

EUROMOD

COUNTRY REPORT

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Christopher Markides, Paris Nearchou

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

EUROMOD covers the 27 Member States and is yearly updated to cover the most recent changes in countries' policy systems. It uses input databases which are also updated on a yearly basis, coming mainly from the European Union Statistics on Income and Living Conditions (EU-SILC). 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 Cyprus. 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: Fidel Picos

EUROMOD coordination assistant: Marta Jędrych

EUROMOD software developer: Kostas Manios and Bianey Palma Fernandez

EUROMOD developer responsible for Cyprus: Klaus Grünberger

National team for Cyprus: Christopher Markides and Paris Nearchou

The results presented in this report are derived using EUROMOD version I6.0+. 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

1. BASIC INFORMATION	5
1.1 Basic information about the tax-benefit system	5
1.2 Minimum Wage	5
1.3 Social Benefits	6
1.3.1 Contributory insurance-based benefits	6
1.3.2 Non-contributory social benefits:	9
1.4 Social insurance contributions	10
1.5 Taxes	11
1.6 Covid-19 temporary measures	12
2. SIMULATION OF TAXES, SOCIAL INSURANCE CONTRIBUTIONS AND BENEFITS IN EUROMOD	14
2.1 Scope of simulation	14
2.1.1 Partially simulated tax-benefit components	14
2.2 Main policy changes	19
2.3 Order of simulations and interdependence	19
2.4 Policy extensions	21
2.5 Benefits	21
2.5.1 Unemployment benefit/Επίδομα ανεργίας (<i>bunct_s</i>)	21
2.5.2 Child benefit/Επίδομα Τέκνου (<i>bch_s</i>)	24
2.5.3 Single parent benefit/Επίδομα μονογονεϊκής οικογένειας (<i>bchlp_s</i>)	26
2.5.4 Student grant/Φοιτητική χορηγία (<i>bedet_s</i>)	27
2.5.5 Standard maternity grant/Βοήθημα Τοκετού (<i>bchba_cy</i>)	29
2.5.6 Special birth grant for unmarried mothers/Ειδικό βοήθημα τοκετού σε άγαμες μητέρες (<i>bchba_cy</i>)	30
2.5.7 Maternity allowance /Επίδομα μητρότητας, (<i>bmact_s</i>)	30
2.5.8 Paternity allowance /Επίδομα πατρότητας (<i>bpact_s</i>)	31
2.5.9 Guaranteed Minimum Income/Ελάχιστο Εγγυημένο Εισόδημα (<i>bsamm_cy</i>)	32
2.5.10 Low pension benefit/ Επίδομα χαμηλοσυνταξιούχου (<i>bsaoa_s</i>)	37
2.5.11 Easter Benefit/Πασχαλινό Επίδομα (<i>bsals_s</i>)	40
2.6 Social insurance contributions	41
2.6.1 Employee social contributions (<i>tscee_cy</i>)	41
2.6.2 Employer social contributions	43
2.6.3 Self-employed social contributions	46
2.6.4 Government social contributions	47
2.6.5 Contributions to the General Health System (Γενικό Σύστημα Υγείας)	47
2.7 Direct taxes	49

2.7.1	Tax unit	49
2.7.2	Exemptions (non-taxable income)	49
2.7.3	Tax allowances	49
2.7.4	Tax base	51
2.7.5	Tax schedule	51
2.7.6	Tax credits	51
2.8	Other taxes	51
2.8.1	Special contribution to defense	51
2.8.2	Contribution of public employees to Government Employees Pension Plan	52
2.8.3	Contributions of public employees to the Widows and Orphans Government Fund	52
2.8.4	Scaled reduction in emoluments of public and broader public sector pensioners and employees	52
2.9	Covid-19 temporary measures	53
2.9.1	Special unemployment benefit scheme for employees (Ειδικό Σχέδιο Πλήρους ή Μερικής Αναστολής των Εργασιών της Επιχείρησης, yemcomp_cy)	53
2.9.2	Special unemployment benefit scheme for self-employed (Ειδικό Σχέδιο Στήριξης Αυτοτελώς Εργαζομένων, ysecomp_cy)	55
3.	DATA	57
3.1	General description	57
3.2	Data adjustment	58
3.3	Imputations and assumptions	58
3.3.1	Time period	61
3.3.2	Gross incomes	61
3.3.3	Disaggregation of harmonized variables	61
3.4	Uprating	62
4.	VALIDATION	63
4.1	Aggregate Validation	63
4.1.1	Components of disposable income	64
4.1.2	Validation of market income	64
4.1.3	Validation of taxes and social insurance contributions	65
4.1.4	Validation of benefits	66
4.2	Income distribution	67
4.2.1	Income inequality	67
4.2.2	Poverty rates	67
4.3	Summary of “health warnings”	68
5.	REFERENCES	70
ANNEX 1.	UPRATING FACTORS	71

ANNEX 2. POLICY EFFECTS IN 2022-2023 _____ **75**

ANNEX 3. VALIDATION TABLES _____ **78**

1. BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- The Cypriot tax-benefit system is a unified, national system; policy rules do not vary across regions or municipalities.
- The “tax year” starts on the 1st of January of each year and ends on the 31st of December.
- The statutory pensionable age of the General Social Insurance Scheme (the “GSIS”) is 65 for both males and females, irrespective of the category of workers (employed versus self-employed persons) and the type of occupations. Withdrawing a GSIS statutory pension at the age of 63 is possible under certain conditions and financial disincentives (actuarial reductions in pensions).
- The normal retirement age of the Government Employee Pension Scheme (the “GEPS”) is 65 for both males and females, but retirement at the age of 63 is possible under certain conditions and financial disincentives (actuarial reductions in pensions). However, for certain occupations (i.e., police officers, military officers, officers in educational service), the normal retirement age is lower, for example 62 for officers in educational service.
- Definitions of benefit units may differ slightly across policies. The most important definition in terms of social policy is that of dependent children. In most cases children are considered to be dependent if they are under the age of 18 years or aged 18-23 years if in military service or in full-time education. Individuals deprived of their subsistence capabilities are considered dependent regardless of age.
- The income tax is calculated on an individual basis (spouses are assessed independently).
- Taxable income is taxed progressively, while corporate profits, dividends and interests are taxed at a flat rate.
- The levels of benefits, pensions as well as wages in the public sector are periodically revised through statutory indexing regimes that take into account inflation and/or cost of living.
- Income for the purpose of means-testing is assessed in annual or monthly basis depending on the context of each policy. Means-testing is based on past income. The definition of income is not uniform, i.e., it varies according to the context of each policy.

1.2 Minimum Wage

As of 1st January 2023, a National Minimum Wage has been established in Cyprus. This has been set at €885 upon recruitment, and after the completion of six months of employment in the same employer it increases to €940 monthly (for full-time employment). For persons younger than 18 in occasional employment this can be discounted by 25% for no more than 2 months. The minimum wage does not apply for household workers (οικιακούς εργαζόμενους), as well as workers in the hotel industry who are covered by a different legislation, the agricultural or stock-farming

(γεωργοκτηνοτροφία) sectors, or in shipping (ναυτιλία). It is also inapplicable to workers in education or in training who are in mandatory work placements. It is also non-applicable to workers for whom more favourable arrangements are fixed in legislation, contract, custom or tradition.

In previous years, Cyprus did not have a national minimum wage, as the relevant legislation only covered specific occupations. Specifically, the minimum wage legislation applied only to shop assistants, clerks, child-care workers (assistant baby and child minders), personal care workers (nursing assistants), security guards and cleaners. The minimum monthly wage upon recruitment was €870, and after the completion of six months of employment in the same employer it increased to €924. The minimum wage for security guards was at an hourly rate of €4.90 and increased to €5.20 upon the completion of a six-month period of employment. The corresponding hourly rates for cleaners was €4.55 and €4.84, respectively.

1.3 Social Benefits

The section briefly describes a number of basic (simulated and non-simulated) social benefits, excluding minor benefits which affect small population groups and whose relevance is limited. Specific parametric information (e.g., benefit rates) can be found in section 2.

1.3.1 Contributory insurance-based benefits

Short-term benefits

Unemployment benefit (*ανεργιακό επίδομα*): Unemployment benefit under the GSIS is payable to persons between the ages of 16 and 63 for involuntary unemployment¹. Period of payment extends to 156 days for each spell of unemployment. The benefit rate is calculated as a proportion of insurable earnings and it is increased for dependent spouses and children. Eligibility is defined on certain contribution conditions, namely the person should (i) have been insured for at least 26 weeks and has paid up to the date of unemployment contributions not lower than 26 times the weekly amount of the basic insurable earnings; and (ii) has paid contributions in the previous contribution year on insurable earnings no less than 20 times the weekly amount of basic insurable earnings. These contribution conditions apply to other insurance-based benefits, too.

Maternity benefit (*επίδομα μητρότητας*): The maternity benefit under the GSIS is a contributory benefit payable to employed and self-employed mothers of new-borns during the maternity leave period. The duration of the benefit is 18 weeks increased in cases of multiple births (by 4 weeks for twins and by 8 weeks for triplets and above). An amendment in the social insurance law, which was enacted on 5 November, 2021, extends the duration of maternity leave and benefit to 22 weeks for 2nd child and 26 weeks for 3rd child and above. Adoptive mothers are also covered by the scheme. The eligibility criteria require that the recipient should be on maternity leave and not receiving a full salary from her employer. Furthermore, certain contribution-related conditions should be satisfied. The

¹ The benefit is paid for voluntary unemployment too. In this case, the first 6 weeks are deducted from payment, but are paid eventually if the person continues to be unemployed for a period exceeding 6 months.

amount of the benefit is calculated on the basis of the insurable earnings of the recipient. However, the sum of the reduced wage (if any) and the benefit cannot exceed the full wage.

Paternity benefit (επίδομα πατρότητας). The paternity benefit under the GSIS is a contributory benefit payable to employed and self-employed married fathers of new-borns during the parental leave period. The duration of the benefit is 2 weeks. The same qualifying conditions apply as for the maternity benefit. The benefit was introduced in August 2017. From 16 December 2022, a new law was enacted (214 (I)/2022) which extends this benefit to fathers irrespective of marital status. From the same date, paternity leave and benefit can be extended in cases where the mother dies at birth, or during maternity leave.

Birth grant (βοήθημα τοκετού). The birth grant under the GSIS is a lump-sum flat-rate contributory benefit payable to mothers of new-borns. Eligibility is based on mother's or fathers' insurance record.

Special birth grant to unmarried mothers (ειδικό βοήθημα τοκετού σε άγαμες μητέρες). The special birth grant, which is a non-contributory, tax-financed benefit, is payable to unmarried mothers who are not eligible for the birth grant. The level of the special birth grant is the same as the birth grant.

Parental leave benefit (γονική άδεια): On December 2022, the Social Insurance Law was amended to provide for parental leave benefit to insured employed parents who are on parental leave. The benefit is paid for a maximum of 6 weeks (8 weeks after 2/08/2024) to each parent for each child out of the 18 weeks of parental leave provided by the Leaves (Paternity, Parental, Caring, Force Majeure) and Flexible Work Arrangements for Work-Life Balance Law of 2022 (216(I)/2022). In the case of a single parent the leave is extended to 23 weeks. In the case of a child with serious disability or moderate mental disability, the benefit is extended by 4 weeks and in the case of a child with total disability by 6 weeks. The benefit is paid between the period end of maternity/paternity leave until the child reaches the age of 8 years old or in the case of a child with disability until the age of 18 years old. In addition, for the unpaid portion of parental leave the GSIS provides for assimilated insurance (insurance credits).

Other benefits to parents include: the honorary allowance to mothers, allowance to care for disabled children or older relatives and grants for the care of children placed with foster families. There is also a funeral grant. In October 2022, law 150(I)/2022 was enacted which provides for sickness benefit to insured persons between the ages of 63-65 provided they continue to work and do not receive the state pension.

Sickness Benefit (επίδομα ασθενείας): The sickness benefit under the GSIS is payable to persons not capable for work. The payment period cannot exceed 156 days. Eligibility is defined on the basis of the standard contribution conditions (see above). The rate of the benefit is calculated as a proportion of insurable earnings, increased in the presence of dependents.

Orphan Benefit (επίδομα ορφάνιας): Orphan benefit under the GSIS is payable to underage² children whose both parents died, or one parent died while the other parent is not entitled to a widow's pension. Eligibility requires that at least one of the parents is insured. The rate of the benefit is

² Underage child is a child under 15 years old; unmarried son age between 15 and 25 who is under full time education or on military service; unmarried daughter age 15 to 23 who is under full-time education, and unmarried person independently of age who is permanently incapable for self-supporting.

calculated as a proportion of insurable earning, but certain ceilings exist. The benefit is paid until the child satisfies age requirements unless the beneficiary is permanently incapable of working.

Employment injury benefit (επίδομα σωματικής βλάβης): This benefit under the GSIS is payable to any employed person who is incapable of work as a result of an employment accident or occupational-related disease. The benefit is payable for up to 12 months from the date of accident/disease. The recipient should be employed on the day he/she had the accident/disease; and, as a result of the injury cannot work and does not receive a full wage for this period. The rate of injury benefit is the same as for the sickness benefit.

Disablement grant (βοήθημα αναπηρίας): The disablement grant under the GSIS is payable to employed persons who, as a result of an employment injury, suffered a loss of physical or mental capacity which results to a degree of disability between 10% and 19%.. The benefit takes the form of a lump sum transfer.

Pensions

Statutory pension (θεσμοθετημένη σύνταξη): Statutory pension under the GSIS is payable to insured persons having completed the pensionable age (65 year of age for all categories of employees) and satisfying all the required insurance conditions. The insurance conditions : the claimant should have been insured for at least 780 weeks up to the pensionable age and the number of insurance points collected in the relevant period is equal to at least 30% of the years included in that period. Statutory pension is payable at the age of 63 with 12% actuarial reduction when the insurance points collected in the relevant period are equal to at least 70% of the years included in that period. Statutory pension has two components: the basic and the supplementary. The basic is calculated as 60% of the average of insurable earnings in the lower band earning increased by 1/3, 1/2 and 2/3 for one, two or three or more dependants respectively. The supplementary is 1/52 of 1.5% of the total insurable earnings (of the beneficiary in the upper band).

Invalidity pension (σύνταξη ανικανότητας): Invalidity pension under the GSIS is payable to persons who have been incapable for work for at least 156 days and are expected to remain permanently incapable for work. Besides the typical insurance conditions (see other benefits) the claimant should have been insured for at least 156 weeks up to the date of invalidity and the number of insurance points collected in the relevant period, is equal to at least 25% of the years' included in that period. The level of invalidity pension is calculated similar to statutory pension.

Widow/widower pension (σύνταξη χηρείας): Widows' pension under the GSIS is payable to the widow of a person who until the date of his/her death satisfied the relevant insurance conditions. Widows' pension comprises of a basic and supplementary part. The basic part is equal to the basic part of the statutory pension and the supplementary part is equal to 60% of the statutory/invalidity pension. An amendment in the social insurance law, which was enacted on 5 August, 2019 with retroactive effect as of 1 January, 2018, stipulates the payment of widower's pensions to men under the same conditions as for women who lose their husbands.

Disablement pension (σύνταξη αναπηρίας): Entitled to disablement pension are all employed persons who as a result of a work-related injury suffered a loss of physical or mental capacity resulting to a degree of disability of 20% or more. There are not any insurance conditions that need to be

satisfied for granting eligibility. The recipients of the disablement pension can receive it even if they keep working.

Honorary benefit for war veterans (τιμητικό επίδομα βετεράνων πολεμιστών του 1974): This is a means-tested, tax-financed benefit for people who receive statutory pension and are war veterans. Due to the Turkish Invasion in 1974, they had served more time at the National Guard - at least more than a month - and/or were war prisoners and/or disabled warriors. The benefit was implemented in June 2018. Additionally, a Special Lumpsum is paid on a six-monthly basis to those who were prisoners or non-military/civilians of war during the Turkish invasion of 1974 and are included within the Registries of the Ministry of Defence or Ministry of Interior and to those who are invalid and are receiving on a monthly basis benefit from the Patients' Relief Fund (Note. Since December 2022 for those who are invalid the lumpsum is paid from the Patients' Relief Fund. With a supplementary decision of the Council of Ministers, beneficiaries for the Special Lumpsum can also be those who may not be eligible for the monthly honorary benefit. The lumpsum was implemented in July 2022.)

1.3.2 Non-contributory social benefits:

GMI (ελάχιστο εγγυημένο εισόδημα): The GMI scheme is a means-tested benefit targeting families with income not enough to cover their basic needs. The benefit is defined as the difference between the basic income and the (actual) family income. The derived amount is supplemented with a housing allowance. The recipient unit is the family, which is defined as couples (or single persons) living with unmarried children up to the age of 28 or children in full time education or in military service. In defining eligibility criteria, movable and immovable property is taken into account.

Child Benefit (επίδομα τέκνου): Child benefit is a non-contributory means-tested benefit paid to all families with children that reside permanently in Cyprus. It consists of a basic part and a supplementary part. The basic part is paid for each child that lives under the same household, while the supplementary part is payable only to families with annual gross income below a certain threshold which is set by the Law.

Students Grant (φοιτητική χορηγία): Student grant is a non-contributory means-tested benefit payable to families with students, irrespectively if the latter study in private or public tertiary institutions. It consists of a basic and a supplementary part. The basic part is a flat amount and the supplementary part depends on income and other criteria.

Social pension (κοινωνική σύνταξη): Social pension provides a minimum pension to elderly persons residing in Cyprus who are not entitled to a contributory pension or other retirement income. Beneficiaries should satisfy the following residence conditions; have resided legally in Cyprus for at least 20 years from the date on which the applicant reached the age of 40; or have resided legally in Cyprus for at least 35 years from the date the applicant reached the age of 18. Social pension is paid at a flat rate to all beneficiaries. The social pension for 2023 is €377.18.

Single parent benefit (επίδομα μονογονιού): Single parent benefit is a non-contributory means-tested benefit that provides income support to single parents provided that are Cypriots, EU citizens or have been residing in Cyprus the last three years. Single parents might unmarried, divorced or widowed and reside with her/his dependent children without a spouse or partner.

Low pension benefit (επίδομα χαμηλοσυνταξιούχου): The low pension benefit is a means-tested, non-contributory benefit targeting families with incomes below the poverty limit with at least one person in the family receiving pension. The regulation was introduced on the 1st December of 2009 and was implemented on the 1st March of 2010.

Easter benefit (πασχαλινό επίδομα): The Easter benefit is a means-tested benefit which is given to pensioners with low incomes just before Easter. The benefit introduced in Cyprus on the year 2010 and is voted each year by the Ministry Council.

1.4 Social insurance contributions

Employee social insurance contributions (ασφαλιστικές εισφορές εργαζομένων): The compulsory contribution rate for employees amounts to 21.5%, of which 8.3% is paid by the employee, 8.3% by the employer and 4.9% from the Consolidated Fund of the Republic (Πάγιο Ταμείο της Δημοκρατίας).

