

# **EUROMOD**

## **COUNTRY REPORT**



# **BULGARIA (BG)**

## **2013-2016**

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EUROMOD is a tax-benefit microsimulation model for the European Union (EU) that 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 has been enlarged to cover 28 Member States and is updated to recent policy systems using data from the European Union Statistics on Income and Living Conditions (EU-SILC) as the input database, supported by DG-EMPL of the European Commission.

This report documents the work done in one annual update for Bulgaria. This work was carried out by the EUROMOD core developer team, based mainly in ISER at the University of Essex, in collaboration with a national team.

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The results presented in this report are derived using EUROMOD version G4.0. EUROMOD is continually being improved and the results presented here may not match those that would be obtained with later versions of EUROMOD. For more information, see: For more information, see: <https://www.euromod.ac.uk>

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## 1. Basic Information

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

- The Bulgarian tax-benefit system is largely a unified national system. The Consolidated National Budget has three major components: the budget of the central government (Republican Budget), the budget of the Social Insurance Funds, and the summary budget of the local governments (or Municipal Budgets). The parameters of the main taxes (VAT, corporate tax, personal income tax (PIT), and social insurance contributions (SIC)) are determined by legal acts of the National Parliament and the respective revenues are collected by the central government. Under some regulation, the local taxes are set by the local governments (Municipal Councils) but the revenues from these taxes have insignificant shares in the overall tax burden. Social transfers are set and administered by agencies of the central government and there are not any significant benefits that are provided by the local governments

- Social benefit system is governed at a central level and there are no regional differences in the application of the relevant legislative acts. The legislation is adopted by the National Assembly (laws) but some of the legislative acts (regulations, decrees, orders, etc.) are adopted by the Council of Ministers.

- The municipalities, at their own initiative, can also adopt and implement policies in that field. In principle, these initiatives envisage the provision of in-kind benefits (housing, social services, targeted support to the vulnerable groups of the population, transportation services for people with disabilities, etc.).

- The fiscal year for taxes and benefits runs from 1<sup>st</sup> of January to 31<sup>st</sup> of December. The start of the calendar year is usually the moment when changes in tax-benefit regimes apply

- According to Social Insurance Code (*Кодекс за социално осигуряване*) the standard retirement age in 2013 was 60 years and 8 months for women and 63 years and 8 months for men. However, the right to an old-age pension arises if the following cumulative conditions are fulfilled: (1) the person has reached the statutory retirement age and (2) the person can prove the existence of a minimum period of a contributory service.

**Table 1.1 Conditions for acquiring a right to an old-age pension (2013-2016)**

Year	Women		Men	
	Standard retirement age	Minimum period of contributory service	Standard retirement age	Minimum period of contributory service
2013	60 y. 8 m.	34 y. 8 m.	63 y. 8 m.	37 y. 8 m.
2014	60 y. 8 m.	34 y. 8 m.	63 y. 8 m.	37 y. 8 m.
2015	60 y. 8 m.	35 y. 0 m.	63 y. 8 m.	38 y. 0 m.
2016	60 y. 10 m.	35 y. 2 m.	63 y. 10 m.	38 y. 2 m.

- In 2015, a pension reform regarding conditions for acquiring a right to a old-age pension was introduced. According to the reform, the retirement age for women should rise by 2 months per calendar year and by 3 months after the beginning of 2030 until reaching 65 years of age. The retirement age for men should rise by 2 months per calendar year in 2017, and by 1 month per calendar year after that until reaching 65 years of age. In addition, from 2017 the length of required contributory service will rise by 2 months be per calendar year until reaching 37 years for women and 40 years for men.

- If the condition on the minimum period of contributory service is not fulfilled, both women and men can retire at the age of 65 years and 10 months (65 years and 8 months in 2013-

2015) if they can prove that they have completed at least 15 years of contributory service. From 2007, the required minimum age will be increased by 2 months per calendar year until reaching 67 years of age.

- Main definitions used in tax-benefit system in Bulgaria:

**Family**: The Bulgarian tax-benefit legislation contains different definitions of “family”:

**Family Allowances Act (Закон за семейни помощи за деца)**: Family includes: (a) spouses (married couples) and their children up to 18 years of age and children aged 18-20 years if they are still in secondary education (born, fathered, adopted, stepchildren, except those who have marriage); (b) parents living together outside marriage (have the same current address) and their children up to 18 years of age and children aged 18-20 years if they are still in secondary education (born or fathered, except those who have marriage); (c) the parent and her/his children up to 18 years of age and children aged 18-20 years if they are still in secondary education (born, fathered or adopted, except those who have marriage). This definition entered into force in August 2015 as the points (b) and (c) were added to the existing definition.

