance Agency

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

	EUROMOD				SILC	Ratio	External				Ratio			
	2018	2019	2020	2021	2018	2018	2018	2019	2020	2021	2018	2019	2020	2021
<b>Benefits</b>														
Unemployment benefits	36	36	36	36	36	1.00	33	36	53	N/A	1.10	0.99	0.68	N/A
Child birth allowance	50	50	50	50	43	1.16	55	54	54	N/A	0.91	0.92	0.93	N/A
Parental allowance	167	167	179	179	145	1.15	140	139	146	N/A	1.20	1.21	1.23	N/A
Child benefit	713	713	713	713	721	0.99	649	652	655	N/A	1.10	1.09	1.09	N/A
Material need benefits	85	81	62	62	92	0.92	72	63	62	N/A	1.18	1.29	1.00	N/A
<b>Taxes and Social Insurance contributions</b>														
Income taxes	2,437	2,428	2,388	2,404	N/A	N/A	2,421	2,333	2,239	N/A	1.01	1.04	1.09	N/A
Tax credit on dependent children	653	653	653	653	N/A	N/A	587	573	568	N/A	1.11	1.14	1.15	N/A
Employees SIC	2,244	2,249	2,250	2,250	N/A	N/A	2,329	2,302	2,230	N/A	0.96	0.98	1.01	N/A
Sickness	2,198	2,198	2,198	2,198	N/A	N/A	2,156	2,153	2,092	N/A	1.02	1.02	1.05	N/A
Disability	2,173	2,173	2,173	2,173	N/A	N/A	2,329	2,302	2,230	N/A	0.93	0.94	0.97	N/A
Pension	2,198	2,198	2,198	2,198	N/A	N/A	2,329	2,302	2,230	N/A	0.94	0.95	0.99	N/A
Unemployment	2,130	2,130	2,130	2,130	N/A	N/A	2,059	2,058	1,998	N/A	1.03	1.03	1.07	N/A
Health	2,134	2,144	2,144	2,151	N/A	N/A	1,999	2,014	1,964	N/A	1.07	1.06	1.09	N/A

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

	EUROMOD				SILC	Ratio	External				Ratio			
	2018	2019	2020	2021	2018	2018	2018	2019	2020	2021	2018	2019	2020	2021
<b>Taxes and Social Insurance contributions</b>														
Employers SIC	2,306	2,306	2,305	2,305	2,208	1.04	2,373	2,340	2,287	N/A	0.97	0.99	1.01	N/A
Sickness	2,198	2,198	2,197	2,198	N/A	N/A	2,156	2,153	2,092	N/A	1.02	1.02	1.05	N/A
Disability	2,173	2,173	2,172	2,173	N/A	N/A	2,329	2,302	2,230	N/A	0.93	0.94	0.97	N/A
Pension	2,198	2,198	2,197	2,198	N/A	N/A	2,329	2,302	2,230	N/A	0.94	0.95	0.99	N/A
2nd pillar pension	714	714	714	714	N/A	N/A	1,072	1,132	1,152	N/A	0.67	0.63	0.62	N/A
Reserve Solidarity Fund	2,198	2,198	2,197	2,198	N/A	N/A	2,329	2,302	2,230	N/A	0.94	0.95	0.99	N/A
Unemployment	2,130	2,130	2,129	2,130	N/A	N/A	2,059	2,058	1,998	N/A	1.03	1.03	1.07	N/A
Health	2,077	2,077	2,071	2,071	N/A	N/A	1,999	2,014	1,964	N/A	1.04	1.03	1.05	N/A
Accident	2,198	2,198	2,197	2,198	N/A	N/A	2,373	2,340	2,287	N/A	0.93	0.94	0.96	N/A
Guarantee	1,973	1,973	1,972	1,973	N/A	N/A	2,005	1,964	1,895	N/A	0.98	1.00	1.04	N/A
Credited health insurance contributions	2,750	2,748	2,756	2,755	N/A	N/A	2,903	2,900	3,011	N/A	0.95	0.95	0.92	N/A
"Voluntary" health insurance contributions	167	168	163	163	N/A	N/A	113	114	112	N/A	1.49	1.48	1.46	N/A

Notes: N/A – not available.