Self-employed social insurance contributions (ασφαλιστικές εισφορές αυτοτελώς εργαζομένων): The contribution rate for self-employed persons amounts to 20.5%, of which 15.6% is paid by the self-employed and 4.9% from the state. The insured earnings of self-employed, that is, the earnings for which their contributions are calculated, are based on their occupation. For every occupational category there is an obligatory minimum amount of insured earnings (notional Income). The self-employed person is allowed to pay contributions on a higher amount of insured earnings up to the maximum limit of social insurance earnings. If the real income of a self-employed person is lower than the minimum amount of the corresponding occupational category then he/she can ask to pay contributions based on his/her real income.

Voluntary insured person social insurance contributions (προαιρετικές ασφαλιστικές εισφορές): The contribution rate that applies to voluntarily insured persons working in Cyprus is 18.4%, from which 14% is paid by the voluntarily insured person and 4.4% by the state. Also, the contribution rate that applies to voluntarily insured persons working abroad for Cypriot employers is 21.5%, from which 16.6% is paid by the voluntarily insured person and 4.9% by the state. The amount of insured earnings for which social insurance contribution is paid voluntarily is chosen by the insured person. However, this cannot be higher than the weekly amount of his/her past insured earnings.

Employer social insurance contributions (ασφαλιστικές εισφορές εργοδοτών): Employers are obliged to contribute to the following Funds (Social Insurance Fund, Annual Holidays Fund, Redundancy Fund, Human Resource Development Authority Fund and Social Cohesion Fund) for all employees whose earnings exceed €2 per week or €7 per month. For trainees/apprentices the employer has to pay contributions to the Social Insurance Fund even if the employee has no earnings. The liability of the employer for paying contributions to the Social Insurance Fund ceases on the day the employee reaches the pensionable age.

Credited social insurance contributions (πιστωμένες ασφαλιστικές εισφορές): Contributions can be credited to insured persons in the following cases: 1) for any period after the age of 16 for which he/she studies on a full time basis or attends training courses; 2) for any period he/she receives sickness benefit, unemployment benefit, maternity benefit, physical injury benefit or incapacity pension from the Social Insurance Fund; 3) for any period of declared unemployment or sickness for

which the person is not allowed to receive a benefit. In such case the credit period cannot exceed six months.

Provident fund contributions (ασφαλιστικές εισφορές ταμείων πρόνοιας): Provident funds provide cash benefits to employed persons in case of termination of employment, permanent incapacity for work, retirement or death and are financed by periodical contributions paid by the employer and the employed persons. The Law of the Establishment, the Activities and the Supervision of Institutions of Occupational Retirement Benefits sets the general legislative framework but does not specify the rates of contribution/benefits, which are subject to collective agreements between employees and employers.

General health system (γενικό σύστημα υγείας): The general health system is a comprehensive and financially sustainable healthcare system aiming at meeting the expectations of Cypriot citizens for equal access to treatment and provision of high-quality healthcare. The participation in the GHS is mandatory for all individuals who are resident and have incomes in Cyprus. The main GHS source of financing is contributions. The collection of contributions associated with the implementation of the first phase of GHS started on March 1st, 2019, and for the final implementation on June 1st, 2020.³

1.5 Taxes

Personal Income Tax (φόρος εισοδήματος): The personal income tax applies to all Cyprus tax residents for their income accrued or derived from all sources in Cyprus and abroad. Taxable income includes wages and salaries, income from self-employment and business activities, rents and pensions. The social benefits provided in the form of a lump sum or for a short period of time (i.e. sickness benefit) are not included in the tax base.

Special Contributions for defence (ειδική εισφορά για την άμυνα): Special contribution for defence is levied on the income from dividends, interest, and the rental income of tax residents (individuals and legal entities). Dividends are taxed at 17%, income from interest at a rate of 30% excluding the interest from corporate bonds (as from 26 June 2019), Cyprus government savings and development bonds, and interest earned by a provident fund, which is taxed at a rate of 3% (other minor exemptions also exist), and finally, income from rents at a rate of 3% (but only 75% of the rental income is subject to the contribution).

Real Property Tax (φόρος ακίνητης περιουσίας): Property owners, regardless of whether they reside in Cyprus or not, are liable to pay an annual tax based on the total value of all their immovable property. The real property tax was abolished as of 1st of January 2017.

Value Added Tax (φόρος προστιθέμενης αξίας): Value added tax is imposed on the provision of goods and services in Cyprus, on the acquisition of goods from the European Union and on the importation of goods into Cyprus. In most cases, the VAT is 19%, but there are also reduced rates of VAT of 5% and 9% for several basic goods.

³ The final implementation was initially scheduled on March 1st, 2020 but has been postponed by three months due to the COVID-19 crisis.

Capital Gains Tax (*φόρος κεφαλαιακών κερδών*): Capital gains (e.g., from selling immovable property) are taxed at a rate of 20%. Individuals may claim several deductions.

Special contribution (*Ειδική εισφορά*): The special contribution is part of the fiscal consolidation measures that were undertaken after 2011. It is imposed on the monthly emoluments of the private and public employees, self-employed and pensioners. The contribution rate is zero below a certain threshold and thereafter increases with the level of emoluments. The special contribution was abolished as of 1st January 2017.

1.6 Covid-19 temporary measures

Between March 2020, when the Covid-19 pandemic appeared, and October 2021, the Government of Cyprus ran several schemes in order to provide economic support to the workers and businesses affected. There were four main schemes, which were designed to target various industries (employed), occupations (self-employed) and workers who were absent from work for either health or child care reasons due to the pandemic. Some design features of the above schemes were varying to reflect the impact of the specific Government's COVID measures onto workers and businesses affected.

The four main schemes, which have been in operation over the 20 financial periods (from March 2020 to October 2021), are briefly described below:

- 1. Special Unemployment Benefit Scheme:** A number of variants of this scheme were aimed at businesses either (i) operating in the hospitality industry, or (ii) carrying out economic activities affected by the hospitality industry, or (iii) operating in other industries affected that suspended their operations either (a) completely or (b) partially due to COVID-19 and (a subset of) their employees were put on temporary leave.
- 2. Special Work Absence Allowance for Child Care Scheme:** This scheme was aimed at employees with children under the age of 15 or with disabilities (regardless of age), and whose nature of work did not allow teleworking, or working from home, or working flexible hours. Its introduction was deemed necessary due to the suspension of attendance at schools, nurseries and child-care centres. This measure is not simulated in the EUROMOD, as we cannot identify in the data who is potentially eligible to the allowance.
- 3. Special Work Absence Allowance for Health Reasons Scheme:** This scheme was aimed at employees belonging to vulnerable health groups, whose nature of work did not allow teleworking, or working from home, or working flexible hours. This measure is not simulated in the EUROMOD, as we cannot identify in the data who is potentially eligible to the allowance.
- 4. Special Unemployment Benefit Scheme for the Self-employed:** This scheme was aimed at specific categories of self-employed who implemented either a complete or partial suspension of their activities.

Under each of the first three special schemes, employers were relieved of their obligation to pay the salary to their employees who instead received the relevant benefit. Employers were also relieved of paying the relevant social insurance contributions.

Under the fourth special scheme, the self-employed beneficiaries received the special unemployment benefit and were also relieved of their obligation to pay the relevant social insurance contribution.

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

2.1 Scope of simulation

EUROMOD model simulates a collection of policy instruments (taxes, social benefits and social insurance contributions). The choice between simulating or not an instrument depends on the available information in the dataset. Eligibility rules are not always possible to simulate given the enormous demand of informational input some policies require. A characteristic example is pensions, whose meaningful simulation would require knowing the contribution record of each individual until the pensionable age. Other benefits are built upon complex rules which are only partially simulated by the model. A characteristic example is the GMI benefit, which alongside a basic monetary benefit and a housing allowance provides to recipients to a whole range of other minor in-cash and non-cash benefits, corresponding to recipients' individualised needs (long-term care cash benefits to recipient units with dependent elderly persons, childcare benefits and other), which cannot be simulated by the model. In such cases, the simulation of the instrument is partial and should be interpreted as such.

2.1.1 Partially simulated tax-benefit components

Some benefits use eligibility information from the data to establish the eligibility status due to the lack of sufficient information in the data to simulate all relevant eligibility rules. This, for example, is the case for the unemployment benefit, which is only simulated for those recorded in the data to receive it.

Table 2-1: Simulation of benefits in EUROMOD [2020-2023]

Benefit	Variable	2020	2021	2022	2023	Comments
GMI	bsamm_s	S	S	S	S	Lack of information on the particular needs of the recipient
Low pension benefit	bsaoa_s	S	S	S	S	-
Easter benefit	bsals_s	S	S	S	S	-
Unemployment benefit: From SIF	bunct_s	PS	PS	PS	PS	Not possible to define contribution record and past earnings
Unemployment: other	bunot	I	I	I	I	No information to define eligibility
Maternity benefit	bma	I	I	I	I	Paid SICs cannot be defined perfectly, no available information
Paternity benefit	-	-	-	-	-	Introduced in 2017, not yet part of input data
Child benefit	bch_s	S	S	S	S	Relevant income may not be defined exactly
Military service grant	bml	I	I	I	I	Not enough information to define the exact amount of the grant
Students grant	bedet_s	S	S	S	S	-
Special unempl scheme: Employees	bwkmcee_s	-	S	S	S	Introduced during COVID-related lockdown in 2020.
Special unempl scheme: Self-empl	bwkmcse_s	-	S	S	S	Introduced during COVID-related lockdown in 2020.
Special grant to blind persons	pdi	I	I	I	I	Eligibility cannot be defined
Sickness benefit	bhl	I	I	I	I	Eligibility cannot be defined
Physical injury benefit	bhl	I	I	I	I	Eligibility cannot be defined
Disability pension	pdi	I	I	I	I	Eligibility cannot be defined
Disability benefit	pdi	I	I	I	I	Eligibility cannot be defined
Widow/widower pension	psuwd	I	I	I	I	Depends on the SICs of the deceased
Orphan benefit	psuor	I	I	I	I	Eligibility cannot be defined
Parent pension	psuot	I	I	I	I	Eligibility cannot be defined
Honorary benefit	-	-	-	-	-	Introduced in 2019, not yet part of input data. Eligibility cannot be defined
Birth grant	bchba_s	S	S	S	S	-
Maternity benefit	bmact_s	S	S	S	S	Eligibility: difficult to define work history
Paternity benefit	bpact_s	S	S	S	S	Eligibility: difficult to define work history
Other benefits for parents	bfamh	I	I	I	I	Eligibility cannot be defined
Widow pension for public empl.	psuwd	I	I	I	I	Eligibility cannot be defined
Orphan pension for public employees	psuor	I	I	I	I	Eligibility cannot be defined
Statutory pension	poa	I	I	I	I	Pension's level depends on the SICs which are not known
Social pension	poasp	I	I	I	I	Eligibility cannot be simulated
Incapacity pension	pdi	I	I	I	I	Eligibility cannot be defined.

EUROMOD Country Report – CYPRUS

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

EUROMOD Country Report – CYPRUS

Table 2-2: Simulation of taxes and Social Insurance contributions (SICs) in EUROMOD [2020-2023]

Taxes/SICs	Variable	2020	2021	2022	2023	Comments
Employee SICs: General	tscee00_s	S	S	S	S	
Employee SICs: Widow and pension fund	tsceepi_s	S	S	S	S	
Employee SICs: General Health System	tsceehl_s	S	S	S	S	
Employer SICs: General	tscer00_s	S	S	S	S	
Employer SICs: Annual Holidays Fund	tscerhe_s	S	S	S	S	Contributors randomly chosen
Employer SICs: Redundancy Fund	tscersv_s	S	S	S	S	
Employer SICs: Human Resources Fund	tscerot_s	S	S	S	S	
Employer SICs: Social Cohesion	tscerir_s	S	S	S	S	
Employer SICs: General Health System	tscerhl_s	S	S	S	S	
Self-employed SICs:	tscse00_s	S	S	S	S	
Self-employed SICs: General Health System	tscsehl_s	S	S	S	S	
Pensioner SICs: General Health System	tscpehl_s	S	S	S	S	
Other Income SICs: General Health System	tscothl_s	S	S	S	S	
State SICs: General	tscgv00_s	S	S	S	S	
State SICs: General Health System	tscgvhl_s	S	S	S	S	
Optionally insured person SICs	-	E	E	E	E	Non-sufficient information available from data
Credited SICs	-	E	E	E	E	Non-sufficient information available from data
Provident-fund contributions	-	E	E	E	E	Non-sufficient information available from data
Contribution for public pensions	tpipb_s	S	S	S	S	
Personal Income Tax	tin_s	S	S	S	S	
Corporate income tax	-	E	E	E	E	Out of scope of the model
Property tax	-	E	E	E	E	No information about the value of property
Special contribution for defence	txc_s	S	S	S	S	No information on legal entities
Value Added Tax	-	E	E	E	E	Out of scope of the model
Excise duties	-	E	E	E	E	Out of scope of the model
Other indirect taxes	-	E	E	E	E	Out of scope of the model
Indirect taxes	-	E	E	E	E	Out of scope of the model

EUROMOD Country Report – CYPRUS

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

2.2 Main policy changes

Table 2-3 records the main policy changes that occurred over the simulation period.

Table 2-3 Main policy changes over 2020-2023

Policies	2019 → 2020	2020 → 2021	2021 → 2022	2022 → 2023
Benefits			Maternity allowance: duration of maternity benefit has been extended according to the number of children in the family.	Minimum Wage: Introduction of National Minimum Wage
Social Insurance Contributions				
Direct Taxes				The Scaled reduction in emoluments of public and broader public sector pensioners and employees was abolished
Other				

2.3 Order of simulations and interdependence

The spine structure has remained stable between 2020 and 2023. The order of simulation is as follows: initially, the model simulates social insurance contributions, (note that cuts in public sector employees' wages and pensions are simulated before SICs). Then, income tax and the special contribution to defence are deducted from income. Thereafter, cash benefits are simulated with the following order: birth grant, child benefit, single parent benefit, student grant and GMI. Finally, we note that the unemployment benefit is switched off (in the baseline scenario) across all years. The following table describes the order in which the main instruments of the Cypriot tax-benefit system are simulated.

Table 2-4: EUROMOD Spine: order of simulation

Policy	2020	2021	2022	2023	Description of the instrument and main output
<i>yemcomp_cy</i>	n/a	On	Off	Off	Special unemployment benefit scheme for employees (only produces results with the LMA add-on)

EUROMOD Country Report – CYPRUS

<i>ysecomp_cy</i>	n/a	On	Off	Off	Special unemployment benefit scheme for self-employed (only produces results with the LMA add-on)
<i>paycut_cy</i>	On	On	On	n/a	Cuts in public wages and pensions of public employees ¹
<i>tscee_cy</i>	On	On	On	On	Employee social insurance contributions
<i>tscer_cy</i>	On	On	On	On	Employer social insurance contributions
<i>tscse_cy</i>	On	On	On	On	Self-employed social insurance contributions
<i>tscpe_cy</i>	On	On	On	On	Pensioner social insurance contributions
<i>tscot_cy</i>	On	On	On	On	Other income social insurance contributions
<i>tscgv_cy</i>	On	On	On	On	SICs paid by the government
<i>txcbp_cy</i>	n/a	n/a	n/a	n/a	Special contribution of public employees
<i>txcps_cy</i>	n/a	n/a	n/a	n/a	Special contribution of private sector
<i>txcpe_cy</i>	n/a	n/a	n/a	n/a	Special contribution on pensions
<i>tpipb_cy</i>	On	On	On	On	Contribution of public employees to Government Employees Pension Plan
<i>tin_cy</i>	On	On	On	On	Income Tax
<i>txc_cy</i>	On	On	On	On	Special contribution for defence
<i>bchba_cy</i>	On	On	On	On	Birth grant
<i>bmact_cy</i>	switch	switch	switch	switch	Maternity allowance
<i>bpact_cy</i>	switch	switch	switch	switch	Paternity allowance
<i>bunct_cy</i>	Off	Off	Off	Off	Unemployment benefit
<i>bch_cy</i>	On	On	On	On	Child benefit
<i>bchlp_cy</i>	On	On	On	On	Single parent benefit
<i>bfamh_cy</i>	On	On	On	On	Correct double counting of family benefits
<i>bedet_cy</i>	On	On	On	On	Student grant
<i>bsa_cy</i>	n/a	n/a	n/a	n/a	Social assistance benefit
<i>bsamm_cy</i>	On	On	On	On	Guaranteed Minimum Income
<i>bsaoa_cy</i>	On	On	On	On	Low Pension benefit
<i>bsals_cy</i>	On	On	On	On	Easter benefit

Notes: Several policies, which are included into the model but not used in the EUROMOD baseline output, are marked as “switched off”. (1) See Y6 Country report for more information on the wage cut.⁴

⁴ See Y6 Country report for more information on the wage cut.

Note that the COVID-19 policies are not included in the baseline even if they are “on” in the spine, given that they only work when labour market transitions (TransLMA) are switched on.

2.4 Policy extensions

- FYA (Full Year Adjustments): The baseline simulation refers to policy rules on 30th June. This switch accounts for policy changes occurred during the year. In particular, the switch takes into account the introduction of social security contributions (SIC) for the General Health System (GHS) on 1st March 2019 and the further increase of GHS-related SIC rates on 1st June 2020. The switch is set to off by default.
- MWA (Minimum Wage Adjustment): The switch allows simulating (hypothetical) minimum wage models in policy yem_cy. The switch is set to off by default.
- PBE (Parental leave benefits): The switch allows to switch on parental leave related policies not simulated in the baseline: bmacro_cy and bpact_cy. The switch is set to off by default.

2.5 Benefits

2.5.1 Unemployment benefit/Επίδομα ανεργίας (*bunct_s*)

Table 2-5: Characteristics of the unemployment benefit

		2020	2021	2022	2023
Eligibility	Contribution period	26 contribution weeks with employment income liable to SIC.			
	Contributed amount	20 times the weekly amount of basic insurable earnings (see below).			
	Other conditions	Aged 16-63 (65 if not eligible for statutory pension), not incapable to work, not on leave, no other employment income			
	Self-employed	No.			
Payment	Contribution base	Average weekly paid and credited insured earnings (employment income) of the previous contribution year.			
	Basic amount	60% of the contribution base			
	Additional amounts	<u>Supplementary amount</u> in case of: <ul style="list-style-type: none"> • dependent spouse: 20% • dependent child/other dependants up to 2: 10% • 50% of the contribution base that exceeds the basic insured earnings up to the level of the insured earnings. 			
	Floor	No minimum amount.			
	Ceiling of the basic amount (€):	60% of <i>basic insurable earnings</i> of:			
	<i>in weekly terms:</i>	175.90	183.96	186.20	192.47
	<i>in annual terms:</i>	9,147	9,566	9,682	10,008
Duration	Standard	156 working days (Sundays are not included, 6 months)			

Subject	Taxes	No.
to:	SIC	No.