**Regulation on the Implementation of the Social Assistance Act (Правилник за прилагане на Закона за социално подпомагане)**: For the purposes of social assistance policy, “family” includes spouses (married couple) and their spouses (married couples) and their children up to 18 years of age and children aged 18-20 years if they are still in secondary education (born, fathered, adopted, stepchildren, except those who have marriage). However, the Social Assistance Law distinguishes the category “cohabiting people”, i.e. people, relatives or not, who live together, share the same dwelling and are registered at the same address.

**Regulation on the Implementation of the Integration of People with Disabilities Act (Правилник за прилагане на Закона за интеграция на хората с увреждания)**: According to this Law, the term “family” means spouses (married couple) and their children up to 18 years of age (born, fathered, adopted, stepchildren, except those who have marriage).

**Child**: The Child Protection Act (Закон за закрила на детето) stipulates that “child” is any natural person, who has not reached the age of 18. However, for social protection purposes a broader definition for a “dependent child” is used. According to the Family Allowances Act (Закон за семейни помощи за деца) and Social Assistance Act (Закон за социално подпомагане) apply a “child” could be a person up to 20 years of age if he/she is still enrolled in the secondary school (see the definition of “family”). According to the Public Education Act, schooling up to the age of 16 is compulsory.

**Twins**: Family Allowances Act (Закон за семейни помощи за деца) stipulates that “twins” are two or more children born alive after multiple gestation pregnancy.

**Single parent (lone parent)**: According to the Regulation on the Implementation of the Social Assistance Act (Правилник за прилагане на Закона за социално подпомагане), “single parent” is a person, who, due to widowhood, divorce or other reason, brings up alone children up to 18 years of age (20 years of age if the child is still enrolled in the secondary school).

**Child with one living parent**: Family Allowances Act (Закон за семейни помощи за деца) stipulates that “child with one living parent” is a child who has not come of age, or a child of legal age who continues his/her studies, until graduation from high school, but not after the age of 20, one of whose parents (adoptive parents) has died, and who is being brought up by his/her other parent (adoptive parent), where the latter has not been married before the registrar.

**Child with permanent disability**: According to the Family Allowance Act (Закон за семейни помощи за деца), “child with permanent disability” is a child who has not reached the age of 16 with a specific type and degree of disability of 50% or more and a person between 16 and 20 years of age with reduced working capacity of 50% or more (two definitions concerning

persons with disability at different ages are used because persons below 16 years of age are not a part of the workforce, i.e. it is not necessary to assess their working capacity but the specific type and degree of their disability). The same definition is used in the Regulation on the Implementation of the Integration of People with Disabilities Act (*Правилник за прилагане на Закона за интеграция на хората с увреждания*).

***Orphan child:*** According to the Regulation on the Implementation of the Social Assistance Act (*Правилник за прилагане на Закона за социално подпомагане*), “orphan child” is a child who has not reached age of 18 and whose parent (or both parents) has passed away.

***Mothers of multiple children:*** Family Allowances Act (*Закон за семейни помощи за деца*) stipulates that “mothers of multiple children” are mothers who have given birth, or have adopted, and brought up three or more children above the age of one.

- Bulgarian PIT system is based on the taxation of the individual, with the spouses being assessed independently. After subtracting the tax exemptions from the annual tax base and applying all legal deductions, the personal income tax amount for 2013-2016 is calculated using a flat income tax rate of 10%.

- The incomes from different sources are taxed with the same tax rate of 10%, but the tax exemption from the annual tax base varies for different income sources

- The period of taxation with PIT covers one fiscal year. Each individual with taxable income is obliged to submit a Tax Declaration regulated by the Income Taxes on Natural Persons Act (*Закон за данъка върху доходите на физическите лица*) usually till the end of April the following year. There is an important exclusion for this duty – it applies to any individual that has received income **only** from employment relations on labour contract.

- The social insurance contribution rates are determined in the Social Insurance Code (*Кодекс за социално осигуряване*) with the exception of the rates of the contributions to Employment Injury and Occupational Disease Fund (*Фонд „Трудова злополука и професионална болест“*) to the Guaranteed Receivables of Workers and Employees Fund (*Фонд „Гарантирани вземания на работниците и служителите*) Public Social Insurance Budget Act (*Закон за бюджета на държавното обществено осигуряване*). The health insurance contribution rate is determined in the Health Insurance Fund Budget Act (*Закон за бюджета на Националната здравно-осигурителна каса*).

- The Public Social Insurance Budget Act (*Закон за бюджета на държавното обществено осигуряване*) determines: (1) the maximum monthly amount of the contributory income during the calendar year for all categories of insured people; (2) the minimum monthly amount of contributory income for the calendar year for self-employed persons; (3) the minimum monthly amount of the contributory income for employees, according to main economic activities and occupation groups.