Sources: Social Insurance Agency; Central Office of Labour, Social Affairs, and Family; Health insurance agencies; personal income tax returns

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

	EUROMOD				SILC				Ratio				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
<b>Benefits</b>																				
Unemployment benefits	59	62	67	70	60	63	68	71	0.99	0.98	0.98	0.99	184	214	329	N/A	0.32	0.29	0.20	N/A
Child birth allowance	42	42	42	42	36	36	36	36	1.17	1.17	1.17	1.17	44	43	43	N/A	0.95	0.96	0.97	N/A
Parental allowance	362	371	494	503	320	329	403	411	1.13	1.13	1.23	1.22	366	375	567	N/A	0.99	0.99	0.87	N/A
Child benefit	335	344	358	366	333	343	351	359	1.01	1.01	1.02	1.02	313	328	333	N/A	1.07	1.05	1.08	N/A
Material need benefits	146	149	113	115	121	124	127	130	1.21	1.20	0.89	0.88	142	135	109	N/A	1.03	1.10	1.04	N/A
<b>Taxes and Social Insurance contributions</b>																				
Income taxes	2,248	2,464	2,423	2,732	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,948	3,195	3,124	N/A	0.76	0.77	0.78	N/A
Tax credit on dependent children	279	370	378	478	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	269	333	356	N/A	1.04	1.11	1.06	N/A
Employees SIC	3,215	3,474	3,607	3,834	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,041	3,279	3,309	N/A	1.06	1.06	1.09	N/A
Sickness	328	353	367	389	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	311	335	338	N/A	1.06	1.05	1.09	N/A
Disability	696	750	779	827	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	647	697	702	N/A	1.08	1.08	1.11	N/A
Pension	937	1,010	1,048	1,113	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	898	968	970	N/A	1.04	1.04	1.08	N/A
Unemployment	228	246	255	271	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	212	228	230	N/A	1.08	1.08	1.11	N/A
Health	1,015	1,102	1,147	1,222	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	974	1,050	1,068	N/A	1.04	1.05	1.07	N/A
Self-employed SIC	2,282	2,446	2,527	2,707	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	593	616	617	N/A	3.85	3.97	4.10	N/A
Sickness	237	254	262	282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49	52	52	N/A	4.79	4.90	5.09	N/A
Disability	318	342	352	378	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61	64	64	N/A	5.19	5.31	5.51	N/A
Pension	937	1,004	1,033	1,108	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	174	182	181	N/A	5.37	5.52	5.71	N/A
2nd pillar pension	33	37	41	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28	30	30	N/A	1.17	1.22	1.35	N/A
Reserve Solidarity Fund	256	275	283	304	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53	56	56	N/A	4.78	4.90	5.09	N/A
Health	534	572	596	634	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	227	231	235	N/A	2.36	2.47	2.53	N/A

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

	EUROMOD				SILC				Ratio				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
<b>Taxes and Social Insurance contributions</b>																				
Employers SIC	7,790	8,375	8,576	9,175	7,950	8,570	8,892	9,442	0.98	0.98	0.96	0.97	8,039	8,665	8,719	N/A	0.97	0.97	0.98	N/A
Sickness	328	353	362	389	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	311	335	338	N/A	1.06	1.05	1.07	N/A
Disability	696	750	768	827	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	647	697	702	N/A	1.08	1.08	1.09	N/A
Pension	2,908	3,113	3,158	3,380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,556	2,717	2,681	N/A	1.14	1.15	1.18	N/A
2nd pillar pension	371	422	461	514	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	582	665	703	N/A	0.64	0.64	0.66	N/A
Reserve Solidarity Fund	1,113	1,199	1,228	1,321	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,067	1,150	1,148	N/A	1.04	1.04	1.07	N/A
Unemployment	228	246	252	271	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	212	228	230	N/A	1.08	1.08	1.09	N/A
Health	2,248	2,423	2,511	2,666	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,435	2,626	2,671	N/A	0.92	0.92	0.94	N/A
Accident	187	202	207	223	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	184	199	198	N/A	1.02	1.02	1.05	N/A
Guarantee	52	56	58	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46	49	48	N/A	1.14	1.15	1.20	N/A
Credited health insurance contributions	1,103	995	1,055	1,291	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,151	1,182	1,164	N/A	0.96	0.84	0.91	N/A
"Voluntary" health insurance contributions	95	100	105	113	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90	91	81	N/A	1.05	1.10	1.30	N/A

Notes: N/A – not available.

Sources: Ministry of Finance; Social Insurance Agency; Central Office of Labour, Social Affairs, and Family

Table 4.9-Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
D1	3.7	3.6	3.6	3.5	3.6	4.0	0.0	0.0	1.03	0.91	N/A	N/A
D2	6.3	6.2	6.3	6.2	6.1	6.3	0.0	0.0	1.03	0.99	N/A	N/A
D2	6.3	6.2	6.3	6.2	6.1	6.3	0.0	0.0	1.03	0.99	N/A	N/A
D3	7.3	7.3	7.4	7.3	7.2	7.4	0.0	0.0	1.02	0.99	N/A	N/A
D4	8.3	8.2	8.3	8.3	8.2	8.4	0.0	0.0	1.01	0.98	N/A	N/A
D5	9.1	9.1	9.2	9.1	9.1	9.3	0.0	0.0	1.00	0.98	N/A	N/A
D6	10.1	10.1	10.1	10.1	10.0	10.1	0.0	0.0	1.01	1.00	N/A	N/A
D7	11.0	11.0	11.0	11.1	11.0	11.1	0.0	0.0	1.00	0.99	N/A	N/A
D8	12.4	12.4	12.4	12.4	12.4	12.3	0.0	0.0	1.00	1.01	N/A	N/A
D9	14.0	14.0	14.0	14.1	14.0	13.7	0.0	0.0	1.00	1.02	N/A	N/A
D10	17.9	17.9	17.8	17.9	18.3	17.5	0.0	0.0	0.98	1.02	N/A	N/A
Median	8,058	8,557	9,016	9,419	8,119	8,703	0	0	0.99	0.98	N/A	N/A
Mean	8,389	8,942	9,378	9,815	8,523	9,003	0	0	0.98	0.99	N/A	N/A
Gini	22.0	22.2	22.1	22.3	22.8	20.9	0.0	0.0	0.97	1.06	N/A	N/A
S80/S20	3.2	3.2	3.2	3.3	3.3	3.0	0.0	0.0	0.96	1.07	N/A	N/A