- **Definitions**

The unemployment benefit is payable to insured employees working in Cyprus, or voluntary contributors that work abroad in the services of a Cypriot employer. Insured persons should be between 16 and 63 years old in order to be eligible for the benefit. Yet, the age limit of 63 can be expanded to 65 years old, in case that the applicant is not eligible for old-age pension. Any insured person may apply for unemployment benefit for the days he/she is unemployed, able to work and willing to accept employment. But he/she is not considered to be unemployed:

- 1) When he/she is incapable for work due to sickness;
- 2) On Sundays;
- 3) When he/she is on leave
- 4) The days during which he/she works in any occupation that he/she practiced in addition to his/her usual work and from which he/she receives salary at least equal to 1/12 of the amount of basic insurable earnings.
- 5) On any day for which the employer pays for employee's contributions.

Dependents of the insured person are considered: the spouse, the children aged below 15, unmarried daughter aged 15-23 if she is student, unmarried son age 15-25 if he is student or soldier, unmarried child if he/she is permanently incapable of self-support independently of his/her age, the disabled spouse if he/she is supported by the spouse, the father/mother of the insured person if he/she is incapable of employment and financially supported by him or her and the underage younger brother or sister if he/she is financially supported by the insured person.

- **Eligibility conditions**

The requirements needed for the payment of unemployment benefit are:

- 1) At least 26 weeks must have passed between the day when the person became insured and the day on which he or she became unemployed. During that period, the total amount of insured earnings has to be at least equal to 26 times the weekly amount of the basic insured earnings.

- 2) The applicant has paid⁵ or been credited⁶ with contributions in previous contributions year⁷. During this period insured earnings should not be lower than 20 times the weekly amount of basic insurable earnings.

In the requirements mentioned above the contributions of the self-employed are not taken into consideration while the contributions of optionally insured persons are taken into consideration only if they are for work abroad with a Cypriot employer.

EUROMOD modelling: *The model controls for the first condition using a variable on working history. As far as the second is concerned, it uses the employment income.*

The benefit is payable for 156 working days in each period of interruption of employment.

Unemployed person who has exhaust his right to unemployment benefit can be allowed to it again if he/she works and pay contributions on earnings that on their total are not less than 26 times the weekly amount of basic insured earnings and at least 26 weeks have passed since the last day that the person received the benefit.

In the case where the unemployed person is above 60 years old and is not allowed to pension from any professional plan, he/she gains the right to unemployment benefit if he/she worked and has paid contributions on earnings that on their total are not less than 26 times the weekly amount of basic insured earnings and at least 13 weeks have passed since the last day that the person received the unemployment benefit.

EUROMOD modelling: *The rules described above are not simulated in the model.*

The applicant loses entitlement of the unemployment benefit for up to six weeks if he/she:

- 1) loses his/her employment by his/her own blame or abandons it without excuse,
- 2) refuses or omit to submit application for proper employment or to accept proper employment offer to him/her,
- 3) fails or neglects to be employed in a suitable job, and
- 4) refuse or omits, without excuse, to attend professional training lessons.

EUROMOD modelling: *Euromod model does not control for these conditions.*

- **Income test**

There is no income test.

⁵ The paid insured earnings are the earnings for which contributions had been paid.

⁶ Every insured person is allowed to be credited with insured earnings for every period of full time education after the age of 16, for the period under military service and for the period for which he/she is receiving sickness benefit, unemployment benefit, maternity benefit, physical injury benefit or incapability pension from the Social Insurance Fund and for the period that he/she is absent from his/her employment with parental leave or leave due to force majeure.

⁷ For the first semester of every year, the previous contributions year is the penultimate calendar year and for the second semester is the last calendar year, i.e. for the first semester of 2023 the previous contributions year is 2021 while for the second semester of 2023 is the 2022.

- **Benefit amount**

The amount of the unemployment benefit is calculated on the basis of the weekly mean of paid and credited insured earnings of the insured person during the previous contribution year. The unemployment benefit includes a basic and a supplementary amount. The weekly amount of the basic benefit is equal to 60% of the weekly mean of the insurable earnings (up to the basic insurable amount) during the previous contribution year and increases by 20% for the dependent spouse and by 10% for every child or other dependant⁸ (the maximum number of dependent children/other dependants is 2)⁹. In case that both spouses are eligible to receive unemployment benefits, the increase for dependents is paid only to the spouse that is allowed the highest increase. The weekly amount of the supplementary amount is equal to 50% of the weekly mean of insurable earnings of the beneficiary that exceeds the basic insured earnings, but the complementary amount should not be higher than the weekly amount of basic insured earnings.

In case that the insured person is entitled not only to unemployment benefit but also to other provisions of the Social Insurance Fund, then only the benefit with the higher rate is paid. This rule does not hold if the beneficiaries are entitled to unemployment benefit and widow pension or missing person allowance. In that case, both provisions are paid to the person.

Note on Euromod implementation: *Dependants other from children of spouse and children of the recipient were not taken into account in the implementation. However, these cases are very rare in practice (see, footnote (9)).*

2.5.2 Child benefit/Επίδομα Τέκνου (*bch_s*)

- **Definitions**

Child benefit is a non-contributory benefit provided to families with dependent children. The benefit is means-tested and is provided to families residing in Cyprus at least for three consecutive years. Starting from 1st January 2018: The residence condition changed from 3 years to 5 years residing in Cyprus. The relevant law defines “dependent children” as the persons aged:

- 1) up to 18 years old,
- 2) up to 19 years old, if they still attend secondary education,
- 3) up to 21 years old, if they are serving in the National Guard.
- 4) regardless of age, if they are permanently deprived of the ability to maintain themselves (e.g., children with disabilities).

The amount of the benefit depends on the number of children and the gross annual family income. It consists of a basic part and a supplementary part. The benefit is paid to the mother

⁸ Other dependents refer to the cases of a) recipient’s younger brothers, b) recipient’s parent(s) if he/she or they are incapable of work. In both cases a) and b) the dependents should prove that they are financially supported by the recipient.

⁹ The usual definition of dependent child applies.

or, in absence of the mother, to the father or the person who is in charge of the children in case that both parents are dead. Finally, the child benefit is not taxable.

- **Eligibility conditions**

A family is entitled to the benefit only if their *annual family income* (before taxes) does not exceed:

- €49,000 for families with only one dependent child,
- €59,000 for families with two, three or four dependent children,
- Starting from 1st January 2018: The threshold increases by €5,000 for each additional child for families with three or more children (e.g. the threshold is €64,000 for a family with 3 dependent children and €69,000 for 4 dependent children).

Additionally, a family is not eligible for the benefit if its *total property* (real estate property, shares, bonds, securities and deposits) exceeds €1.2 million.

- **Income test**

Family income is defined as the total annual gross income acquired one year before the year of applying for the benefit and includes wages and salaries of all family members, pensions, capital income, rents and social benefits (including GMI). The child benefit is paid annually and it is not taxable.

- **Benefit amount**

The benefit amount depends on the number of dependent children and the family income as shown in the following Table.

Table 2-6: Benefit levels for 2020-2023 (annual amounts per child, in EUR)

		Benefit amounts for families with income:			
		up to 19,500	19,500.01 - 39,000	39,000.01 - 49,000	49,000.01 - 59,000*
2020-2021					
Family with 1 child		484.36	433.37	387.49	0.00
with 2 children		581.23	530.24	387.49	351.80
with 3 children		1,065.59	1,014.60	774.97	703.59
with 4+ children		1,708.00	1,555.04	1,284.82	1,157.36
2022					
Family with 1 child		496.42	444.17	397.14	0.00
with 2 children		595.71	543.45	397.14	360.56
with 3 children		1,092.13	1,039.87	794.28	721.12
with 4+ children		1,750.54	1,593.78	1,316.83	1,186.19
2023					
Family with 1 child		539.98	483.14	431.98	0.00
with 2 children		647.98	591.14	431.98	392.20
with 3 children		1.187,96	1.131,12	863,97	784,39

with 4+ children 1.904,14 1.733,62 1.432,37 1.290,27

Note: * From 2018, this income threshold increases by €5,000 for each additional child for families with three or more children.

EUROMOD modelling: The current income is used for the income-test (instead of the previous year income). The benefit is given to the head of the tax unit. Also, the student grant is considered for the means-testing of the benefit, while the opposite is not true. Social assistance is not included in the income list. The period of residency in Cyprus is not taken into account in the model.

2.5.3 Single parent benefit/Επίδομα μονογονεϊκής οικογένειας (*bchlp_s*)

- **Definitions**

The single parent benefit is a non-contributory means-tested benefit given to single parents with dependent children. Single parent families consist of one parent who cohabits with at least one dependent child. The single parent may be unmarried, widowed or divorced. Eligible recipients should have already applied for the child benefit (meaning that the same definition of dependent children applies to both benefits). The benefit is not taxable.

- **Eligibility conditions**

The recipients should be eligible for the child benefit. The definition of single parent family is as described above. The recipients can be either Cypriots or EU citizens who reside in Cyprus at least for the last three years. Starting from 1st January 2018, the residence condition changed from 3 to 5 years.

- **Income test**

The benefit is means-tested. The gross family income (acquired one year before the application for the benefit) is used. The definition of family income is the same as for the child benefit. The value of the benefit depends on the value of the gross family income.

- **Benefit amount**

Table 2-7: Benefit levels for 2020-2023 (monthly amounts per child, in EUR)

Family income	2020-2021	2022	2023
0 - 39,000	183.55	188.12	204,62
39,000 - 49,000	163.15	167.22	181,89

EUROMOD modelling: The period of residency in Cyprus is not taken into account by the model.

2.5.4 Student grant/Φοιτητική χορηγία (*bedet_s*)

• **Definitions**

Student grant is a means-tested non-contributory benefit aiming at providing income support to families with children in higher education. Responsible for its administration is the Ministry of Education and Culture. The description of the policy rules (2020-2023) is based on the Provision of Student Grant (modifying) Law of 2012¹⁰ and the State Student Care Law of 2015.¹¹

The student grant is given either to student's parents or to any person paying student's expenses. Students should either live in the same household with their parents or, in case that they live separately, they should be financially supported by their parents.

The Law considers the following family units:

- couples with children,
- lone parents (divorced, widowed, or unmarried) and their children,
- student whose parents are deceased or missing, or he or she (the student) has been abandoned by his/her parents.
- married student and his/her spouse and his/her child(ren)

The 2015 Law added:

- divorced, widowed student and his/her child(ren).

Furthermore, for the purposes of the Law, children are defined as follows:

- children up to 18 years old,
- children up to 19 years old, if they attend secondary education,
- children up to 21 years old, if they are serving in the National Guard,
- children irrespectively of age who are considered students eligible for receiving the student grant,
- children irrespectively of age who are disable or permanently deprived of the ability to maintain themselves.

• **Eligibility conditions**

Eligible students should be Cypriot citizens or EU citizens who have their permanent residence in Cyprus (permanent residents are considered those persons who had been staying in Cyprus for at least 30 months the past 3 years before the beginning of their studies). In case that the student is a non-EU citizen, then s/he may be eligible for the grant if at least one of his/her parents has Cypriot or EU citizenship. Furthermore, the recipient should have graduated from a secondary school in Cyprus. The student should be enrolled in a recognized higher education institution. The grant is paid only for the normal duration of studies which may vary across

¹⁰ Ο περί Παροχής Φοιτητικής Χορηγίας (Τροποποιητικός) Νόμος του 2012 (Ν. 181(I)/2012).

¹¹ Ο περί Κρατικής Φοιτητικής Μέριμνας Νόμος του 2015 (Ν. 203(I)/2015).

faculties, but the period of payment may be extended in special cases (health reasons). Note that the student grant is not paid to students that:

- attend language learning programmes that are prerequisites for entering an educational institution,
- attend tertiary foundation certificates or similar courses,
- attend distance learning courses or open university courses,
- attend courses as external students and not as normal students,
- are enrolled in PhD programs.

Finally, the recipients should satisfy certain asset criteria. In particular, the total value of family immovable and movable property should not exceed 1.2 million EUR.

- **Income test**

The eligibility and level of the student grant is defined based on the total gross family income of the recipient. Total gross family income (acquired in the year before the 1st of January of the relevant academic year) includes the following components: employment income, pensions, rents, income from interest or dividends, alimonies, the GMI benefit, the public assistance, the child benefit¹², the single parent benefit and other benefits or grants. The following income sources are excluded: income from the employment of children who are full-time students, scholarships or other student benefits and any disability and chronic diseases benefits or grants who are received by any family member. Income thresholds are presented in the following Tables.

- **Benefit amount**

The student grant consists of a basic and an additional amount. The additional amount is paid to families which either bear the cost of tuition fees or have more than three dependent children (multi-child families). If the student completes her studies during the first semester of the academic year, then the family is allowed to half of the grant. If the case of part-time studies, the grant is paid when the period of studies corresponds to one year of normal studies. The following Table shows the level of the student grant corresponding to each income group for the period 2018-2021.

Table 2-8: Benefit Rates for 2020-2023 (in EUR)¹³

Family income	Annual amount per student	Additional amount for tuition payment or for families with more than 3 dependent children
0 - 39,000	1,710	855
39,000.01 - 49,000	1,580	790
49,000.01 - 59,000*	1,450	725

¹² Note that the child benefit was excluded in the definition of family income according to the 2011 Law. The 2015 Law added the child benefit in the definition of family income.

¹³ http://www.moec.gov.cy/ypiresia_foititikis_merimnas/foititiki_chorigia.html

* As from 2019, the maximum income threshold increased by 5,000 EUR for each additional child above the second child. For example, the maximum income threshold for a three-child family is 64,000 EUR.

Note on Euromod implementation: The model cannot fully control for the provisions of the Law. According to the implementation, the grant is attributed to families with dependent children that attend an educational programme that corresponds to the ISCED values 5 or 6. Since it is not possible to control for the payment of fees, the only additional amount simulated is the one for multi-child families. Note also that social assistance is not taken into account in the calculation of family income. Eligibility to students aged 19 and older is furthermore restricted to those without own original income following the assumption that those will be supported by the parents.

2.5.5 Standard maternity grant/Βοήθημα Τοκετού (*bchba_cy*)

- **Eligibility conditions**

The maternity grant is a contributory benefit paid to the mother of a new-born child (if she or her spouse is insured), independently of the category of insurance (employee, self-employed, optionally insured).

The requirements for the payment of the maternity grant are:

1. The birth of an alive child or a child born dead after at least 28 weeks of pregnancy.
2. The applicant or spouse must have been insured for not less than 26 weeks. The total amount of insured earnings must be at least equal to 26 times the weekly amount of the basic insured earnings.
3. The applicant or spouse has paid or been credited with contributions in the previous contribution year. During this period, the insured earnings should not be lower than 20 times the weekly amount of the basic insurable earnings.

- **Income test**

No income test applies.

- **Benefit amount**

The amount of the maternity grant (per child in the case of twins) is equal to:

- €548.82 for 2020
- €573.96 for 2021
- €580.92 for 2022
- €600.48 for 2023

EUROMOD modelling: this benefit is given to all heads of families with children aged 0 where at least one of the parents has working history at least equal to 6.5 months (26 weeks) and annual earnings equal at least to 20 times the weekly amount of basic insured earnings.

2.5.6 Special birth grant for unmarried mothers/Ειδικό βοήθημα τοκετού σε άγαμες μητέρες (*bchba_cy*)

- **Eligibility conditions**

Women who gave birth and reside in Cyprus for the last 12 consecutive months are entitled to the special maternity grant provided that they are not entitled to the maternity grant from the Social Insurance Services.

- **Benefit amount**

The amount of the special maternity grant for 2023 is equal to the maternity grant for the same year, i.e., €600.48, and payable upon birth as lump-sum.

EUROMOD modelling: The period of residency in Cyprus is not taken into account in the model.

2.5.7 Maternity allowance /Επίδομα μητρότητας, (*bmact_s*)

- **Definitions**

Maternity allowance is a contributory benefit covering women who are employees, self-employed or voluntarily insured at the service of a Cypriot employer abroad. Adoptive mothers are also covered by the scheme. The benefit compensates mothers for the loss of income during the period of maternity leave.

- **Eligibility conditions**

Eligible recipients should:

- Be on maternity leave and not receiving a full wage from her employer. In case of reduced wage (possible under certain collective agreements), the sum of reduced wage and the benefit cannot exceed the full wage;
- have paid social insurance contributions for at least 26 weeks before the week in which their maternity leave begins,
- have paid contributions up to the date of their maternity benefit of at least 26 times the weekly amount of basic insurable earnings¹⁴ (0.5 insurance points)¹⁵;
- have paid and /or assimilated contributions of at least 20 times the weekly amount of basic insurable earnings (0.39 insurance points) in the previous contribution year. The last two conditions are similar to the eligibility rules of the unemployment insurance benefit.

- **Income test**

There is no income test.

¹⁴ Basic weekly insurable earnings were at €192.47 in 2023.

¹⁵ One insurance point is equal to 52 times the weekly basic amount (for 2023: € 10,008.44).

- **Benefit duration**

The duration of the benefit is 18 weeks for 1st child, but it can be extended to 21 in certain occasions (such as long periods of hospitalization of the new-born due to premature delivery or other health problems). In case of twins the duration is extended by 4 weeks, and by 8 weeks in case of triplets. In any case, 2 weeks of the duration must be taken before the expected date of birth.

An amendment in the social insurance law, enacted on 5 November, 2021, extends the duration of maternity benefit to 22 weeks for the 2nd child, and to 26 weeks for the 3rd child and above.

- **Benefit amount**

The maternity benefit consists of a basic and a supplementary part calculated on a weekly basis (note that a single payment is credited to the recipient, the distinction between basic and supplementary serves only in the calculation of the amount as different conditions apply). In particular:

The weekly rate of the basic benefit is equal to 72% of the weekly basic insurable earnings of the last year. This rate increases to 80%, 90% and 100% for one, two or three dependants respectively (maximum three dependants) if the mother is a lone parent or the father is considered a dependent spouse. A spouse is considered dependant if he is neither working nor receiving any other contributory benefit.

The weekly rate of the supplementary part is equal to 72% of average weekly insurable earnings which exceed the basic insurable earnings of the last year up to the maximum amount (€1,155 weekly in 2023).

- **Subject to taxes/SIC**

The benefit is not subject to taxes or SICs.

- **Take up**

There are no data on take-up. However, the take up rate is expected to be very high.

2.5.8 Paternity allowance /Επίδομα πατρότητας (bpatct_s)

- **Definitions**

Paternity benefit is a contributory benefit covering married fathers of newborns who are employees, self-employed or voluntarily insured at the service of a Cypriot employer abroad. Adoptive fathers are also covered by the scheme. The duration of the benefit is 2 weeks. The benefit compensates fathers for the loss of income during the period of paternal leave. The benefit was introduced in August 2017. From December 2022, it was extended to cover all fathers, irrespective of marital status. It can also be extended in cases where the mother dies during labour or during maternity leave.

- **Eligibility conditions**

The same eligibility conditions regarding maternity benefits should be satisfied.

- **Income test**

There is no income test.

- **Benefit duration**

The duration of the benefit is 2 weeks.

- **Benefit amount**

The paternity benefit is calculated as the maternity benefit.

- **Subject to taxes/SIC**

The benefit is not subject to taxes and SICs.

- **Take up**

There are no available data on take-up.