- In Bulgarian tax-benefit system all social insurance and social assistance benefits **are not taxable**.

- There is no systematic statutory indexation of tax schedules and benefit levels to inflation in general in Bulgaria. There are no specific rules imposing an obligation to the public authorities to apply an automatic indexation of social benefits. The following table gives an overview of the indexation of pensions as they have the largest share in the total social protection expenditures:



Table 1.2 Pension indexation rules (2013-2016)

Year	Indexation rules	Ad-hoc increases and lump-sum supplements
2013	As of 01.4.2013: - pensions granted before 31.12.2009 - increased by 9.8% - pensions granted between 01.1.2010 to 31.12.2010 - increased by 8.8% - pensions granted from 01.1.2011 to 31.12.2011 - increased by 5.7% - pensions granted from 01.1.2012 to 31.12.2012 - increased by 2.2%	In December all pensioners whose pensions are below BGN 251 per month, received a lump-sum supplement of BGN 50.
2014	As of 01.7.2014 all pensions granted before 31.12.2013 were increased by 2.7%.	In April 2014, all pensioners received a lump-sum supplement. It was differentiated according to the amount of the pension: - pensions up to BGN 150 - BGN 40 - pensions between 150.01-251.00 - BGN 30 - pensions above BGN 251.00 - BGN 20 In December all pensioners whose pensions are below BGN 286 per month, received a lump-sum supplement of BGN 40.
2015	As of 01.7.2015 all pensions granted before 31.12.2014 were increased by 1.9%.	In April 2015, all pensioners the amount of whose pension is below BGN 286 per month, received a lump-sum supplement of BGN 40. In December 2015, all pensioners the amount of whose pension is below BGN 300 per month, received a lump-sum supplement of BGN 40.
2016	It is envisaged that, as of 01.7.2016, all pensions granted before 31.12.2015 will be increased by 2.6%.	In April 2016, all pensioners the amount of whose pension is below BGN 300 per month, received a lum-sump supplement of BGN 40.

- The percentage of pension indexation and absolute amount of the minimum old-age pension is determined annually in the Law on the Budget of the Public Social Insurance (Закон за бюджета на държавното обществено осигуряване). The same is for the minimum amount of the unemployment benefit and the amount of the cash benefit for bringing up a child up to age of 2.

- The amount of the social old-age pension is determined in a decree adopted by the Council of the Ministers.

- The absolute amounts of the family allowances are determined annually in the State Budget of the Republic of Bulgaria Act (Закон за държавния бюджет на Република България) as that they should not be lower than the levels in the previous year.



- Regarding the social assistance benefits, the benefit amount is determined on the basis of the amount of the Guaranteed Minimum Income (*Гарантиран минимален доход – GMI*). The GMI amount is determined by the Council of Ministers.

- There are **different rules** concerning the assessment of the means-tested benefits:

**Allowances under the Family Allowances Act (Закон за семейни помощи за деца):**

- The means-test includes all gross incomes of the family, taxable under the Income Taxes on Natural Persons Act (Закон за данъците върху доходите на физическите лица), as well as all received pensions, benefits and scholarships, scholarships of students until graduation from high school, but not after the age of 20, as well as allowances and funds received under this act and under the Child Protection Act.
- The supplement for care by assistant is not included in the means-test.
- The reference income is the income for the last 12 months.
- The assessment is done annually. However, the recipients are obliged to inform public authorities and to declare any changes which might have influence their eligibility.

**Allowances under the Social Assistance Act (Закон за социално подпомагане):**

- The means-test includes: wages and all other incomes from labour activities; incomes from economic activity in agriculture, forestry and fishing; income from sales of immovable or/and movable property; income from rents, leases, etc.; royalties; equity yields and other capital incomes; allowances and benefits; pensions; scholarships; monthly family allowances; alimonies; other incomes (not included in the list).
- The following incomes are not included in the means-test: allowances granted under the Social Assistance Act (Закон за социално подпомагане); the supplement for care by assistant; one-off pensions and ad-hoc compensations to the pensions; supplements to pensions of war veterans; the one-off benefit upon childbirth; targeted allowances for free railway and bus transport to mothers of multiple children; targeted allowances to schoolchildren; monthly allowances for social integration of people with disabilities; allowances granted by the Council of Ministers' act.
- The reference income for determining the right to monthly social assistance allowance is the income for the last month. The income for the last 6 months is used for determining the right to targeted heating allowances.
- The recipients are obliged to inform public authorities and to declare any changes which might have influence their eligibility to social assistance benefits.