Notes: Based on 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; computed at the individual level.

Sources: EUROMOD calculations; External figures are taken from the EUROSTAT statistics database

Table 4.10-Poverty rates by gender and age

	EUROMOD				External				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
<b>40% median HDI</b>												
Total	5.0	4.8	4.9	4.9	4.7	4.1	0.0	0.0	1.06	1.17	N/A	N/A
Males	5.5	5.2	5.3	5.2	5.2	4.4	0.0	0.0	1.05	1.17	N/A	N/A
Females	4.5	4.4	4.5	4.5	4.3	3.9	0.0	0.0	1.05	1.13	N/A	N/A
<b>50% median HDI</b>												
Total	7.2	7.3	7.4	7.5	7.5	7.3	0.0	0.0	0.96	1.00	N/A	N/A
Males	7.5	7.6	7.6	7.8	7.8	7.6	0.0	0.0	0.96	1.00	N/A	N/A
Females	6.9	7.0	7.2	7.3	7.1	7.0	0.0	0.0	0.97	1.01	N/A	N/A
<b>60% median HDI</b>												
Total	11.0	11.2	11.1	11.3	11.9	11.4	0.0	0.0	0.92	0.98	N/A	N/A
Males	11.0	11.1	11.1	11.3	11.6	11.1	0.0	0.0	0.95	1.00	N/A	N/A
Females	10.9	11.2	11.1	11.4	12.1	11.7	0.0	0.0	0.90	0.96	N/A	N/A
<b>70% median HDI</b>												
Total	18.7	18.9	18.9	19.1	19.2	18.0	0.0	0.0	0.98	1.05	N/A	N/A
Males	18.1	18.1	18.1	18.3	18.3	17.0	0.0	0.0	0.99	1.07	N/A	N/A
Females	19.3	19.7	19.8	19.8	20.2	19.0	0.0	0.0	0.96	1.03	N/A	N/A
<b>60% median HDI</b>												
0-15 years	15.4	15.4	15.2	15.0	18.3	16.7	0.0	0.0	0.84	0.92	N/A	N/A
16-24 years	17.2	17.0	17.0	17.0	17.1	14.2	0.0	0.0	1.01	1.20	N/A	N/A
25-49 years	9.7	9.5	9.5	9.5	10.4	10.2	0.0	0.0	0.93	0.93	N/A	N/A
50-64 years	9.4	9.9	10.1	10.3	9.6	9.8	0.0	0.0	0.98	1.01	N/A	N/A
65+ years	7.6	8.9	8.6	9.7	8.7	9.5	0.0	0.0	0.87	0.93	N/A	N/A

Sources: EUROMOD calculations; External figures are taken from the EUROSTAT statistics database

Table 4.11-Minimum wage validation

	Baseline				Min Wage Incl.				Ratio			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Equivalised disposable income	28984.38	30858.64	32354.89	33839.42	29026.82	30905.45	32436.82	33936.17	1.00	1.00	1.00	1.00
Employment income	23774.76	25628.86	26591.12	28233.99	23834.58	25695.18	26710.48	28372.66	1.00	1.00	1.00	1.00
Total income tax	2248.27	2463.82	2423.33	2732.12	2254.12	2470.58	2436.11	2748.01	1.00	1.00	0.99	0.99
Total employee social insurance contributions	3215.12	3474.07	3607.22	3834.32	3226.08	3486.20	3630.17	3858.31	1.00	1.00	0.99	0.99
Gini coefficient	22.01	22.21	22.12	22.35	21.97	22.17	22.06	22.28	1.00	1.00	1.00	1.00
Poverty rate (60% median HDI)	10.95	11.18	11.12	11.31	10.99	11.16	11.06	11.24	1.00	1.00	1.01	1.01

Notes: The baseline is calculated without making any adjustments to employment income; the ‘minimum wage included’ columns adjust employment income to reflect the minimum gross hourly wage; see section II for a description of the implementation of the minimum hourly wage.

Source: EUROMOD calculations.