2.5.9 Guaranteed Minimum Income/Ελάχιστο Εγγυημένο Εισόδημα (bsamm_cy)

- **Definitions**

The Guaranteed Minimum Income (GMI) scheme is a means-tested top-up non-contributory benefit targeting individuals or families with income not enough to cover their basic needs. Basic need is defined on the basis of a minimum consumption basket. The GMI scheme substituted the Social Assistance in 2014.

Unit of assessment is the family consisting of:

- The claimant
- His/her spouse
- Children under the age of 18
- Unmarried children up to the age of 27 irrespective of whether they reside with their parents or not (excluding children who live abroad).

- **Eligibility conditions**

The following categories of persons can apply for the benefit (provided that they have resided in the republic the five previous years):

- Every citizen of the Republic.
- EU citizens.

- Third country nationals if they have received the status of long-term resident or are refugees (excluding asylum seekers)
- Victims of human trafficking.

Furthermore, the claimant should belong to one of the following categories:

- at least 28 years old
- married irrespective of age
- single parent irrespective of age
- orphan irrespective of age
- disabled adult irrespective of age who before becoming 18 years old was under the care of Social Welfare Services.

Finally, there are several special categories not eligible for the benefit, such as monks, persons serving their military service in the National Guard, and students (excluding those who are either under the care of Social Welfare Services, or orphans, or disabled, or voluntarily unemployed).

● **Income test**

GMI is a top-up benefit. Social welfare services calculate recipients' basic needs and family income. The difference is given to the eligible recipients as a top-up to their current income. Family income is the sum of the monetary incomes of all the members of the family (recipient) unit. Income from employment is exempted from the definition of family income, according to following schedule:

Table 2-9: Exempted labour income (in EUR)

Working earnings disregard for working poor (other than children aged 18-28)		Working earnings disregard for children aged 18-28	
Monthly earnings	Retention rate	Monthly earnings	Retention rate
Up to 50	100%	Up to 480	50%
51 - 200	40%	481 - 1000	90%
201 - 500	20%	1001 - 2000	85%
501 and above	0%	2001 and above	80%

Source: Ministry of Labour and Social Insurance

Example: If claimant's income from employment is €200, then €110 (€50 plus the 40% of €150) are exempted, meaning that only €90 are taken into account for the calculation of GMI. Another example is if the claimant has a child under the age of 28 (irrespectively if he/she resides with him/her) with monthly earnings of €1000. Then, only €292 (€240+€52) will be accounted as family income.

Furthermore, the following benefits/pensions are not taken into account in the calculation of family income:

- Funeral grant
- Birth grant
- Student grant
- Military grant
- Financial aid to low-income pensioners
- Donations to philanthropic institutions
- Alimonies (only in case that the claimant can prove that they are not paid to him/her)
- Benefits to disabled persons
- Income from participation in employment or training schemes.
- Assistance through the Welfare Lottery Fund.

- **Asset test**

The total value of family immovable property should not exceed €100,000 (€100,000 are exempted from the calculation if it concerns mortgage and therefore cannot be used). The house in which the family lives in is exempt if the house is under 300 sq.m.

The movable property should be below €5,000, and this amount increases by €1,000 for each member of the family. However, deposits of up to €20,000 are excluded if those:

- are for mortgage (which occurred before the law implementation 2014)
- belong to minors of the family (which occurred before the law implementation 2014)
- belong to minors of the family and acquired after fundraiser or other special conditions
- are used for student loans and last
- are in the same account with an old age parent (which occurred before the law implementation 2014).
- are necessary for health reasons, or rehabilitation, or treatments, or for people with disabilities.

EUROMOD modelling: *The asset test is not taken into account in the model, due to lack of information on the assets.*

- **Benefit amount**

Basic income is calculated as the minimum monetary income necessary to ensure recipients' access to a complete consumption basket of goods and services that correspond to the minimum standard of living accepted by the society. The current value of the basket is equal to €480 for a single individual and increases with the size of the recipient unit in accordance with the OECD equivalence scales. The OECD scales assign a value of 0.5 to each additional adult and 0.3 to each additional child. Children are defined as persons below 14 years old. For example, for a couple with 13-year-old child, the basic amount is equal to $480+0.5*480+0.3*480=864$.

If the basic amount is larger than the family income, then the difference is paid to the eligible recipient. Furthermore, the amount of the benefit is supplemented with a housing allowance (see following Table). Eligible for the housing allowance are renters or homeowners who cannot repay their mortgage loans.

Table 2-10: Housing Allowance (in EUR)

Family Unit type	Nicosia (4.06/m ²)	Limassol (4.41/m ²)	Famagusta (2.94/m ²)	Larnaca (3.50/m ²)	Paphos (2.94/m ²)	Average (3.88/m ²)
Single or couple without children	223.30	242.55	161.70	192.50	161.70	213.48
Couple/single parent with 1 child	324.80	352.80	235.20	280.00	235.20	310.48
Couple/single parent with two minor children of the same sex	324.80	352.80	235.20	280.00	235.20	310.48
Couple/single parent with 2 adult children	406.00	441.00	294.00	350.00	294.00	388.13
Couple/single parent one adult child and one minor child	406.00	441.00	294.00	350.00	294.00	388.13
Couple/single parent with three minor children	406.00	441.00	294.00	350.00	294.00	388.13
-> for each person with disability	101.50	110.25	73.50	87.50	73.50	97.00
-> larger families (for each additional child or two additional minor children of the same sex)	81.20	88.20	58.80	70.00	58.80	77.66

Source: Ministry of Labour and Social Insurance, Notes: minor child=child<18, adult child>=18

EUROMOD modelling:

- *Due to the lack of information the model does not account for the complex asset criteria of the benefit. Also, regional differences cannot be taken into account. Thus, we apply a weighted average.*
- *Some special categories of recipients (e.g. orphans, disabled persons, persons under the Care of Social Welfare Services) cannot be identified by the model.*
- *Furthermore, according to the premises of the model claimants cannot be students and all unemployed persons are considered involuntarily unemployed.*
- *For the purposes of the simulation we adopted the following income list: original income (without excluding alimonies paid), statutory pensions, survivor pensions, health benefits, unemployment benefits, scholarships, housing benefits, child benefits and family related benefits.*
- *Finally, all the families with are eligible to the basic benefit and paying mortgage interests are considered eligible to the housing allowance.*

2.5.10 Low pension benefit/ Επίδομα χαμηλοσυνταξιούχου (bsaosa_s)

• **Definitions**

The low pension benefit is a non-contributory benefit targeting families with incomes below the poverty limit. This specific benefit is a means-tested benefit provided to families with at least one person in the family receiving pension. The regulation was introduced in Cyprus on the 1st December of 2009 and was implemented on the 1st March of 2010. With the introduction of the GMI, a person may apply either for GMI or for the low pension benefit. The higher benefit is paid out in cases where a person is considered eligible for both benefits. In the past, people eligible for both benefits would receive the low pension benefit and only the difference between this benefit and the public assistance.

Unit of assessment is the family consisting of:

- The claimant
- His/her spouses
- Children under the age of 18
- Children up to 23 years old provided that they attend secondary or tertiary education
- Children up to 25 years old provided that they are serving at the National Guard
- Children irrespectively of their age who are considered students eligible for receiving the student grant
- Children irrespectively of their age who are disabled or permanently deprived of the ability to maintain themselves

• **Eligibility conditions**

An individual is considered eligible if he/she receives any kind of pension from the following three categories:

- Pension by the Social Insurance Services
- Social pension
- Pension by an occupation plan as it applies in Cyprus

Once the above is satisfied, any person can apply for the benefit provided that they are Cypriot residents and have had their legal and continuous residence for at least 1 year prior to the submission of the application in the areas under the effective control of the Republic of Cyprus. They must also maintain their continuous residence in the Republic as long as they receive the benefit with an absence of no more than 3 months per calendar year):

● **Income test**

The eligibility and level of the low pension benefit is defined on the basis of the total income of the family in the previous year and total pension of the current year of application or annual re-examination. The income needs to be below the poverty threshold agreed by the Council of Ministers, currently standing at €10,324 for single person households.¹⁶ The threshold is however adjusted based on the composition of the household. A household with one person is assigned a value of 1 unit, 0.5 units to each additional person aged 14 or older and 0.3 units to children below the age of 14.

The considered family income includes any kind of pension received in Cyprus or abroad, income from employment, rents, interest or dividends and other benefits (orphan benefit, unemployment benefit, sickness benefit, child benefit, single parent benefit) The following benefits are not taken into account when calculating the income: disability benefit, student grant, maternity and employment injury benefit, GMI, Easter benefit and low pension benefit.

● **Benefit amount**

The table below describes the low pension benefit which is given according to the yearly incomes of the family and is paid out 12 times a year. The total family income (incl. the benefit itself) must not exceed 120% of the poverty threshold (adjusted for household composition). Thus, the benefit level in the highest income bracket is reduced accordingly.

Once the benefit is calculated, it is multiplied by a scaling factor depending on the composition of the household as follows:

- Each pensioner = 1 unit
- Non pensioner spouse = 0.5 units
- Each additional member of the household = 0.3 units

The scaling factor cannot be greater than 3. For two pensioner households, the resulting benefit is split equally between the two.

¹⁶ NB: This is linked to the national poverty threshold, which has been the same since 2017.

Table 2-11: Benefit amount of low pension benefit for 2020-2022 (monthly benefit amount, paid out 12 times – in EUR)

One-pensioner households					Two-pensioner households				
Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit	Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit
from (€)	to (€)	from (€)	to (€)	€	from (€)	to (€)	from (€)	to (€)	€
0	341	0	387	728	0	700	0	536	1,236
342	360	368	386	728	701	750	0	486	1,236
361	400	328	367	728	751	800	490	536	1,290
401	450	285	327	728 – 735	801	850	440	489	1,290
451	500	256	284	735 – 756	851	900	390	439	1,290
501	550	227	255	756 – 777	901	1,000	290	389	1,290
551	600	198	226	777 – 798	1,001	1,100	190	289	1,290
601	794	86	197	798 – 880	1,101	1,191	99	189	1,290

One-pensioner households					Two-pensioner households				
Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit	Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit
from (€)	to (€)	from (€)	to (€)	€	from (€)	to (€)	from (€)	to (€)	€
0	341	369		710	0	700	510		1,210
342	360	350	368	710	701	750	510		1,260
361	400	310	350	710	751	800	476	510	1,271
401	450	271	310	710 – 721	801	850	421	476	1,271
451	500	244	271	721 – 744	851	900	371	421	1,271
501	550	216	244	744 – 766	901	1,000	271	371	1,271
551	600	189	216	766 – 789	1,001	1,100	171	271	1,271
601	794	40	189	789 – 834	1,101	1,191	81	171	1,271

Beginning on 1st June 2023 the benefit amounts were revised as shown below:

Table 2-12: Benefit amount of low pension benefit for 2023 (monthly benefit amount, paid 12 times per household)

One-pensioner households	Two-pensioner households
--------------------------	--------------------------

Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit	Total monthly income before the benefit		Monthly Benefit		Total monthly income after the benefit
from (€)	to (€)	from (€)	to (€)	€	from (€)	to (€)	from (€)	to (€)	€
0	341	0	387	728	0	700	0	536	1,236
342	360	368	386	728	701	750	0	536	1,236
361	400	328	367	728	751	800	490	536	1,290
401	450	285	327	728 – 735	801	850	440	489	1,290
451	500	256	284	735 – 756	851	900	390	439	1,290
501	550	227	255	756 – 777	901	1,000	290	389	1,290
551	600	198	226	777 – 798	1,001	1,100	190	289	1,290
601	794	86	197	798 – 880	1,101	1,191	99	189	1,290

EUROMOD modelling: The resident status of migrants is not taken into account in the simulation.

2.5.11 Easter Benefit/Πασχαλινό Επίδομα (*bsals_s*)

- **Definitions**

Besides the low pension benefit there is also the Easter benefit which is given to pensioners with low incomes just before Easter following a relevant decision of the Council of Ministers. Similar to the low pension benefit, it was implemented in 2010.

- **Eligibility conditions**

Eligible persons are those who already receive low pension benefit or entitled to low pension benefit through the GMI law.

- **Income test**

Low pension benefit receivers are eligible if their family income from the previous year is below 7,000 EUR for one person and 12,000 EUR for two persons¹⁷. Similar to the low pension benefit, this threshold is adjusted by the household composition. The income threshold increases by 0.5 units for each depended under the age of 14 and by 0.3 units for each person in the family above the age of 14. The definition of family income is the same as for the low pensioner benefit (this also applies to the definition of the family unit).

- **Benefit amount**

¹⁷ For the year 2021, the income threshold for one person and two persons were 6,500 EUR and 11,000 EUR respectively.

The amount of the benefit each year is determined on an *ad-hoc* basis following a relevant Council of Ministers decision. The one-off benefit amount for the years 2020-2023 is 190 EUR per pensioner.

2.6 Social insurance contributions

Participation in the Social Insurance Scheme is mandatory for all working population. The insured persons are divided into two categories: the employees and the self-employed. Voluntary insurance is allowed to persons that are willing to continue insurance after a prescribed period of compulsory insurance. The social insurance contributions are estimated as a proportion of insurable earnings. Insurable earnings are earnings on which contributions are calculated and include any remuneration from employment as well as contributions paid to the Central Holiday Fund. The insured person, the employer and the state each pay a portion of the overall contribution.

2.6.1 Employee social contributions (*tscee_cy*)

The insurable earnings include a lower limit known as the basic insurable earnings. The basic insurable earnings separate the basic part and the earnings-related part of the scheme. The amount of annual basic insurable earnings is set every year:

- €9,147 per year or (€175.90 per week) for 2019,
- €9,566 per year or (€183.96 per week) for 2020, and
- €9,682 per year or (€186.20 per week) for 2021,
- 10,008 per year or (€192.47 per week) for 2022.

These amounts are used for determining the eligibility and the level of statutory pensions, and other social insurance benefits, received in the following year. Accordingly:

- €9,147 the amount used for 2020,
- €9,566 the amount used for 2021
- €9,682 the amount used for 2022, and
- €10,008 the amount used for 2023 (after an amendment in the law to compensate for an increase given in July 2022 due to price index, only in 2023 the amount used for pensions is different and equal to €10,089, which will be fixed with the next indexation of pensions).

○ *Liability to contributions*

Social insurance contributions to Social Insurance Fund (SIF) are compulsorily paid by all employers and employees of private and public sector and self-employed persons¹⁸. Moreover,

¹⁸ The employer is liable to pay contributions to the Social Insurance, Annual Holidays with Pay, Redundancy, Human Resource Development and Social Cohesion Funds for each of his/her employees, whose remuneration is not less than €2 per week, or not less than €7 per month if s/he is a salaried employee, (Social Insurance in Cyprus, Ministry of Labour and Social Insurance).

employees in the broad public sector are additionally covered by the Government Employees Pension Scheme (GEPS). However, as of the 1st of September 2011, newcomers in the public sector are not covered by the GEPS and pay contributions only to the SIF.

○ *Income base used to calculate contributions*

The insurable earnings of the employee include anything paid to the employee for his/her labour i.e., basic salary, cost of living allowance, overtime, commissions, 13th salary, 53rd/56th week, the contribution of the employer to the Central Holiday Fund and holiday unions' funds. Only ex gratia payments are not included. Also, the Law sets a maximum amount of earnings for contribution purposes which is revised annually:

- €4,572 per month or €1,055 per week for 2020,
- €4,784 per month or €1,104 per week for 2021, and
- €4,840 per month or €1,117 per week for 2022,
- €5,005 per month or €1,155 per week for 2023.

In case that employee's earnings are higher than the maximum amount then contributions are not paid for the extra amount.

○ *Contribution rates*

The Social Insurance Scheme is financed by contributions paid by the employees, the employers and the State (through the Consolidated Fund of the Republic, "*Πάγιο Ταμείο της Δημοκρατίας*"). Currently the total contribution rate stands at 21.5% of insurable earnings (8.3% paid by the employer, 8.3% by the employee and 4.9% by the state). Employees who are additionally covered by an occupational scheme provided by the employer without the payment of contributions on the part of the employee (effectively, public sector employees who were hired before 2011) still contribute 21.5% of insurable earnings but 12.4% are paid by the employer, 4.2% by the employee and 4.9% by the state. It is worth mentioning, despite that it is not simulated in the model, that the government has planned a gradual increase in the contribution rates which will be implemented the coming years aiming at ensuring the long-run fiscal sustainability of the social insurance scheme. The contribution rates are summarized in the next two tables:

Table 2-13: Social Insurance Contribution rates (Employees)

	After 1st April 2009	After 1st January 2014	After 1st of January 2019	After 1st of January 2024	After 1st of January 2029
Employee	6.80%	7.80%	8.30%	8.90%	9.50%
Employer	6.80%	7.80%	8.30%	8.90%	9.50%
Government	<u>4.30%</u>	<u>4.60%</u>	<u>4.90%</u>	<u>5.30%</u>	<u>5.70%</u>
Total	17.90%	20.20%	21.50%	23.10%	24.70%

Table 2-14: Social Insurance Contribution rates (Employees additionally covered by an occupational scheme which does not require the payment of contributions from the employee.)

	After 1st April 2009	After 1st January 2014	After 1st January 2019	After 1st January 2024	After 1st January 2029
Employee	3.45%	3.95%	4.20%	4.55%	4.90%
Employer	10.15%	11.65%	12.40%	13.25%	14.10%
Government	<u>4.30%</u>	<u>4.60%</u>	<u>4.90%</u>	<u>5.30%</u>	<u>5.70%</u>
Total	17.90%	20.20%	21.50%	23.10%	24.70%

EUROMOD modelling: Data do not allow us to discern whether an employee is covered by a pension plan from the employer. For this reason, the reduced contribution of 4.2% is applied only to civil servants.

2.6.2 Employer social contributions

○ *Liability to contributions*

Employers are obliged to pay contributions to the Funds (Social Insurance, Annual Holidays with Pay, Redundancy, Human Resource Development and Social Cohesion) for every one of his/her employees whose earnings are at least €1.71 per week¹⁹. The liability of the employer for paying contributions ceases the day employees reach pensionable age. The employer is not obliged to pay contributions to the Central Holiday Fund if he obtains exemption from the Minister of Labour and Social Insurance. Exemption is granted in the cases where the employer provides annual holidays to his employees on more favourable terms than those provided under the Annual Holidays with Pay legislation.

○ *Income base used to calculate contributions*

Insurable earnings have a maximum that is revised annually (contributions to Social Cohesion Fund are calculated on total earnings without maxima). Earnings include the basic salary, the cost-of-living allowance, commissions, the 13th and 14th salary or the 53rd/56th week, overtime etc. The gross amount of earnings (i.e., before the deduction of taxes and contributions) is taken into consideration. The amount paid by the employer as contribution to the Central Holiday Fund is considered as part of insurable earnings. Earnings payable to the employee for periods exceeding one week or one month, such as the 13th salary, earnings of the 54th week, commissions etc., are taken into consideration, up to the amount that when added to the earnings of the employee for the period in question, these are not higher than the maximum amount for that period.

○ *Contribution rates*

Contributions payable by the employers to the above-mentioned Funds are calculated as a percentage on the earnings of the employee as explained below. Contributions under (a), (b),

¹⁹ For trainees and apprentices, the employer has to pay contributions to the Social Insurance Fund even if the employee has no earnings.