**Allowances under the Child Protection Act (Закон за закрила на детето):**

- The means-test includes: wages and all other incomes from labour activities; incomes from economic activity in agriculture, forestry and fishing; income from sales of immovable or/and movable property; income from rents, leases, etc.; royalties; equity yields and other capital incomes; allowances and benefits; pensions; scholarships; monthly family allowances; alimonies; other incomes (not included in the list).
- The following incomes are not included in the means-test: allowances granted under the Child Protection Act (Закон за закрила на детето); the supplement for care by assistant; one-off pensions and ad-hoc compensations to the pensions; supplements to pensions of war veterans; the one-off benefit upon childbirth; monthly allowances for social integration of people with disabilities; allowances granted by the Council of Ministers' act.

- The reference income for determining the right to monthly social assistance allowance is the income for the last month.
- The assessment is done once (for the one-off allowances) and annually (for the monthly allowances). The recipients are obliged to inform public authorities and to declare any changes which might have influence their eligibility.

### *Allowances under the Integration of People with Disabilities Act (Закон за интеграция на хората с увреждания):*

- The means-test includes: wages and other incomes from labour activity; incomes from economic activity in the agriculture, forestry and fishing; income from rents, leases, etc.; equity yields and all capital income; royalties; family allowances; social assistance allowances; pensions; scholarships; alimonies; other incomes (not included in the list).
- The following incomes are not included in the means-test: all allowances granted under the Integration of People with Disabilities Act (*Закон за интеграция на хората с увреждания*); the supplement for care by assistant; the one-off benefit upon childbirth; one-off pensions and ad-hoc compensations to pensions; allowances granted under the Child Protection Act (*Закон за закрила на детето*); humanitarian aid; supplements to the pensions of the war veterans; allowances granted by the Council of Ministers' act.
- The reference income is the income for the last 12 months.
- As means-tested allowances granted under the Integration of People with Disabilities Act (*Закон за интеграция на хората с увреждания*) are one-offs, the assessment is done only once.

## 1.2 Social Benefits

### 1.2.1. Unemployment benefits

**Unemployment benefit** (*Обезщетение за безработица*): it is a contributory benefit provided to the unemployed, only if the person became unemployed involuntarily and is actively searching for a job. The beneficiary should not be entitled to an old-age pension and should not undertake an economic activity requiring compulsory social insurance. Furthermore, since the benefit is contributory it is granted if the unemployed person has been insured for *at least 9 months during the last 15 months* before the termination of the employment. It is equal to 60% of the contributory income for the last 24 months (since 01.01.2012). The duration of the benefit is between 4 and 12 months depending on the length of the contribution history of the individual.

### 1.2.2. Sickness benefits

**Cash benefit for sickness due to general disease** (*Парично обезщетение за временна неработоспособност поради общо заболяване*): it is a contributory benefit granted upon a medical referral and under the condition that the person has been insured for at least 6 months. The requirement for 6 months of insured length of service shall not apply to those under the age of 18. The daily cash benefit for temporary disability through common disease shall be calculated at the rate of 80 % of the contributory income for the last 18 months (18 months – since 01.01.2012).

**Cash benefit for sickness due to an employment injury or occupational disease** (*Парично обезщетение за временна неработоспособност поради трудова злополука или професионална болест*): it is a contributory benefit granted upon a medical referral. Notwithstanding that the benefit is contributory, no qualification period is required. The daily cash benefit for

temporary disability through common disease shall be calculated at the rate of 90 % of the contributory income for the last 18 months (18 months – since 01.01.2012).

### 1.2.3. Maternity benefits and family allowances

**Cash benefit for pregnancy and childbirth** (*Парично обезщетение при бременност и раждане*): it is a contributory non means-tested benefit granted to mothers upon a medical referral and under the condition that the mother has been insured at least for 12 months. The benefit is paid for a period of 410 days, 45 days of which – before the anticipated date of delivery. Fathers have a right to a benefit for a period of 15 days immediately after the childbirth. The same eligibility conditions apply. Moreover, the benefit can be received by the fathers (instead of mothers) from the 6<sup>th</sup> month until the 1<sup>st</sup> year of the child and upon the mother's approval. The benefit amounts 90% of the contributory income for the last 24 months (2013) and for the last 18 months (2014) and for the last 24 months (from 2015). The daily cash benefit may not be more than the average daily net remuneration for the period based on which the benefit has been calculated, or less than the minimum daily wage.

**Cash benefit for bringing up a child up to age of 2** (*Парично обезщетение за оглеждане на малко дете*): it is a contributory non means-tested benefit granted upon a medical referral and under the condition that the person has been insured at least for 12 months. The benefit is paid after the expiration of the period of payment of the cash benefit for pregnancy and childbirth, i.e. since the 1<sup>st</sup> to the 2<sup>nd</sup> year of the child. The mother can receive 50% of the benefit if she does not use the right which she is entitled to (in case that she fulfills all eligibility conditions), or if she interrupts the receipt of the benefit due to returning to work. In some cases, the benefit can be paid to the father (if he uses the paid-leave for bringing up a child up to age 2 according to the regulations of Bulgarian Labour Code (*Кодекс на труда*)). The father has the same rights as the mother. The amount of the benefit is determined by the Public Social Insurance Budget Act (*Закон за бюджета на държавното обществено осигуряване*).