(c) and (d) are computed on insurable earnings up to the maximum amount specified above, while contributions under (e) are computed on actual earnings without any upper limit. The rates under (c), (d), and (e) apply to trainees with low earnings and are applied to their actual earnings.

(a) Social Insurance Fund

As shown in Table 2-15, as of the 1st of January 2019, the contribution rate for employees changed to 21.5%, of which 8.3% is paid by the employee, 8.3% by the employer and 4.9% from the Consolidated Fund of the Republic. In case an employer implements an occupational pension scheme without payment of contributions by the employees, as shown in Table 2-14, the employer pays 12.4% and the employee 4.2%.

(b) Central Holiday Fund

The rate of contribution to the Central Holiday Fund varies according to the length of annual leave to which the employed person is entitled, as shown in the following Table:

Table 2-15: Rate of contribution to the Central Holiday Fund for employees with a 5-day/6-day working week

Rate of contribution to the Central Holiday Fund for employees with a 5-day working week			
Duration of annual leave (days)	Rate of contribution (%)	Duration of annual leave (days)	Rate of contribution (%)
20	8.0	31	12.5
21	8.5	32-33	13.0
22-23	9.0	34	13.5
24	9.5	35	14.0
25	10.0	36	14.5
26	10.5	37-38	15.0
27-28	11.0	39	15.5
29	11.5	40	16.0
30	12.0		
Rate of contribution to the Central Holiday Fund for employees with a 6-day working week			
Duration of annual leave (days)	Rate of contribution (%)	Duration of annual leave (days)	Rate of contribution (%)
24	8.0	37-38	12.5
25-26	8.5	39	13.0
27	9.0	40-41	13.5
28-29	9.5	42	14.0
30	10.0	43-44	14.5
31-32	10.5	45	15.0
33	11.0	46-47	15.5
34-35	11.5	48	16.0
36	12.0		

The rate of contributions for leave longer than 40 days for 5-days working week and 48 days for 6-days working week are increased accordingly.

The contribution to the Central Holiday Fund is payable wholly by the employer.

(c) Redundancy Fund

The contribution to the Redundancy Fund (rate 1.2%) is payable wholly by the employer.

(d) Human Resource Development Fund

The contribution to the Human Resource Development Fund (rate 0.5%) is payable by the employer.

(e) Social Cohesion Fund

It was introduced on 1.1.2003. The contribution to the Social Cohesion Fund (rate 2%) is payable wholly by the employer.

EUROMOD modelling: *Central Holiday Fund: The same contribution rate (8%) was used for all the employers. Data do not provide information on whether an employee is covered by a pension plan from the employer. For this reason, the reduced contribution of 12.4% is applied only to civil servants. Trainees cannot be identified in the dataset; the special rules applying to them are not simulated.*

- **Random assignment**

The eligibility to pay contribution to the Central Holiday Fund is randomly simulated among the non-civil servants on the basis of the ratios presented in the next table (NB: The 2022 value is also used for 2023 as no information is available for the latter).

Table 2-16: Number of Employees covered by Central Holiday Fund

	Number of Employees covered by Central Holiday Fund	Employees private and semi-public sector	Ratio
2012	98,845	356,704	0.277
2013	n.a.	n.a.	-
2014	80,187	332,266	0.241
2015	76,829	338,799	0.227
2016	74,462	356,786	0.209
2017	80,556	385,805	0.209
2018	88,437	413,625	0.214
2019	96,676	431,307	0.224
2020	99,251	406,841	0.244
2021	95,854	429,389	0.223
2022	97,945	466,996	0.210

2.6.3 Self-employed social contributions

○ *Liability to contributions*

Self-employed are liable to social insurance contributions. Their insured earnings are set on the basis of their profession and workplace.

○ *Income base used to calculate contributions*

For each professional category a compulsory minimum amount of insured earnings is set and the self-employed is allowed to pay contributions on a higher amount of insured earnings up to a maximum. If the real income of a self-employed is lower than the minimum corresponding to his/her professional category then he/she can ask to pay contributions based on his/her real income.

○ *Contribution rates*

As of January of 2014, the total contribution of self-employed persons is 19.2% of their insured earnings. From this percentage, 14.6% is paid by the self-employed and 4.6% by the state. As of January of 2019, the total contribution of self-employed increased at 20.5% of their insured earnings; 15.6% is paid by the self-employed person and the rest 4.9% by the state. An insured person has the right to pay contributions until the retirement age of 65. However, in cases where an insured person is not eligible for the statutory pension (because of the requirements) the insured person pays contributions until the requirements are satisfied. This cannot exceed the age of 68.

The contribution rate for self-employed will change as follows:

- As of January of 2024; 21.1%, of which 16.8% is paid by the self-employed and 5.3% from the Consolidated Fund of the Republic.
- As of January of 2029; 23.7%, of which 18% is paid by the self-employed and 5.7% from the Consolidated Fund of the Republic.
- As of January 2034; 25.4%, of which 19.4% is paid by the self-employed and 6% from the Consolidated Fund of the Republic.
- As of January 2039; 26.7%, of which 20.4% is paid by the self-employed and 6.3% from the Consolidated Fund of the Republic.

The *maximum contribution base* for the self-employed differs by professional category (doctors, managers, teachers, farmers etc.). The following limits are applied:

- €450.40 per week in 2020,
- €471.03 per week in 2021
- €476.77 per week in 2022, and
- €492.82 per week in 2023.

EUROMOD modelling: An average maximum contribution base is applied across professions. This is calculated as the simple average, across occupations, of the minimum compulsory amount of insured earnings.

2.6.4 Government social contributions

The Social Insurance Scheme is also financed by contributions paid by the State. As mentioned earlier in Section 2.6.1 (see **Error! Reference source not found.** and Table 2-14) and Section REF_Ref136429153 \r \h 2.6.3, respectively, in both the cases of employed and self-employed persons the contribution paid by the government has been 4.9% since 2019. Note also that contributions to the Annual Holidays Fund are part of the earnings that are considered for the estimation of government contributions.

2.6.5 Contributions to the General Health System (Γενικό Σύστημα Υγείας)

The GHS is a comprehensive and financially sustainable healthcare system aiming at meeting the expectations of Cypriot citizens for equal access to treatment and provision of high-quality healthcare by using all available resources, in the best possible way. For the implementation of the GHS, a special fund was established for purposes of gathering the relevant contributions, from which all payments to providers of healthcare services will be made. The GHS fund will be administered by the Health Insurance Organisation (HIO). The Health Insurance Organization (OAS) was established in Cyprus according to the General Health system law (N.89 (I)/2001). The participation in the GHS is mandatory for all individuals who are resident and have incomes in Cyprus.

According to the provisions of the General Healthcare System (Amending) Law of 2017, the GHS shall be implemented in two stages.

The first stage of GHS implementation, starting from 1st June 2019, provides outpatient healthcare, i.e. the provision of healthcare services by personal doctors and outpatient specialists, pharmacists and laboratories.

The second and final stage of GHS implementation, beginning from the 1st June 2020, includes all the other remaining healthcare services, i.e. services offered by allied health professionals (clinical dietitians, occupational therapists, speech pathologists, physiotherapists, and clinical psychologists), nurses and midwives, the accident and emergency departments, ambulance services, dentists, palliative healthcare services and medical rehabilitation services.

The collection of the contributions for the first stage will start on the 1st March 2019 and for the complete implementation of the GHS on the 1st June 2020. The complete implementation was initially scheduled on 1st March 2020, but has been delayed by three months due to the events related to COVID-19).

Beneficiaries of the System:

- Every citizen of the republic
- European citizens who work or have the right of permanent residence
- Third-country nationals who have acquired a legal right of permanent residence or the right to equal treatment
- Refugees and people with subsidiary protection status

○ *Liability to contributions*

The main GHS source of financing is contributions. Contribution will be paid by those who have income (those who do not contribute i.e. unemployed are also beneficiaries).

The Contributors' Categories are (see table below for more information):

- Employees
- Employers
- Self-employed
- Pensioners (excl. pensioners who only receive the social pension)
- Income-earners (incomes from rent, assets, investments)
- Civil-servants

On top of these groups, the state is paying additional contributions for specific categories.

○ *Income base used to calculate contributions*

Gross incomes.

○ *Contribution rates*

The contribution rates for each category of contributors as they have been set by the General Healthcare System (Amending) Law of 2017 are shown in the following Table.

Table 2-17: Contribution rates to the General Health System

Contributors Categories	First Phase (1/3/2019-31/5/2020)	Full Implementation (from 1/6/2020)	Explanation
Employee	1.70%	2.65%	Earnings
Employer	1.85%	2.90%	Earnings of employees
State	1.65%	4.70%	On earnings, self-employment income, pensions
Self-employed	2.55%	4.00%	Self-employment income
Pensioners	1.70%	2.65%	Pensions
Income earners	1.70%	2.65%	Incomes from various sources
Government Officials	1.70%	2.65%	On their remuneration
Employer of Government Officials	1.85%	2.90%	On the remuneration of the Government Official

Source: Health Insurance Organisation (HIO) and Ministry of Health

Example: An employee with as gross salary €1000 will contribute to GHS an amount equal to €17.00 (€1.000 x 1.7%) and €18.50 by his/her employer (€1000 x 1.85%).

For every natural person, if the total annual amount being received is over €180.000, then contributions will have to be paid only on the amount of € 180.000 (using the income source specific contribution rate starting with employment income, followed by self-employment income, pensions and incomes from other sources).

In case the natural person is not a tax resident of Cyprus, he/she will pay contributions only for the income, earnings and pensions that derive from the Republic of Cyprus, excluding dividends and interest.

Furthermore, every natural person has the right to deduct from her taxable income the amount that contributes to the GHS (only the amount that is paid the person herself). The maximum deductible income is set to €180.000 meaning that a maximum of €3060 can be deducted.

EUROMOD modelling: *The introduction of GHS occurred on 1st March 2019 and the GHS-related SIC rates have been further increased on 1st June. As a general rule, EUROMOD baseline models refer to policy rules on 30th June of the respective year. A FYA (Full Year Adjustments) switch is available to account for the fact that GHS-related SIC increases in 2019 and 2020 are effective only for parts of the year (see section 2.3). The switch is set to off by default.*

2.7 Direct taxes

2.7.1 Tax unit

Personal Income Tax in Cyprus is based on an individual system. Every citizen of the Republic of Cyprus is subject to income tax for incomes from sources inside and outside the country. Persons permanently settled in the Republic can choose to be treated as citizens of the Republic as concerns income taxation. Note also that contributions paid by the employer to the Annual Holidays Fund are part of the tax base.

2.7.2 Exemptions (non-taxable income)

The following types of income are exempt from income tax (as detailed in Law 201(I)/2022 art.8):

- the benefit paid to public employees for service abroad;
- the pensions and benefits paid according to the Suffering Relief Law;
- ~~widow pensions paid from Social Insurance; applies only before 2014~~
- any amount paid as lump sum, pension, compensation due to death or physical injury;
- income from scholarship or any other educational grant;
- payments to persons arising from tax deductions;
- earnings of foreign officers of any institution that operates in the Republic;
- income of any religious, charitable or educational institution with a public character;
- income of a registered cooperative institution arising from transactions with its members;
- income of a company that operates in order to promote art, science or sports;
- earnings of foreign diplomatic representatives; and
- income from interests and 50% of the income of a company from interests.

EUROMOD modelling: *the tax base is computed as the sum of employment income, income from self-employment, pensions and 80% of rent income.*

2.7.3 Tax allowances

The following amounts are deducted from a person's income:

1. Any amount spent for the repair of premises, machines, plants and transport equipment or for the renewal or repair or transformation of any tool, utensil or other objects used in order to raise income;
2. The annual contributions paid by the employee to the various Funds;
3. Bad debts;
4. Expenditures for scientific research;
5. Expenditures for acquiring a patent or copyright;
6. Charity payments or contributions to educational institutions or payments for other charity purposes;
7. Expenditures for the maintenance of a building for which a maintenance order is issued and for the maintenance of an ancient monument;

An amount equal to 20% is deducted from the income acquired from renting buildings before anything else is deducted from this.

Deductions are offered for the decrease of value and damages on assets due to usage from personal income from the operation of a company. An amount equal to the annual amount of the paid premiums and contributions is deducted in order to find the taxable income of any person who has:

1. insured his/her life or the life of the spouse for an amount payable on his/her death;
2. paid contributions to a pension, widow and orphan fund;
3. paid contributions to a pension or provident or any other insurance fund;
4. paid premia or any other contributions to an insurance company for the issuance of a specific insurance contract;
5. paid premia or any other contributions to an insurance company for a pension or the medical plan; and
6. paid contributions to the general health plan;

In the case of a life insurance contract where the insured person will receive a payment of a predetermined amount on his/her death then the amount of the deduction cannot exceed 7% of this amount. The total deduction for contributions and premiums cannot exceed 1/6 of the taxable income. In case of encashment of a life insurance contract within 3 years from the date of the contract then 30% of the premium paid for which a deduction was given is added to the income of the person. This is reduced to 20% if the encashment is made on the 4th or 5th or 6th year of the contract.

EUROMOD modelling: due to data limitations, the only deductions taken into account in the implementations are those of the social insurance contributions, as well as the contributions to individual private pension plans up to an amount that cannot exceed 1/6 of the taxable income. As well as the 20% deduction on property income.

2.7.4 Tax base

The tax base is defined as taxable income minus the various deductions (tax allowances). Taxable income is total income minus the various exemptions.

2.7.5 Tax schedule

Income taxation is progressive, with higher marginal tax rates applying to higher income brackets. The tax rates were stable during 2020-2023.

Table 2-18: Tax rates and income brackets for 2020-2023 (in EUR)

Income brackets	Tax rate
0 – 19,500	0%
19,501 – 28,000	20%
28,001 – 36,300	25%
36,301 – 60,000	30%
60,001 – above	35%

2.7.6 Tax credits

Tax credits exist in case of double taxation and are not considered in the simulations within Euromod.

2.8 Other taxes

2.8.1 Special contribution to defence

Special Contribution to defence, as detailed in Law 198(I)/2022, is imposed on income earned by individuals and legal entities based on Cyprus. Non-tax residents are generally exempt. It is charged at the following rates:

1. 17% on income from dividends
2. 30% on income from interest (paid or credited). Interest received by a person from the normal operation of his/her company is not considered as interest. Persons with annual income (including interest) not exceeding €12,000 have the right to refund amounts withheld as contribution for defence on interest income above 3% of this income.
3. 3% on income from corporate bonds (as from 26 June 2019), Cyprus government savings and development bonds, National or local administration bonds or debt securities that are trading in recognized stock exchanges (as of 8/6/2022) as well as all interest earned by a provident fund.
4. 3% on gross rents reduced by 25%.

Money paid as special contribution for defence is taxable.

EUROMOD modelling: contributions under point 1 and 3 are not simulated. The contributions of legal entities are out of the scope of the model; therefore, special contributions for defence are partly simulated.

2.8.2 Contribution of public employees to Government Employees Pension Plan

Starting from 1st October 2011, all broad public sector employees who are covered by the Government Employees Pension Plan (here note that employees hired in the public sectors after 30th September 2011 cannot be subscribed in the scheme) pay 3% of their gross employment income to the Government as a support to the Government Employees Pension Plan. Typically, these payments are not considered as contributions to the Government Employees Pension Plan (since the pension benefits from the Government Employees Pension Plan do not depend on the amount of this payment). Finally, if the employee has contributed over 400 monthly social insurance contributions, then s/he is exempted from the contribution.

EUROMOD modelling: The distinction between public sector employees who started before or after 1st October 2011 is carried out by the imputed variable *lcs10*. See the Data section for further information on the variable. The exemption of those who contributed above 400 months is simulated by making use of the employment history of the person.

2.8.3 Contributions of public employees to the Widows and Orphans Government Fund

All broad public sector employees pay a contribution to the Widows and Orphans Government Fund. Before 1st October 2011, the contribution was equal to 0.75% of the gross wage. In case that the gross wage exceeded the maximum amount of insurable earnings then a rate of 1.75% was applied to the part of the gross wage which exceeded the maximum amount. A brief example describes how the contribution is calculated: Let the gross wage be €6,000, then the contribution is:

$C = 0.75\% * 5,005$ (this is the maximum amount of insurable earnings in 2023) $+ 1.75\% * (6,000 - 5,005)$.

As of the 1st October 2011, the rules simplified. The contribution increased at 2% of the gross wage without any minima/maxima. Again, if the employee has contributed over 400 monthly social insurance contributions then she is exempted from the contribution.

Note to Euromod Implementation: This instrument is implemented within the policy *tscee_cy* and included in the variable *tscee_s* (employees' social insurance contributions). The exemption of those who contributed for over 400 months is simulated by making use of the employment history of the person.

2.8.4 Scaled reduction in emoluments of public and broader public sector pensioners and employees

Starting from 1st December 2012, the government implemented a scaled reduction in the emoluments of public sector employees and pensioners. The reduction is applied on gross wages and pensions. The term 'gross' refers to income before all taxes and contributions. On 30th April

2013, the House of Representatives voted for a modification of the law that changed the reduction rates. After 1st June 2013, the scaled reduction appearing in the third column of the following table substituted the one voted in 2012. From 1st January 2014, emoluments in the public sector (including pensions of the public sector) decreased by another 3 per cent, total reduction appears in the fourth column. From July 2018, the scaled reduction started decreasing, and by the 1st of January of 2023 was abolished.

Table 2-19: Scaled reductions

Monthly Income brackets	12/2012	06/2013	01/2014	07/2018	01/2019	01/2020	01/2021	01/2022
	05/2013	12/2013	06/2018	12/2018	12/2019	12/2020	12/2021	12/2022
0-1,000	0%	0.8%	3.8%	1.8%	0%	0%	0%	0%
1,001-1,500	6.5%	7.3%	10.3%	8.3%	5.8%	3.3%	0.8%	0%
1,501-2,000	8.5%	9.3%	12.3%	10.3%	7.8%	5.3%	2.8%	0%
2,001-3,000	9.5%	10.5%	13.5%	13.5%	13.5%	11%	8.5%	5%
3,001-4,000	11.5%	13%	16%	16%	16%	13.5%	11%	7.5%
4,001-above	12.5%	14.5%	17.5%	17.5%	17.5%	15%	12.5%	9%

Note to Euromod Implementation: This instrument is implemented within the policy `paycut_cy`.

2.9 Covid-19 temporary measures

2.9.1 Special unemployment benefit scheme for employees (Ειδικό Σχέδιο Πλήρους ή Μερικής Αναστολής των Εργασιών της Επιχείρησης, `yemcomp_cy`)

● Definitions

The policy was aimed at businesses either (i) operating in the hospitality industry, or (ii) carrying out economic activities affected by the hospitality industry, or (iii) operating in other industries affected which suspended (part of) their operations due to COVID-19 and (a subset of) their employees were put on temporary leave (furlough). It provided compensation to employees for their foregone employment income in the form of a Special Unemployment Benefit. It also relieved the participating businesses of paying the corresponding social insurance contributions.

A number of variants of this scheme (i.e., sub-schemes) was in place over the 18 financial periods from March, 2020 to October 2021. The first set of variants relates to whether the affected businesses (i) belong to the hospitality industry, or (ii) carry out economic activities affected by the hospitality industry, or (iii) operating in other economic sectors. Businesses under variants (i) and (ii) were affected the most in Cyprus and their operations were virtually suspended since

the outbreak of Covid-19 pandemic in March 2020. With respect to businesses under variant (iii), there were two sub-schemes which have been in place: (a) one directed towards the businesses that were required by Government Decree to suspend their operations completely, and (b) another for those that suspended their operations only partially.

- **Eligibility conditions**

Different eligibility conditions applied depending on the variant/sub-scheme:

Complete suspension of economic activities:

Any business that was required to suspend all its operations by a Government Decree during all (or some) of the economic periods since the outbreak of the Covid-19 pandemic in March 2020, was eligible to participate. While participating, such firms were obliged not to dismiss any of their employees. This restriction also extended for the period following the end of participation in the scheme, with the same length as the participation period plus one month.

Furthermore, for businesses employing up to nine employees all of them could be covered, while only up to 90% of them for businesses with larger workforce.

Partial suspension of activities:

Any business that suspended its operations partially due to COVID-19 was eligible to participate. “Partial suspension” was defined as a decline in the businesses’ turnover of more than 25% compared to the same period of the previous year. While participating such firms were obliged not to dismiss any of their employees. This restriction also extended for the period following the end of participation in the scheme, with the same length as the participation period plus one month.

Furthermore, for businesses employing up to fifty employees only up to 75% of them could be covered; for businesses with larger workforce the relevant threshold was 60%.

- **Income test**

There was no income test.

- **Benefit duration**

For the beneficiaries in each economic period this was equal to the duration of that period.

- **Benefit amount**

For the employees meeting the eligibility conditions that apply for the regular unemployment benefit²⁰, the Special Unemployment Benefit was also equal to 60% of their insurable earnings (i.e. equal to the regular unemployment benefit). For those not meeting these conditions the calculation of the benefit was based on the most recent past salary for which there was evidence

²⁰ See Section 2.5.1 for details on the regular Unemployment Benefit provided under the GSIS.

in the register of Social Insurance Services. In any case, the monthly benefit amount could not be less than € 360, and more than € 1214 in each economic period.

- **Social insurance contributions and taxation**

The employers whose employees receive the Special Unemployment benefit have relieved of their obligation to pay the corresponding contributions to the GSIS. The recipients of the Special Unemployment Benefit are liable to pay personal income tax on the total amount they receive.

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_cy policy, which is switched on automatically by the add-on. For more information about the modelling of labour market transitions please consult the ‘Simulating labour market transitions in EUROMOD’ document.*

2.9.2 Special unemployment benefit scheme for self-employed (Ειδικό Σχέδιο Στήριξης Αυτοτελώς Εργαζομένων, ysecomp_cy)

- **Definitions**

This policy has been aimed at specific categories of self-employed workers whose business was substantially affected by COVID-19. It provided for a Special Unemployment Benefit, as well as relieving them of their obligation to pay social insurance contributions.

The scheme was in place over the 18 economic periods from March, 2020 to October 2021.

- **Eligibility conditions**

Self-employed workers who suspended their operations completely in accordance to the Decrees of the Minister of Health and the relevant decisions of the Council of Ministers. Also self-employed workers who suspended their work “partially” due to COVID-19, which was defined as experiencing a decline in their turnover of more than 25% compared to the same period of the previous year.

- **Income test**

There was no income test.

- **Benefit duration**

For the beneficiaries in each economic period, this was equal to the duration of that period.

- **Benefit amount**

This was equal to 60% of the weekly amount of the insurable remuneration for which the payee was obliged to pay contributions to the GSIS for the fourth quarter of 2019. In addition, this amount could not be less than € 300, and more than € 900, for a four-week period.

- ***Social insurance contributions and taxation***

The beneficiaries were relieved of their obligation to pay the corresponding contributions to the GSIS. The recipients of the Special Unemployment Benefit are liable to pay personal income tax on the total amount they receive.

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_cy policy, which is switched on automatically by the add-on. For more information about the modelling of labour market transitions please consult the 'Simulating labour market transitions in EUROMOD' document.*

3. DATA

3.1 General description

The Cyprus EUROMOD 2020-2023 simulations are based on the recently introduced EUROMOD SILC database (EMSD), prepared by Eurostat. The EMSD includes:

- all EU-SILC UDB (User Database) variables
- national SILC data supplied by the National Statistical Institute (NSI)
- EUROMOD variables created and imputed by Eurostat because of restricted data access or knowledge in-house.

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

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

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

Table 3-1 presents information about the data collection period, the income reference period, the sample size, and response rate.

Table 3-1: EUROMOD database description

EUROMOD database	CY_2021_b3
Original name	CY_EMSD2_2021
Provider	Eurostat
Year of collection	2021
Period of collection	n/a
Income reference period	2020
Sample size	10,596 IND, 4,113 HH
Response rate	n/a

3.2 Data adjustment

Data adjustments were kept to a minimum. All monetary values in the EU-SILC database are expressed in annual terms, but for the purposes of the EUROMOD database, were converted into monthly basis.

3.3 Imputations and assumptions

Table 3-2 shows the variables that were imputed using other EU-SILC aggregated variables. In EU-SILC data, soldier's allowance (bml) is recorded as employee cash or near cash income (variable py010g). We set bml equal to py010g/12 if the individual, a) has never worked as employee, b) has spent a positive number of months in compulsory military service, and c) declares employee (cash or near cash) income. If the individual has spent a positive number of months in compulsory military service and has also worked as an employee, then bml is set equal to the basic monthly soldier's allowance (around 157 euro in 2020) times the months spend in the army divided by 12.

Since the 2016 release, the benefit-related monetary variables in EU-SILC are disaggregated to four categories based on eligibility conditions (means-tested or not, and contributory or not). For example, the variable py111g records the contributory and means-tested survivor's benefits, py112g the contributory and non-means tested survivor's benefits, py113g the non-contributory and means tested survivor's benefits, and py114g the non-contributory and non-means tested survivor's benefits. We use these to impute the survivor's benefit to widow (psuwd), the survivor's benefit to orphan (psuor), and other survivor's benefits (psuot) as follows:

- psuwd is set equal to $py112g/12 + py113g/12$, if py112g and/or py113g is positive, the marital status (pb190) is widow(er) or the individual is married but no partner's id (rb240) is recorded in the data.
- psuor is set equal to $py112g/12 + py113g/12$, if py112g and/or py113g is positive, the individual is not a widow(er), and is aged less than 25.
- psuot is equal to $py110g/12 - psuwd - psuor$, if py110g is positive²¹.

The total amount of child and family related benefits is recorded in the harmonised variable hy050g, and disaggregated in variables hy052g, hy053g, and hy054g, as described above. We use these variables to impute the values for the child benefit (bch), the birth grant (bchba), the maternity allowance (bma), the single parent benefit (bchlp), and the variable recording all other family related allowances (bfamh). Specifically, we impute the received family birth grant by multiplying the amount of birth grant (around 549 euro per month in 2020)²² with the number of children in family aged less than 1. If the imputed birth grant is lower or equal to hy052g then we set bchba equal to the imputed birth grant. In case that the imputed birth grant is higher than hy052g then we set bchba equal to hy052g. The maternity allowance is set as the difference between hy052g and birth grant. The imputation of child benefit (bch) is based on the child

²¹ No contributory and means-tested (py111g) survivor benefits exist in Cyprus.

²² See policy parameters reported in Section 2.5.5.

benefit policy defining eligibility and benefit rates. We simulate the amount of the child benefit for each eligible family, and we compare it with the `hy053g`. If `hy053g` is higher than the simulated child benefit, then `bch` is set equal to the simulated child benefit. If `hy053g` is lower than the simulated child benefit then `bch` is set equal to `hy053g`. The imputation of single parent benefit (`bchlp`) is based on the single parent benefit policy defining eligibility and benefit rates. We simulate the amount of the single parent benefit for each eligible family, and we compare it with the `hy053g` excluding the `bch` amount received by the family. If `hy053g` (subtracting `bch`) is higher than the simulated single parent benefit, then `bchlp` is set equal to the simulated single parent benefit. If `hy053g` (subtracting `bchlp`) is lower than the simulated single parent benefit, then `bchlp` is set equal to `hy053g`. We set `bfamh` equal to `hy050g` minus `bch`, `bchba`, `bchlp`, and `bma`.

The total amount of old-age benefits is recorded by the variable `py100g`, and is further disaggregated in variables `py101g`, `py102g`, `py103g` and `py104g`. We use these variables to impute the values for three old-age related benefits, namely the social pension (`poasp`), the taxable old-age pension (`poatx`), and the non-taxable old-age pension (`poant`). In particular, `poasp` is set equal to `py104g` if the amount of `py104g` is close to the amount of social pension (around 342 euro per month in 2020). For imputing `poatx` and `poant` we compare the net and gross amount of `py100g` variable. The difference of `py100g` and `py100n` gives us the tax paid and by reversing the income tax policy we found the taxable amount. We set `poatx` equal to this taxable amount, and the difference of `py100g-poatx-poasp` is set equal to `poant` (`poant=py100g-poatx-poasp`).

In EU-SILC data the total amount of unemployment benefits is recorded by the variable `py090g`, and is disaggregated in the variables `py091g`, `py092g`, `py093g` and `py094g`. We use these to impute the values of the unemployment benefit paid by the Social Insurance Fund (`bunct`), and the unemployment benefit paid from all other sources (`bunot`). First, we identify the maximum monthly amount an individual with positive `py092g` can receive as unemployment benefit, according to the provisions of the current unemployment benefit policy. We compare this maximum unemployment benefit amount with the monthly unemployment benefits reported in the data, i.e., `py092g`, divided by the reported numbers of months in unemployment but constraining this duration to be up to six months (unemployed can receive unemployment benefits for up to six months). If the maximum monthly unemployment benefit amount is lower than reported monthly unemployment benefit, then we set `bunot` equal to the difference of the two amounts (multiplied with the duration of unemployment and divided by 12), and `bunct` equal to the maximum monthly unemployment benefit amount (multiplied with the duration of unemployment and divided by 12). If the maximum monthly unemployment benefit amount is equal or higher than the reported monthly unemployment benefit, then we set `bunot` equal to zero and `bunct` equal to the reported monthly unemployment benefit (multiplied with the duration of unemployment and divided by 12). We also add to `bunot` the amounts recorded in `py093g` and `py094g`, divided by 12. Using the unemployment benefits paid by the Social

Insurance Fund (bunct) the monthly wage before unemployment (yempv) is obtained by reversing the unemployment benefit policy.²³

EU-SILC do not provide information whether someone works in the public sector or in the private sector. We impute the values of the variable recording if someone is a civil servant (lcs) using their self-defined current economic status (pl031) and occupation (pl051). Specifically, if the individual is an employee (pl031 = 1 or 2) and working in public administration and defence, compulsory social security or in education, then we assume that he/she is a civil servant.

Based on the already available information, we also construct a variable indicating whether a civil servant had been hired in the public sector during the previous 12 months (variable lcs10). For this imputation we use the information whether someone is a civil servant (lcs=1), and about their number of months in employment (liwwh). Thus, if someone is a civil servant and has work history less than 12 months then we assume that he/she was hired in the public sector in the last 12 months. The indicator variable for military conscripts (young man enlisted in the army) (l01) is created based on the information provided by individuals about their current economic status (variable pl031) and the months spent in compulsory military service during the income reference period (variable pl088): when pl031=9 and pl088>0 then the individual is in compulsory military service. Finally, variable l02 denotes whether someone is a pensioner from the public sector or not. Pensioners who are former civil servants usually receive higher pension income than other pensioners because they receive a pension from the SIF (Social Insurance Fund) as well as a pension from the Government Employees Pension Plan. Using this information, we define as former civil servants those who, (i) are pensioners (les=4), and (ii) their monthly statutory pension is higher than the sum of the minimum full pension from the SIF plus the minimum full pension from the Government Employees Pension Plan.

Table 3-2: List of imputed variables

Variable name	Description
bml	BENEFIT/PENSION: Soldier allowance
psuwd	BENEFIT/PENSION: Survivors: widow
psuor	BENEFIT/PENSION: Survivors: orphan
psuot	BENEFIT/PENSION: Survivors: other
bch	BENEFIT/PENSION: Child benefit
bchba	BENEFIT/PENSION: Maternity: birth grant
bchlp	BENEFIT/PENSION: Child: Single parent benefit
bma	BENEFIT/PENSION: Maternity allowance
bfamh	BENEFIT/PENSION: Family: Family related allowances
poasp	BENEFIT/PENSION: Social Pension - Old Age
poatx	BENEFIT/PENSION: Taxable old Age
poant	BENEFIT/PENSION: Non-taxable old Age
bunct	BENEFIT/ SIC: unemployment benefit
bunot	BENEFIT: Other unemployment benefit

²³ No contributory and means-tested (py091g), or non-contributory and means-tested (py093g) unemployment benefits exist in Cyprus.

yempv	INCOME: monthly wage from previous work
lcs	LABOUR MARKET: Civil Servant
lcs10	LABOUR MARKET: Newly hired (in the last 12 months) Civil servant
lc01	LABOUR MARKET: Military
l02	LABOUR MARKET: Pensioner – former civil servant

3.3.1 Time period

The EU-SILC information on demographic variables refers to the time of data collection, while the income reference period is year 2020. Accordingly, the same reference period applies for income taxes and social insurance contributions, as well as taxes on wealth.

3.3.2 Gross incomes

The EU-SILC survey contains information on gross and net monetary income. In the very few cases where gross income was impossible to collect, net income was recorded and converted to gross by applying the tax as well as social insurance contributions rules of the system.

3.3.3 Disaggregation of harmonized variables

As discussed earlier, several harmonized EU-SILC variables were disaggregated into their components. These are:

- Survivor's benefits are recorded in harmonized variable *py110g* and in disaggregated variables *py112g*, *py113g* and *py114g*. The information included in these variables is decomposed into three parts: the survivor's benefit to widow, survivor's benefit to orphan, and other survivor's benefits.
- Education-related variables are recorded in harmonized variable *py140g* and in disaggregated variables *py143g* and *py144g*. The information is decomposed into the student grant and income from scholarships.
- Child and family related variables are recorded in harmonized variable *hy050g* and in disaggregated variables *hy052g*, *hy052g*, *hy052g* and *hy054*. We decompose these variables into the child benefit, birth grant, maternity allowance, single parent benefit, and other family related allowances.
- Old-age benefits are included in harmonized variable *py100g* and in disaggregated variables *py101g*, *py102g*, *py103g* and *py104g*. The information is decomposed into two parts: the taxable old-age pension part, and the non-taxable old-age pension part.
- Unemployment benefits are included in harmonized variable *py090g* and in disaggregated variables *py091g*, *py092g*, *py093g* and *py094g*. The information is decomposed into two parts: the unemployment benefit from SIF, and the unemployment benefits from other sources.

3.4 Uprating

The income variables in the EMSD version used for the model update documented here record information from 2020 (i.e., the Income Reference Period). When running tax-benefit simulations for a subsequent year using this data, the income information is uprated to consider the changes that have taken place between the Income Reference Period , i.e., 2020, and the simulation year. Uprating indices are generally based on changes in the average value of an income component between the year of the data and the policy year. Annex 1 provides detailed information about each uprating index.

4. VALIDATION

4.1 Aggregate Validation

In this section we validate the EUROMOD output data against external benchmarks. Specifically, the number of individuals receiving/earning a given income component or pay a given tax or social insurance contribution, and the corresponding total yearly amounts, are compared to the values of external official statistics. Where possible, potential explanations are provided for the observed discrepancies.

The external statistics used are collected from various administrative sources, including the Ministry of Labour, Welfare and Social Insurance, the Statistical Service of Cyprus, the Ministry of Finance, and the Tax Department. It should be stressed from the outset that the scope of macrovalidation is considerably reduced by the limited supply of such data,²⁴ the timeliness of official data publications and, in some cases, by the differences in the statistical definitions between the various sources of data. Furthermore, a macrovalidation exercise might also be challenging for the following reasons:

a) Using a sample for calculating totals requires caution. The use of grossing factors (weights) is necessary to compute a population total using a sample. The basic statistical utility of grossing factors is to alter the proportions of different groups (i.e., to adjust for unequal selection probabilities or non-response). Despite that, by default, the grossing factors add up to the total population, it might be the case that several sub-groups are under- or over-represented. That could cause differences between the simulated and official data, irrespectively of the precision of the microsimulation process²⁵.

b) Administrative data are collected using accounting procedures that serve the needs of public authorities. This might mean that the underlying statistical definitions may not be suitable for the purpose of macrovalidating a microsimulation model. For example, in Cyprus statistics of annual public spending on various benefits refer to the total value of payments for each benefit that took place within a particular year. Yet, many of these payments refer to benefit entitlements of previous years (for example, a family is entitled a birth grant in 2020, but the amount is credited to family's bank account in 2021).

Based on the above, the comparison between estimates of EUROMOD totals and administrative data is meaningful insofar as we compare only the order of magnitude between the two figures. To the extent that large differences exist, this provides an indication that the simulation of the corresponding quantities might not be perfect, and possibly some adjustments are due (for

²⁴ In some cases, EUROMOD variables represent groups of benefits (e.g., housing allowances, pensions, and family-related allowances). Meaningfully macrovalidating these variables requires the timely collection of official data from a variety of public service – an endeavor severely constrained by practical limitations.

²⁵ For example, the sample may underestimate the total number of persons with disabilities. If this is the case, then the number of recipients of disability benefits will be underestimated, even if the microsimulation procedure is very precise.

example, the benefit in question is characterised by considerable non-take-up, more detailed data are needed, etc). Bearing these in mind, the model appears overall to provide relatively good estimates of the simulated instruments, despite that several discrepancies arise. Our long-run purpose is to gradually improve the model, exploiting our better understanding of the social protection system, as well as incorporating in the model new advances in microsimulation techniques.

4.1.1 Components of disposable income

Table 4-1 shows the components comprising disposable income in EU-SILC, based on EU-SILC 2021.

Table 4-1: Components of disposable income

	EUROMOD	EU-SILC
	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	0	0
Unemployment benefits	+	+
Old-age benefits	+	+
Survivor' benefits	+	+
Sickness benefits	+	+
Disability benefits	+	+
Education-related allowances	+	+
Income from rental of a property or land	+	+
Family/children related allowances	+	+
Social exclusion not elsewhere classified	+	+
Housing allowances	+	+
Regular inter-household cash transfer received	+	+
Interests, dividends, etc.	+	+
Income received by people aged under 16	+	+
Regular taxes on wealth	-	-
Regular inter-household cash transfer paid	-	-
Tax on income and social contributions	-	-
Repayments/receipts for tax adjustment	+	+

4.1.2 Validation of market income

Tables A3.1 and A3.2 (in Annex 3) report, respectively, the number of earners/recipients and the corresponding total annual amounts for various types of market incomes used in the model.