**Cash benefit in case of adoption of child between 2 and 5 years** (*Парично обезщетение при осиновяване на дете от 2- до 5 годишна възраст*): it is a contributory non means-tested benefit which has been introduced since 1<sup>st</sup> of January 2014. It is given to people who have been insured against the sickness and maternity risks for at least 12 months and who are in paid leave in case of adoption of child between 2 and 5 years, according to the Labour Code (*Кодекс на труда*). The duration of the benefit is 365 days, but cannot be received after the 5<sup>th</sup> year of the child. The benefit amount is equal to 90% of the contributory income for the last 24 months. The daily cash benefit may not be higher than the average daily net remuneration for the period used as a basis for determining the amount of the benefit, or lower than the minimum daily wage.

**Monthly allowance for bringing up a child up to age of 1** (*Месечна помощ за отглеждане на дете до навършване на 1 година*): it is a non-contributory means-tested allowance paid to mothers of children up to one year of age. The benefit is means-tested and shall be paid to claimants living in families where the average monthly income per family member for the last 12 months is lower than a certain threshold. To receive the benefit, mothers should not be insured and should not be in receipt of contributory benefit for pregnancy and childbirth or for bringing up a child up to age 2. The threshold level and the amount of the allowance are determined by the State Budget Act.

**Monthly allowances for a child until graduation from high school, but not after the age of 20** (*Месечна помощ за дете до завършване на средно образование, но не повече от 20-годишна възраст*): it is a non-contributory means-tested allowance paid to a parent bringing up a child until the completion of secondary education, but no longer than the moment when the child reaches 20 of age. The benefit is means-tested and shall be paid to claimants living in families where the average monthly income per family member for the last 12 months is lower than a certain threshold. The threshold level and the amount of the allowance are determined by the State Budget Act.

**Monthly allowance for permanently disabled children below 18 years of age and prior to finishing secondary school, but not later than reaching 20 years of age** (*Месечна добавка за деца с трайни увреждания до 18-годишна възраст и до завършване на средното образование, но не по-късно от 20-годишна възраст*): it is a non-contributory means-tested allowance paid to a parent of a child with permanent disability up to 18 years of age and until completion of secondary education but not later than 20 years of age. The allowance is paid regardless of the family income and upon a medical referral. The amount of the allowance is determined by the State Budget Act.

**Lump sum pregnancy grant** (*Еднократна парична помощ при бременност*): it is a non-contributory means-tested lump sum allowance paid to mothers who are not insured and do not receive a contributory maternity benefit. The allowance is means-tested and is paid to persons living in families where the average monthly income per family member for the last 12 months (preceding the period which starts from the 45<sup>th</sup> day prior to the anticipated date of delivery) is lower or equal to a certain threshold. If the parents are divorced, only the income of the parent who has received the right to take care for the child shall be taken into account. The threshold level and the amount of the allowance are determined by the State Budget Act.

**One-off allowance upon childbirth** (*Еднократна парична помощ при раждане на дете*): it is a non-contributory non-means-tested allowance paid to mothers upon childbirth regardless of the family income. The right to a benefit occurs since the date of the childbirth. The amount of the benefit depends upon the number of the born children. It is determined by the State Budget Act. In case of twins, the benefit for each child shall be paid in the amount for the second child. If the parents are divorced, only the income of the parent who has received the right to take care for the children shall be taken into account.

**Targeted allowance for schoolchildren** (*Целева помощ за ученици*): it is a non-contributory means-tested lump sum allowance paid to a family whose child is enrolled in 1<sup>st</sup> grade at state or municipal schools. The benefit is means-tested and is paid to persons living in families where the average monthly income per family member for the last 12 months is lower or equal to a certain threshold. The threshold level is determined by the State Budget Act and the amount of the benefit – by an act of the Council of Ministers.

**Lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students** (*Еднократна помощ за отглеждане на дете до навършване на 1 година за майки студентки в редовна форма на обучение*): it is a non-contributory non means-tested allowance introduced in 2009. Its amount is determined by the State Budget Act.

**Lump sum allowance for raising twins until 1 year of age** (*Еднократна помощ за отглеждане на близнаци до навършване на 1 година*): it is a non-contributory non means-tested allowance introduced in 2009. Its amount is determined by the State Budget Act.