As can be seen from column 2 of each table, neither of these two quantities are simulated for any of these income types. Accordingly, the numbers of earners/recipients reported in columns 3-6 ("Baseline values") of Table A3.1 for the years 2020-2023 are calculated directly from the data in EU-SILC 2021. Specifically, for any given income type the same value is used for all

simulation years, which is the number of earners/recipients in the base year (i.e., 2020)²⁶ that is appropriately weighted to refer to the entire population.

As can be seen in columns 11-13 (“Baseline/External ratio”) of Table A3.1, the numbers of employment income earners (i.e., employees) in 2020-2022, calculated in this way, are very close to the external statistics (which were provided by the Social Security Services). On the other hand, the numbers of the recipients of self-employment income are well above the corresponding external statistics. The latter likely reflects the incidence of underreporting by individuals of their self-employment status to the Social Security Services.

Similarly, the values for the total annual amounts of earned/received income reported in Table A3.2 are based on the corresponding total amounts from EU-SILC 2021, which also refer to 2020. To obtain the 2021-2023 amounts the actual 2020 amount is adjusted (i.e., uprated) to consider the changes that occur over time (e.g., due to price inflation, income growth, etc). As a result, although based on the same raw data, the statistics reported for each simulation year in columns 3-6 vary slightly from each other. As in the case of the number of earners, the total annual amounts of employee income calculated in this way are very close to the external statistics (also provided by the Social Security Services), whereas the corresponding amounts for the self-employment income are well above the relevant external statistics. On the one hand, the latter result might be due to the underreporting by individuals of their self-employment status, and on the other to the underreporting of the actual amount of self-employment income by those who duly report their self-employment status.

4.1.3 Validation of taxes and social insurance contributions

Tables A3.3 and A3.4 report, respectively, the number of payers and the corresponding total annual amounts of (mainly) simulated and non-simulated taxes and social insurance contributions included in the EUROMOD output data, against the values of external statistics.

From Table A3.4, we note that the total annual amount of Personal Income Tax moderately exceeds the corresponding external statistics for 2020 and 2021, by 36% and 26%, respectively.

As regards to the accuracy of the various types of Social Insurance contributions, this reflects the accuracy of the employment incomes their simulation is based upon (discussed in the previous section). Accordingly, the total annual amounts of the General Social Insurance Contributions by employees and employers, as well as the contributions to the Redundancy Fund, which are all based on the employee income, are simulated very accurately for the years 2020-2022. In particular, the discrepancy between the simulated and actual amounts is not larger than 10%. On the other hand, the simulated amounts for the contributions paid by the self-employed are twice as high as the corresponding external statistics, for the same years. Similarly, the simulated total annual amounts of the Government contribution, part of which is

²⁶ NB: This is the income reference year for EU-SILC 2021.

the contribution made to match the contribution by the self-employed, also exceed the corresponding external statistics, in this case by more than 100%.²⁷

Finally, the simulated numbers of employees, in the years 2020-2022, for whom their employers contribute to the Annual Holiday Fund are very close to the corresponding external statistics. However, the corresponding simulated total annual amounts exceed the corresponding external statistics by 34% to 86%.

4.1.4 Validation of benefits

Table A3.5 reports the number of receivers, and Table A3.6 the corresponding total annual amounts of various simulated and non-simulated benefits included in the EUROMOD output data.

Focusing first on the simulated quantities, we note that numbers of recipients of the Child Benefit, for the years 2020-2022, are overestimated by 16% to 33%. The corresponding total annual amounts are also moderately overestimated, by around 10% for 2020 and 2022, and 22% for 2021.

The numbers of the recipients of the Guaranteed Minimum Income, for 2020-2022, are also slightly overestimated (by no more than 15%), whereas the corresponding total annual amounts are underestimated by about 55%. Similarly, the numbers of the recipients of the Low Pension Benefit are relatively close to the external statistic, whereas the corresponding total annual amounts are underestimated, by about 20% to 35%.

Both the numbers of recipients and the total annual amounts of the Easter Benefit, for the years 2019-2021, are underestimated by about 20% to 40%. In contrast, both the numbers of recipients and the total annual amounts of the Single Parent Benefit are overestimated, by 43% to 56%, and 36% to 40%, respectively.

Finally, both the number of recipients and the total annual amount of the Birth Grant are overestimated in 2020, by around 60%, and underestimated in 2021 and 2022, by around 13%.

Turning next to the non-simulated quantities, we note that the numbers for the recipients and the total annual amounts of the Old Age Social Pension, for the years 2020-2022, are very close to the corresponding external statistics.

Similarly, the number of recipients of the Taxable Old Age Pension and Widow Pension, for the same years, are relatively close to the corresponding values of the external statistic; in the first case, these are below the external statistic by 2% to 9%, and in the second by 8% to 15%. However, in both cases the total annual amounts are overstated, by 37% to 51% in the case of the Taxable Old Age Pension, and by 20% to 32% in the case of the Widow Pension.

Both the numbers of recipients and the total annual amounts of the Orphan Pension, for 2020-2022, are substantially understated (by about 70% and 85%, respectively). On the other hand,

²⁷ NB: These calculations do not consider the underreporting of self-employment income to the Social Insurance Services that potentially takes place in practice.

the numbers of recipients of the Maternity Benefit are highly overstated (by more than three times), as well as the total annual amounts albeit to a lesser degree (by 24% to 52%).

The numbers of recipients of Social Insurance Unemployment Benefit in each of 2020 and 2022 are very close to the corresponding external statistics, but the number for 2021 is twice as high. The total annual amount of Social Insurance Unemployment Benefit received in 2020 is also very close to the corresponding external statistics, but twice as high in 2021, and higher by around 60% in 2022. These values for 2021 might be justified by the substantial fall in the actual cases of unemployed individuals in that year due to the generous financial support given to workers and employers during the Covid-19 pandemic to preserve their job positions.

Finally, the number of recipients of the Sickness Benefit is almost identical to the corresponding external statistic for 2020, but well below for 2021 and 2022 (by 46% and 62%, respectively). At the same time, the total annual amounts for these years are overstated, more so for 2020 (by almost 100%), and to a lesser degree for 2021 and 2022 (by 22% and 33%, respectively).

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

EUROMOD estimates on income inequality, as reflected on decile shares and the Gini index reported in Table A3.7, are very close to the EUROSTAT estimates.

4.2.2 Poverty rates

Table A3.8 reports a collection of poverty rates based on the simulated distribution of Household Disposable Income (HDI), and calculated for different specifications of the poverty line.

When the poverty line is set at either 60% or 70% of the median of the simulated income distribution, the resulting poverty rates for the entire population, and those calculated separately for men and women, are almost identical to the corresponding rates reported by EUROSTAT. This result appears to be stronger for the statistics obtained for the base year (i.e., 2020), that is, when actual income/expenditure values are used for the simulations.

The corresponding poverty rates obtained for the more restrictive specifications of the poverty line, i.e., when the poverty line is set at, either 40% or 50% of the median of the simulated income distribution, are lower than the corresponding EUROSTAT rates (by around 40 p.p. for the 40% specification, and 10 to 20 p.p. for the 50% specification). This suggests that the leftmost part of the left tail of the simulated income distribution is substantially thinner than the

corresponding part of the income distribution used by EUROSTAT for its calculations of poverty rates.

The poverty rates obtained for various age groups, while the poverty line is set at 60% of the median of the simulated income distribution, are also very close the corresponding rates reported by EUROSTAT. There is only the exception of the age group of the over-65s, for which the simulated rates are 19p.p. and 32p.p. higher than the EUROSTAT rates for 2020 and 2021, respectively.

In general, distributional discrepancies (underestimating or overestimating incomes at certain parts of the income distribution) might be due to that the current version of the model does not make any adjustments for tax evasion and non-take-up. As regards the issue of tax evasion, according to Pashardes and Polycarpou (2008) the size of black economy in Cyprus is estimated at around 6.7% - 8.1% of GDP, with income from self-employment being under-reported by 44.8%, and capital income by 40.3% (NB: the highest under-reporting rate – of 59.9% – was estimated for agricultural income). No official results are currently available regarding the extent of benefit non-take-up in Cyprus, to the best of our knowledge.

4.3 Summary of “health warnings”

The model simulates several policy instruments of the tax and benefit system of Cyprus. It is a valuable tool that enables the user to estimate the first-round distributional and fiscal effects of potential policy reforms. Nevertheless, in order to interpret the results meaningfully, the following caveats should be taken into consideration:

- Issues of data comparability

The validation of the model requires to compare the results of microsimulation (e.g., the total number of recipients, and total annual spending per benefit) with data that is external to the model that usually come from administrative sources. Due to the lack of data availability, and difficulties in collecting administrative data in a systematic manner, the process of macrovalidation is imperfect.

- Partly simulated instruments

Several instruments were not fully simulated due to data limitations. For example, the GMI benefit is only partly simulated since it is not possible to gather information about the special needs of the recipients (which are nevertheless covered by the GMI Law). Another example regards the eligibility conditions of several contributory benefits which depend on having knowledge on the contributory record of the potential recipient. Of course, such information is not included in the underlying database.

- Imperfect targeting and tax evasion

The model does not account for imperfect non-take-up, income underreporting, and tax evasion. This may cause differences between simulated and actual values. In practice, welfare programmes are subject to Type I and Type II errors. Type I errors arise from “false negatives”,

meaning that the benefit is not attributed to an eligible recipient. On the other hand, Type II errors arise from “false positives”, that is the benefit is attributed to non-eligible persons. Lastly, the existence of tax evasion may cause biases to distributional statistics.

- The simulation of special unemployment benefit (yemcomp_de and ysecomp_cy) is triggered by the simulation of labour market transitions defined in policy TransLMA_cy. This policy becomes operational if the model is run in conjunction with the LMA add-on. The nature of these simulations is still experimental and only partially validated. Users are encouraged to refer to the “Simulating labour market transitions in EUROMOD” document prior to their use.
- Labour market transitions are switched OFF in EUROMOD baselines. Consequently, 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 and 2021 to be higher than disposable income in previous years.
- The labour market transition data used in the TransLMA_cy are produced by Eurostat, using detailed distributional information on the loss of jobs and short-term work schemes from the Labour Force Survey and administrative data. The impact across different categories of individuals, the duration of unemployment/absence and percentage of hours worked are modelled using the EU-LFS longitudinal and quarterly transitions as target. For more information please consult the methodological note available at <https://ec.europa.eu/eurostat/documents/7894008/8256843/Methodological-note-2020.pdf/>

5. REFERENCES

Pashardes, P. & Polycarpou, A. (2008) “Income Tax Evasion, Inequality and Poverty”, Cyprus Economic Policy Review, University of Cyprus, Economics Research Centre, 2(2): 37-49.

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

Ministry of Labour and Social Insurance:

<http://www.mof.gov.cy/mlsi>

Ministry of Finance, Grants and Benefits Service:

http://www.mof.gov.cy/mof/mof.nsf/page24_gr/page24_gr?OpenDocument

Legal acts in English:

http://www.mlsl.gov.cy/mlsi/sws/sws.nsf/dmlindex_en/dmlindex_en?OpenDocument

ANNEX 1. UPRATING FACTORS

Table 0-1: Uprating factor values and sources, 2020-2023

Index	Reference	2020	2021	2022	2023	Source
Harmonised Index of Consumer Prices	\$HICP	99.67	101.92	110.17	114.4	EUROSTAT; AMECO 2023 spring forecasts for 2023 values
CPI (2005=100)	\$f_CPI	114.95	117.77	127.65	131.48	Republic of Cyprus, Statistical Service, Economy & Finance, Consumer Price Index > CONSUMER PRICE INDEX – TIMESERIES (BASE 1992, 2005, 2015) [https://www.mof.gov.cy/mof/cystat/statistics.nsf/economy_finance_14main_en/economy_finance_14main_en?OpenForm&sub=4&sel=2]
Basic annual child benefit for 1 child	\$f_childben	397.14	397.14	397.14	431.98	Ministry of Labour, Welfare and Social Insurance
Average annual amount of the student grant	\$f_studgrant	1710	1710	1710	1710	Ministry of Education [http://www.moec.gov.cy/ypiresia_foititikis_merimnas/foititiki_chorigia.html]
Monthly public assistance benefit amount for head	\$f_bsa	0	0	0	0	Ministry of Labour and Social Insurance, Department of Social Insurance Services, Statistical data, archived statistical data
Basic amount of a number of benefits	\$f_ben	422.16	441.5	446.88	461.93	Ministry of Labour and Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
Basic monthly amount of orphan grant	\$f_psuor	281.44	294.34	297.92	307.95	Ministry of Labour and Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
Basic amount of birht grant	\$f_bchba	548.82	573.96	580.92	600.48	Ministry of Labour and Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]

EUROMOD Country Report – CYPRUS

Basic monthly amount of social pension	\$f_poasp	341.95	357.62	361.97	374.16	Ministry of Labour and Social Insurance, Department of Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
Average yearly income from employment, previous year	\$f_yempv	12.0644	12.0082	12.4703	12.9404	Lagged value of \$f_hourly_wage
Basic amount of military grant	\$f_bml	157.23	157.23	157.23	157.23	Ministry of Defence (Χορήγηση οπλιτών ΕΦ)
Empl Income civil servants	\$f_EmplInc_Publ	17.5747	18.251	18.9391	20.1309	Value of "Average hourly wage, Public administ. and defence (lindi = 9), units of national currency"
Taxable public pensions	\$f_poatx_publ	422.16	441.5	446.88	461.93	Ministry of Labour and Social Insurance, Department of Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
GDP at market values	\$f_GDP	5041.5	5900.9	6709.6	6910.89	Republic of Cyprus, Statistical Service, Economy & Finance, National Accounts [https://www.mof.gov.cy/mof/cystat/statistics.nsf/economy_finance_11main_en/economy_finance_11main_en?OpenForm&sub=1&sel=2]
Average pension from SIF	\$f_avgpen	9865.96	10207.34	10473.99	10747.6	Ministry of Labour and Social Insurance, Department of Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
Monthly Guaranteed Minimum Income benefit amount for head	\$f_bsamm	480	480	480	480	Ministry of Labour and Social Insurance, Department of Social Insurance Services, Statistical data [http://www.mlsi.gov.cy/mlsi/sid/sidv2.nsf/page21_gr/page21_gr?OpenDocument]
Single parent benefit	\$f_bchlp	183.55	183.55	188.12	204.62	Ministry of Labour, Welfare and Social Insurance
Maternity allowance	\$f_bma	12.0082	12.4703	12.9404	13.7548	Value of \$f_hourly_wage
Average hourly wage, Agriculture and Fishing (lindi = 1), units of national currency	\$f_hourly_wage_lindi_1	6.4601	6.7087	6.9616	7.3997	Computed from ESTAT tables nama_10_a64 (wages) and nama_10_a64_e (hours worked) up to 2019. The values for 2020-2022 are computed by multiplying the value of the previous year by

EUROMOD Country Report – CYPRUS

							the yearly increase of nominal compensation per employee, total economy, from AMECO.
Average hourly wage, Mining, Manufact. and Utilities (lindi = 2), units of national currency	\$f_hourly_wage_l indi_2	11.1744	11.6044	12.0419	12.7997	ibid	
Average hourly wage, Construction (lindi = 3), units of national currency	\$f_hourly_wage_l indi_3	9.6359	10.0067	10.384	11.0374	ibid	
Average hourly wage, Wholesale and retail (lindi = 4), units of national currency	\$f_hourly_wage_l indi_4	9.7108	10.0845	10.4646	11.1232	ibid	
Average hourly wage, Hotels and restaurants (lindi = 5), units of national currency	\$f_hourly_wage_l indi_5	7.5403	7.8305	8.1257	8.6371	ibid	
Average hourly wage, Transport and communication (lindi = 6), units of national currency	\$f_hourly_wage_l indi_6	15.3023	15.8912	16.4902	17.528	ibid	
Average hourly wage, Financial intermediation (lindi = 7), units of national currency	\$f_hourly_wage_l indi_7	26.8091	27.8408	28.8904	30.7084	ibid	
Average hourly wage, Real estate and business (lindi = 8), units of national currency	\$f_hourly_wage_l indi_8	12.5711	13.0549	13.547	14.3996	ibid	
Average hourly wage, Public administ. and defence (lindi = 9), units of national currency	\$f_hourly_wage_l indi_9	17.5747	18.251	18.9391	20.1309	ibid	
Average hourly wage, Education (lindi = 10), units of national currency	\$f_hourly_wage_l indi_10	21.8722	22.714	23.5703	25.0536	ibid	
Average hourly wage, Health and social work (lindi = 11), units of national currency	\$f_hourly_wage_l indi_11	14.307	14.8576	15.4177	16.388	ibid	
Average hourly wage, Other (lindi = 12), units of national currency	\$f_hourly_wage_l indi_12	5.6936	5.9127	6.1356	6.5217	ibid	

EUROMOD Country Report – CYPRUS

Average hourly wage, All activity sectors, units of national currency	\$f_hourly_wage	12.0082	12.4703	12.9404	13.7548	ibid
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NB: Some of the figures for the latter two years are either provided by the source as “preliminary” or are projected. Also, the “Unadjusted average quarterly earnings” figures for 2020 and 2021 are estimates of the values one would expect to have in the absence of the labour market disruption induced by Covid-19.

ANNEX 2. POLICY EFFECTS IN 2022-2023

Table A2.1 and Figure A2.1 show the *ceteris paribus* effect of the 2023 policies on the mean equivalised household disposable income, by income component and income decile group. The effect is estimated as the difference between the simulated household disposable income under the 2023 tax-benefit policies (monetary parameters have been deflated using the Eurostat's Harmonized Index of Consumer Prices, HICP²⁸) and the simulated household disposable income under the 2022 policies, and then this difference is measured as a percentage of the mean equivalised household disposable income in 2022.

The overall policy effect between 2022 and 2023 is small and negative, at only -0.48% (see right-bottom-corner cell of Table A2.1). It is also small and negative for each income (decile) group, taking values between -1.14% (Decile 1) and -0.20% (Decile 5) - see rightmost column of Table A2.1. These effects are more pronounced for the lowest and highest income groups, ranging between -1.14% to -0.68% for Deciles 1-2, -0.20% to -0.29% for Deciles 3-5, and -0.45% to -0.59% for Deciles 6-10.

These results reflect the fact that there were only minimal policy changes between 2022 and 2023, except from the introduction of the National Minimum Wage on January 1st, 2023, which however is not simulated by the model. Accordingly, these can only be attributed to the moderate inflation between the two years.²⁹

In particular, inflation could have a negative impact on the eligibility of some individuals to receive means-tested benefits, which are a substantial part of the total household income of the low-income households.³⁰ Accordingly, the policy effects on means-tested benefits appear to have the highest contribution to the observed negative overall policy effect for the low income groups (see column 4).

Similarly, inflation could distort the calculation of income tax due to the progressivity of the income tax system in Cyprus, whereby for some households a portion of their taxable income could move into a higher income tax bracket and thus be taxed at a higher income tax rate. This would result to a higher income tax for these households in real terms, even in the absence of changes in the income tax policy. As income tax is more important for the calculation of disposable income for the higher income groups, this inflation-induced

²⁸ Annual average retrieved from Eurostat website, AMECO forecast for 2023 data.

²⁹ NB: For the purposes of these calculations the latest Harmonized Index of Consumer Prices figure from Eurostat) was used, which was just below 4%.

³⁰ NB: For the results reported here, the eligibility to receive a given amount of a simulated means-tested benefit in 2023 depends on whether the income used for the relevant means-test, which is the same as that used for 2022 but inflated to account for the positive inflation between 2022 and 2023, is below the nominal value under the 2023 policy of the relevant income threshold. Accordingly, even if there was no change in the nominal value of that income threshold between the two years, the fact that a higher (inflated) income value is used for the 2023 test compared to 2022 means that some of the individuals who were marginally eligible in 2022 could lose their eligibility in 2023.

distortion could lead to the income tax-related negative policy effects reported in column 9 (Direct Taxes) for these income groups.

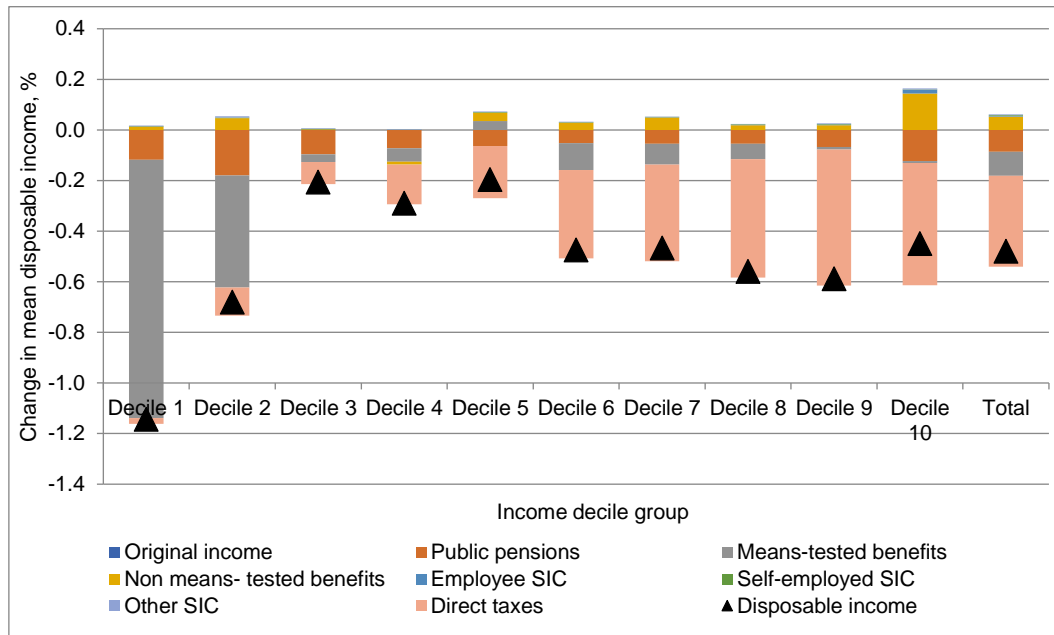
At the same time, the amount of social insurance contributions paid by individuals is typically proportional to their employment income, and therefore its calculation is not distorted by inflation in the way described above. Given that there were no changes in the policies that determine social insurance contributions between 2022 and 2023, the policy effect on the social-insurance-related components of disposable income of income groups is virtually zero (see columns 6-8).

Table A2.1: Policy effects in 2022-2023, using the CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non-means-tested benefits	Employee SIC	Self-employed SIC	Other SIC	Direct taxes	Disposable income
1	0.00	-0.12	-1.02	0.01	0.00	0.00	0.00	-0.02	-1.14
2	0.00	-0.18	-0.44	0.05	0.00	0.00	0.00	-0.11	-0.68
3	0.00	-0.10	-0.03	0.00	0.00	0.00	0.00	-0.09	-0.21
4	0.00	-0.07	-0.05	-0.01	0.00	0.00	0.00	-0.16	-0.29
5	0.00	-0.06	0.04	0.03	0.00	0.00	0.00	-0.21	-0.20
6	0.00	-0.05	-0.11	0.03	0.00	0.00	0.00	-0.35	-0.47
7	0.00	-0.05	-0.08	0.05	0.00	0.00	0.00	-0.38	-0.47
8	0.00	-0.06	-0.06	0.02	0.00	0.00	0.00	-0.47	-0.56
9	0.00	-0.07	-0.01	0.02	0.00	0.00	0.00	-0.54	-0.59
10	0.00	-0.12	-0.01	0.14	0.02	0.00	0.00	-0.48	-0.45
Total	0.00	-0.09	-0.09	0.05	0.00	0.00	0.00	-0.36	-0.48

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 2022, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating monetary parameters of 2023 policies by Eurostat's Harmonized Index of Consumer Prices (HICP).

Figure A2.1: Policy effects in 2022-2023, using the CPI-indexation, %



ANNEX 3. VALIDATION TABLES

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

	Simulated (Y / N)	EUROMOD				External				Ratio			
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Earnings (ils_earn)													
employment income (yem)	N	432	432	432	432	463	484	524	NaN	0.93	0.89	0.82	NaN
income from self-employment (yse)	N	81	81	81	81	30	31	31	NaN	2.69	2.64	2.61	NaN
Other original income (ils_origy - ils_earn)													
investment income (yiy)	N	50	50	50	50	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
private pension (ypp)	N	4	4	4	4	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property income (ypr)	N	46	46	46	46	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
income of children under 16 (yot)	N	0	0	0	0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
private transfers received (ypt)	N	61	61	61	61	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
soldier's allowance (bml)	N	11	11	11	11	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maintenance payments paid (xmp)	N	56	56	56	56	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

	Source	Comments
Earnings (ils_earn)		
employment income (yem)	MLSWI (SIS)	-
income from self-employment (yse)	MLSWI (SIS)	-
Other original income (ils_origy - ils_earn)		
investment income (yiy)	-	-
private pension (ypp)	-	-
property income (ypr)	-	-
income of children under 16 (yot)	-	-
private transfers received (ypt)	-	-
soldier's allowance (bml)	-	-
maintenance payments paid (xmp)	-	-

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Other Contributions (ils_sicot)																					
SIC general health system by pensioners (Γενικό Σύστημα Υγείας) (tscehl_s)	Y	170	170	170	170	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
SIC general health system by other income earners (Γενικό Σύστημα Υγείας) (tscothl_s)	Y	88	88	88	88	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Continued...

Source		Comments
Taxes (ils_tax)		
income tax (φόρος εισοδήματος) (tin_s)	MoF	-
special contribution for defence (ειδική εισφορά για την άμυνα) (txc_s)	-	-
property tax (φόρος ακίνητης περιουσίας) (tpr)	-	-
contribution to government pension plan (tripb_s)	-	-
Employee Social Insurance Contributions (ils_sicee)		
general SIC (ασφαλιστικές εισφορές εργαζομένων) (tscee00_s)	MLWSI (SIS)	-
contributions to widow and pension fund (tsceeri_s)	-	-
SIC general health system (Γενικό Σύστημα Υγείας) (tsceeh1_s)	-	-
Self-employed Social Insurance Contributions (ils_sicse)		
General SIC (ασφαλιστικές εισφορές αυτοεργοδοτούμενων) (tscse00_s)	MLSWI (SIS)	-
SIC general health system (Γενικό Σύστημα Υγείας) (tscseh1_s)	-	-
Employer Social Insurance Contributions (ils_sicer)		
General SIC (ασφαλιστικές εισφορές εργοδοτών) (tscer00_s)	MLWSI (SIS)	-
holiday fund (tscerhe_s)	MLSWI (SIS)	-
redundancy fund (tscersv_s)	MLSWI (SIS)	-
human resource development fund (tscerot_s)	-	-
social cohesion fund (tscerir_s)	-	-

Continued...

	Source	Comments
SIC general health system (Γενικό Σύστημα Υγείας) (tscerhl_s)	-	-
Credited Contributions (ils_sicct)		
government SICs (tscgv_s)	MLSWI (SIS)	-
Other Contributions (ils_sicot)		
SIC general health system by pensioners (Γενικό Σύστημα Υγείας) (tscpehl_s)	-	-
SIC general health system by other income earners (Γενικό Σύστημα Υγείας) (tscothl_s)	-	-

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

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Taxes (ils_tax)																					
income tax (φόρος εισοδήματος) (tin_s)	Y	852	927	998	1,130	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	625	736	NaN	NaN	1.36	1.26	NaN	NaN
special contribution for defence (ειδική εισφορά για την άμυνα) (txc_s)	Y	25	30	35	36	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
property tax (φόρος ακίνητης περιουσίας) (tpr)	N	20	20	20	20	20	20	20	20	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
contribution to government pension plan (tripb_s)	Y	34	36	37	39	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employee Social Insurance Contributions (ils_sicee)																					
general SIC (ασφαλιστικές εισφορές εργαζομένων) (tscee00_s)	Y	648	673	695	736	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	598	664	743	NaN	1.08	1.01	0.94	NaN
contributions to widow and pension fund (tsceepi_s)	Y	26	27	28	30	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
SIC general health system (Γενικό Σύστημα Υγείας) (tsceeh_s)	Y	237	246	255	271	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Self-employed Social Insurance Contributions (ils_sicse)																					
General SIC (ασφαλιστικές εισφορές αυτοεργοδοτούμενων) (tscse00_s)	Y	122	127	131	138	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	58	60	70	NaN	2.11	2.11	1.86	NaN
SIC general health system (Γενικό Σύστημα Υγείας) (tscseh_s)	Y	39	40	42	44	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Employer Social Insurance Contributions (ils_sicer)																					
General SIC (ασφαλιστικές εισφορές εργοδοτών) (tscer00_s)	Y	747	775	801	848	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	684	751	830	NaN	1.09	1.03	0.97	NaN
holiday fund (tscerhe_s)	Y	158	151	143	151	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	85	94	107	NaN	1.86	1.60	1.34	NaN
redundancy fund (tscersv_s)	Y	103	107	110	117	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	93	102	115	NaN	1.10	1.05	0.96	NaN
human resource development fund (tscerot_s)	Y	43	44	46	49	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
social cohesion fund (tscerir_s)	Y	183	190	197	209	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
SIC general health system (Γενικό Σύστημα Υγείας) (tscerh_s)	Y	260	270	280	297	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Credited Contributions (ils_sicct)																					
government SICs (tscgv_s)	Y	963	1,001	1,033	1,091	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	397	432	487	NaN	2.43	2.32	2.12	NaN
Other Contributions (ils_sicot)																					

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
covid-19 special unemployment scheme for self-employed (bwkmcse_s)	Y	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct_s)	Y	0	0	0	0	40	40	40	40	0.00	0.00	0.00	0.00	37	19	37	NaN	0.00	0.00	0.00	NaN
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct)	N	40	40	40	40	40	40	40	40	1.00	1.00	1.00	1.00	37	19	37	NaN	1.08	2.14	1.08	NaN
other unemployment benefits (bunot)	N	7	7	7	7	7	7	7	7	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
other education-related benefits (bedsl)	N	11	11	11	11	11	11	11	11	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
birth grant (Βοήθημα τοκετού) (bchba_s)	Y	8	8	8	8	5	5	5	5	1.47	1.47	1.47	1.47	5	9	9	NaN	1.61	0.87	0.88	NaN
other family benefits (bfaot)	N	22	22	22	22	22	22	22	22	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maternity benefit (Επίδομα μητρότητας) (bma)	N	24	24	24	24	24	24	24	24	1.00	1.00	1.00	1.00	7	7	7	NaN	3.68	3.38	3.28	NaN

Continued...

	Source	Comments
Pensions (ils_pen)		
old age social pension (κοινωνική σύνταξη) (poasp)	MLSWI (SIS)	N: December figures
taxable old age pension (σύνταξη γήρατος) (poatx)	MLSWI (SIS)	N: December figures
non-taxable old age pension (σύνταξη γήρατος) (poant)	-	-
widow pension (σύνταξη χηρείας) (psuwd)	MLSWI (SIS)	N: December figures
other survivor pensions (psuot)	-	-
orphan's pension (επίδομα ορφάνιας) (psuor)	MLSWI (SIS)	N: December figures
disability pension (σύνταξη αναπηρίας) (pdi)	-	-
Means-tested benefits (ils_benmt)		
child benefit (επίδομα τέκνου) (bch_s)	MLSWI (YDEP)	-
guaranteed minimum income benefit (ελάχιστο εγγυημένο εισόδημα) (bsamm_s)	MLSWI (YDEP)	-
low pension benefit (bsaoa_s)	MLSWI (YDEP)	-
Easter Benefit (iΠασχαλινό Επίδομα) (bsals_s)	MLSWI (YDEP)	-

Continued...

	Source	Comments
housing benefits (bho)	-	-
student grant (φοιτητική χορηγία) (bedet_s)	-	-
single parent child allowance (επίδομα μονογονιού) (bchlp_s)	MLSWI (YDEP)	-
Non-means-tested benefits (ils_bennt)		
Maternity allowance (PARBEN) (bmact_s)	MLSWI (SIS)	-
Paternity allowance (PARBEN) (bpact_s)	-	-
health related benefits (επίδομα ασθενείας) (bhl)	MLSWI (SIS)	-
covid-19 special unemployment scheme (bwkmcee_s)	-	-
covid-19 special unemployment scheme for self-employed (bwkmcse_s)	-	-
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct_s)	MLSWI (SIS)	-
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct)	MLSWI (SIS)	-
other unemployment benefits (bunot)	-	-
other education-related benefits (bedsl)	-	-
birth grant (Βοήθημα τοκετού) (bchba_s)	MLSWI (SIS)	-
other family benefits (bfaot)	-	-
maternity benefit (Επίδομα μητρότητας) (bma)	MLSWI (SIS)	-

	Simulated (Y / N)	EUROMOD				SILC				Ratio				External				Ratio			
		2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct_s)	Y	0	0	0	0	106	106	106	106	0.00	0.00	0.00	0.00	110	54	73	NaN	0.00	0.00	0.00	NaN
unemployment benefit from Social Insurance Fund (ανεργιακό επίδομα) (bunct)	N	106	111	115	122	106	106	106	106	1.00	1.04	1.08	1.15	110	54	73	NaN	0.97	2.04	1.58	NaN
other unemployment benefits (bunot)	N	171	178	185	196	171	171	171	171	1.00	1.04	1.08	1.15	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
other education-related benefits (bedsl)	N	12	12	12	12	12	12	12	12	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
birth grant (Βοήθημα τοκετού) (bchba_s)	Y	4	5	5	5	3	3	3	3	1.47	1.53	1.55	1.60	3	5	5	NaN	1.57	0.87	0.86	NaN
other family benefits (bfaot)	N	67	67	67	67	67	67	67	67	1.00	1.00	1.00	1.00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
maternity benefit (Επίδομα μητρότητας) (bma)	N	41	42	44	47	41	41	41	41	1.00	1.04	1.08	1.15	28	28	36	NaN	1.48	1.52	1.24	NaN

Table A3.7. Distribution of equivalised disposable income

	EUROMOD				External				Ratio			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
Decile 1	4.04	4.00	3.96	3.90	3.80	3.80	NaN	NaN	1.06	1.05	NaN	NaN
Decile 2	5.20	5.16	5.14	5.13	5.30	5.20	NaN	NaN	0.98	0.99	NaN	NaN
Decile 3	6.10	6.13	6.13	6.13	6.10	6.10	NaN	NaN	1.00	1.01	NaN	NaN
Decile 4	7.10	7.05	7.08	7.12	7.00	7.00	NaN	NaN	1.01	1.01	NaN	NaN
Decile 5	7.99	8.00	8.01	8.05	8.00	8.10	NaN	NaN	1.00	0.99	NaN	NaN
Decile 6	8.98	9.14	9.00	8.99	9.10	9.10	NaN	NaN	0.99	1.00	NaN	NaN
Decile 7	10.31	10.17	10.36	10.37	10.30	10.40	NaN	NaN	1.00	0.98	NaN	NaN
Decile 8	11.80	11.80	11.77	11.82	11.70	11.80	NaN	NaN	1.01	1.00	NaN	NaN
Decile 9	14.29	14.27	14.25	14.24	14.20	14.30	NaN	NaN	1.01	1.00	NaN	NaN
Decile 10	24.19	24.27	24.30	24.26	24.40	24.20	NaN	NaN	0.99	1.00	NaN	NaN
Median	16,611	17,156	17,745	18,688	16,686	17,856	NaN	NaN	1.00	0.96	NaN	NaN
Mean	19,827	20,504	21,074	22,093	19,649	20,742	NaN	NaN	1.01	0.99	NaN	NaN
Gini	29.17	29.27	29.34	29.39	29.40	29.40	NaN	NaN	0.99	1.00	NaN	NaN
S80/20	4.16	4.20	4.24	4.26	4.23	4.28	NaN	NaN	0.98	0.98	NaN	NaN

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

	EUROMOD				External				Ratio			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
40% median HDI by gender												
Total	1.42	1.46	1.57	1.86	2.40	2.80	NaN	NaN	0.59	0.52	NaN	NaN
Males	1.52	1.52	1.62	1.99	2.40	2.80	NaN	NaN	0.63	0.54	NaN	NaN
Females	1.32	1.39	1.52	1.74	2.30	2.80	NaN	NaN	0.57	0.50	NaN	NaN
50% median HDI by gender												
Total	5.66	5.90	6.20	6.31	6.50	6.60	NaN	NaN	0.87	0.89	NaN	NaN
Males	5.54	5.73	5.93	5.99	6.00	6.30	NaN	NaN	0.92	0.91	NaN	NaN
Females	5.77	6.07	6.46	6.62	7.00	6.90	NaN	NaN	0.82	0.88	NaN	NaN
60% median HDI by gender												
Total	13.84	14.59	15.17	15.33	13.80	13.90	NaN	NaN	1.00	1.05	NaN	NaN
Males	12.80	13.59	14.00	14.16	12.60	12.60	NaN	NaN	1.02	1.08	NaN	NaN
Females	14.83	15.56	16.29	16.44	15.00	15.10	NaN	NaN	0.99	1.03	NaN	NaN
70% median HDI by gender												
Total	22.54	22.41	22.94	22.86	22.50	24.60	NaN	NaN	1.00	0.91	NaN	NaN
Males	20.77	20.58	21.08	21.05	20.40	23.10	NaN	NaN	1.02	0.89	NaN	NaN
Females	24.22	24.16	24.72	24.58	24.50	26.00	NaN	NaN	0.99	0.93	NaN	NaN
60% median HDI by age group												
0-15 years	13.93	14.24	14.25	14.12	16.20	14.60	NaN	NaN	0.86	0.98	NaN	NaN
16-24 years	13.08	13.14	13.46	13.51	12.80	12.00	NaN	NaN	1.02	1.10	NaN	NaN
25-49 years	11.81	11.91	12.19	12.10	12.80	12.60	NaN	NaN	0.92	0.95	NaN	NaN
50-64 years	10.44	10.54	11.05	11.09	10.00	10.70	NaN	NaN	1.04	0.99	NaN	NaN
65+ years	23.22	27.37	29.55	30.87	19.50	20.80	NaN	NaN	1.19	1.32	NaN	NaN