**Lump sum allowance in case of adoption** (*Еднократна помощ при осиновяване на дете*): it is a non-contributory non means-tested benefit granted to adoptive parents if they and the adopted child/children reside in Bulgaria permanently, i.e. more than 183 days per year. The amount of the benefit is determined annually in the State Budget Act – it should not be lower than the amount for the previous year and not higher than the amount of the cash benefit for pregnancy and childbirth (*Парично обезщетение при бременност и раждане*). The allowance has been introduced since 1<sup>st</sup> of January 2016.

### 1.2.4. Child Protection Allowances

**Financial support for the prevention of the abandonment, bringing up of a child by relatives or foster family** (*Помощ за превенция, отглеждане на детето при близки и роднини или в приемно семейство*): there are some non-contributory means tested allowances granted in order to support the bringing up of a child at risk. Allowances could be paid on a monthly basis or as a one-off payment. The total amount of the one-off allowance cannot be higher the 5-time amount

of the GMI. The monthly amount of the allowance could be up to 3 times the amount of the GMI (for children up to 7 years of age), up to 3.5 times the amount of the GMI (for children between 7 and 14 years of age) or up to 4 times the amount of the GMI (for children between 14 and 20 years of age). For children with disabilities, a supplement of 75% of the GMI should be paid to the monthly allowances. Social workers assess the income of the family and the necessity the financial support to be provided.

### 1.2.5. Pensions

**Pension for insurance and old age** (*Пенсия за осигурителен стаж и възраст*): it is a contributory benefit granted to persons who have reached the standard retirement age (in 2016 – 60 years and 10 months for women and 63 years and 10 months for men) and whose length of contributory service is minimum 35 years and 2 months (women) and 38 years and 2 months (men). Persons having insufficient period of insurance can retire at age of 65 years and 10 months if they have at least 15 years of insurance. The amount of the pension depends on: (1) the amount of the average contributory income for the country for the last 12 months preceding the date of retirement; (2) the monthly ratios between the past earnings of the claimant and the average contributory income for the country for the assessment period; (3) the duration of the pension insurance (number of years). The reference (or assessment) period for calculating the pension includes only three consecutive years from the period before 1997, and all periods of insurance afterwards. Since 1<sup>st</sup> of January 2016 individuals who have the necessary length of contributory service can get an insurance and old-age pension maximum 12 months prior reaching the statutory retirement age, i.e. to retire up to one year earlier. In that case the amount of their pension shall be reduced by 0.4% per each insufficient month. The minimum amount of the insurance and old-age pension is determined by the Public Social Insurance Budget Act. The maximum amount of the pension is equal to 35% of the maximum amount of the contributory income for the country.

**Pension for invalidity due to general sickness** (*Пенсия за инвалидност поради общо заболяване*): it is a contributory benefit granted to persons with permanent disabilities upon a medical referral. The minimum required period of insurance varies according to the age of the claimant – it is between 0 for persons up to age 20 and 5 years for persons of age 30 or above. The calculation formula is the same as for the pension for insurance and old age. However, the number of years of insurance is corrected with a coefficient based on the percentage of reduced working capacity. The calculation formula is the same as for the pension for insurance and old age but it cannot be lower than a certain minimum (which varies according to the degree of reduced working capacity) and higher than a certain maximum (35% of the maximum amount of the contributory income for the country).

**Pension for invalidity due to employment injury or occupational disease** (*Пенсия за инвалидност поради трудова злополука или професионална болест*): it is a contributory benefit granted to persons with permanent disabilities upon a medical referral. A minimum qualifying period is not required. The calculation formula is the same as for the pension for insurance and old age. However, the number of years of insurance is corrected with a coefficient based on the percentage of reduced working capacity. The calculation formula is the same as for the pension for insurance and old age but it cannot be lower than a certain minimum (which varies according to the degree of reduced working capacity) and higher than a certain maximum (35% of the maximum amount of the contributory income for the country).

**Social Old-Age Pension** (*Социална пенсия за старост*): it is a non-contributory benefit granted to persons who are over 70 years of age. In order to receive that benefit, the person should live in a family where the annual income per family member by the date after reaching the age is less than the sum of the so-called “Guaranteed Minimum Income” (*Гарантиран минимален доход*) for the last 12 months. Furthermore, the claimant shall not be granted any other type of pension.

**Social Invalidity Pension** (*Социална пенсия за инвалидност*): it is a non-contributory and non-means tested benefit granted to persons who have reached 16 years of age with reduced working



capacity of over 71%. The amount of the social invalidity pension varies according to the degree of reduced working capacity and should be determined as a percentage of the social old-age pension.

**Survivor's pension** (*Наследствена пенсия*): it is a contributory benefit and can be received by the surviving spouse, children (not older than 18 years of age; 26 years of age for students) and parents. Divorced and non-married partners are not entitled to that benefit. The survivor's pension is calculated as a percentage of the pension of the deceased person (one survivor – 50%; two survivors – 75%; three or more survivors – 100%). It is granted to all entitled persons and is divided equally between them. The amount of the survivor's pension (provided to all the survivors) cannot be lower than the 75% of the minimum amount of the insurance and old age pension and cannot be higher than a certain maximum (35% of the maximum amount of the contributory income for the country).

**Pension supplement in case of deceased spouse** (*Добавка от пенсията на починал съпруг*): it is a non-contributory benefit granted to a pensioner whose spouse has deceased. Since 1<sup>st</sup> of September 2011 the amount of the allowance has been fixed at 26.5% of the pension (or the sum of pensions) of the deceased spouse). It is granted for life but should be terminated in case of re-marriage. The supplement cannot be combined with a survivor's pension, but full accumulation with other pensions is possible.

**Pension from supplementary mandatory pension insurance** (*Пенсия от фонд за допълнително задължително пенсионно осигуряване*): it is a contributory benefit paid to persons having been insured in a private fund for supplementary mandatory pension insurance. Pension contributions are accumulated in the so-called "individual accounts". There are two types of such funds: (1) Universal Pension Funds (*Универсални пенсионни фондове*) – the insurance is mandatory only for people born after 31<sup>st</sup> of December 1959) and (2) Professional Pension Funds (*Професионални пенсионни фондове*) – the insurance is mandatory for persons working under the 1<sup>st</sup> and 2<sup>nd</sup> category of labour, i.e. in risky and unhealthy working conditions. The insurance in the Universal Pension Funds (*Универсални пенсионни фондове*) entitle the insured person to: (1) a supplementary lifelong old-age pension after acquisition of an insurance and old age pension; (2) a lump-sum payment of up to 50 % of the resources accrued on the individual account in case of lifelong, permanently reduced working capacity exceeding 89.99% (70.99% until 31<sup>st</sup> of December 2015); (3) a lump-sum payment or payment by installments of amounts to the survivors of a deceased person or of a pensioner. The insurance in the Professional Pension Funds (*Професионални пенсионни фондове*) entitle the insured person to: (1) fixed-period early-retirement occupational pension; (2) lump-sum payment of up to 50 % of the resources accrued on the individual account in case of lifelong, permanently reduced working capacity exceeding 89.99% (70.99% until 31<sup>st</sup> of December 2015); (3) lump-sum payment or payment by installments of amounts to the survivors of a deceased insured person or of a pensioner. Since 1<sup>st</sup> of January 2016, people insured in both Universal Pension Funds (*Универсални пенсионни фондове*) and Professional Pension Funds (*Професионални пенсионни фондове*) have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance (*Държавно обществено осигуряване*) with an increased pension contribution. Individuals insured in Universal Pension Funds (*Универсални пенсионни фондове*) who decide to be insured only in the State Public Social Insurance (*Държавно обществено осигуряване*), can restore their insurance in the Universal Pension Funds (*Универсални пенсионни фондове*) not later than 5 years before reaching the statutory retirement age if they do not receive an insurance and old-age pension from the existing public schemes. Individuals insured in Professional Pension Funds (*Професионални пенсионни фондове*) cannot reverse their choice to be insured only in the State Public Social Insurance (*Държавно обществено осигуряване*), individuals cannot

**Pension from voluntary pension insurance** (*Пенсия от фонд за допълнително доброволно пенсионно осигуряване*): it is a contributory benefit paid to persons having been insured in a private fund for supplementary voluntary pension insurance. Pension contributions are accumulated in the so-called "individual retirement accounts". There are two types of pensions – old-age pension (paid if the person has gained a right to a pension from public pension fund) and

invalidity pension (paid upon a medical referral). The pension can be paid as a periodic or lump-sum benefit depending on the choice of the insured person.

### 1.2.6. Social Assistance, Heating and Housing Allowances

Bulgarian system of social assistance allowances is based upon the concept of the so-called “Guaranteed Minimum Income” (*Гарантиран минимален доход – GMI*). The amount of the GMI is determined by the Council of Ministers. Its amount has been fixed at BGN 65 per month since 2009.

**Monthly social assistance allowance** (*Месечна социална помощ*): it is a non-contributory means-tested allowance granted to persons living alone or to families whose income for the previous month is below the so-called “Differentiated Minimum Income” (DMI). Except the income-test, the beneficiaries should fulfill other eligibility criteria. DMI is determined for each person that falls in a particular beneficiary category as a percentage of GMI. It shall be calculated at individual (when a person lives alone) or at family level. The DMI at family level is calculated as a sum of the DMIs of all family members. DMI varies between 30% of GMI for a child between 7 and 16 years of age (20 years of age when studying) and 165% of GMI for a person aged 75 or more who lives alone. The amount of the monthly social assistance allowance is equal to the difference of the DMI for the individual/family and their actual income.

**Targeted Heating Allowance** (*Целева помощ за отопление*): it is a non-contributory means-tested allowance granted to persons living alone or families whose income is below the so-called “Differentiated Minimum Income for Heating” (DMIH) and who also fulfill other eligibility criteria. DMIH is calculated following the same procedure as the DMI for the monthly social assistance allowance, but the percentages for the different categories of beneficiaries are higher. It varies from 167.08% of GMI for an adult living in the same lodging with her/his spouse to 311.08% of GMI for a person aged 75 years or more who lives alone. The amount of the allowance is determined by the Minister of Labour and Social Policy. It is granted for a period of 5 months – from November to March – because this period is considered as the heating season in the country. However, depending on the type of the heating, the actual level of the support is different.

**Lump-sum social assistance allowance** (*Еднократна социална помощ*): it is a non-contributory means-tested allowance. Its amount is up to 5 times the GMI amount. It can be granted only once per year to cover unexpected health, educational, living and other emergencies. The allowance can be received by all citizens regardless of their income or material status but upon the result of the so-called “social assessment” by the social workers.

**Targeted allowance for issuing a personal ID card** (*Целева помощ за издаване на лична карта*): it is a non-contributory means-tested allowance. It is granted upon an assessment of needs made by social workers and its amount is determined by the social workers.

**Targeted allowance for medical treatment abroad** (*Целева помощ за лечение в чужбина*): it is a non-contributory means-tested allowance. It is granted upon an assessment of needs made by the social workers only to persons having received permission for medical treatment abroad from the Ministry of Health, at the expense of its budget. The financial support shall be granted as a lump-sum allowance to cover the personal expenses of the beneficiary and her/his relatives.

**Targeted allowance for free traveling** (*Целева помощ за безплатно пътуване*): it is a non-contributory non-means tested allowance. It is granted to mothers of many children, persons with reduced working capacity over 71%, and children up to age 16 with permanent disabilities. Mothers of many children are entitled to free travel once per year – 1 return ticket by the railway or bus transport anywhere within the country. To facilitate the social adaptation individuals with reduced working capacity over 71%, children up to age 16 with a specific type and degree of disability of 50% or more, and war-disabled individuals have the right to free travel twice a year – 2 return tickets by rail or bus transport anywhere within the country.



**Targeted allowance for paying rent for a municipal lodging** (*Целева помощ за наем на общински жилища*): it is a non-contributory means-tested allowance paid to persons accommodated in municipal lodgings whose income for the previous month are below 150% of the DMI (see “*Monthly social assistance allowances*”). Only the following groups are entitled to such allowance: (1) orphans up to 25 years of age who have graduated at a specialized institution providing vocational training for disabled children and children at risk; (2) persons over 70 years of age living alone, and (3) lone parents. The amount of the benefit depends on the actual expenditures made by the beneficiaries.

### 1.2.7. Non-contributory allowances for the integration of people with disabilities

**Monthly allowance for social integration** (*Месечна добавка за социална интеграция*): it is a non-contributory non-means tested allowance granted to people with permanent disabilities. There are 7 types of social integration allowances (for transport services; for ICT services; for education; for medical bath treatment and rehabilitation; for dietary purposes and medicines; for accessible information; for paying the rent of a municipal dwelling). Their amounts are calculated as a percentage of GMI and vary from 15%, for example - monthly allowance for transport services, to 300% of GMI, for example the allowance for medical bath treatment and rehabilitation.

**Targeted financial support for buying and repairing supportive means, devices, equipment and medical products** (*Целева помощ за покупка и ремонт на помощни средства, приспособления, съоръжения и медицински изделия*): it is a non-contributory in-kind benefit provided to persons with permanent disabilities. The support is granted upon a medical referral and without means-test. The support is provided in form of reimbursement of the expenses actually made by the beneficiary, but not more than a fixed maximum level. The maximum level of the possible financial support is determined per each item (mean, device, equipment, or other product) by an Ordinance of the Minister of Labour and Social Policy.

**Supplement for care by assistant** (*Добавка за чужда помощ*): it is non-contributory benefit paid to pensioners with disability over 90% who need permanent assistance of an attendant. The amount of the supplement is determined as 75% of the social-old age pension amount.

### 1.2.8. Education related allowances

**Scholarship for pupils** (*Стипендия за ученици*): it is a non-contributory means-tested benefit provided to pupils enrolled in state and municipal schools depending on their marks achieved during the last school year. The scholarship is paid for the period from October 1<sup>st</sup> to June 30<sup>th</sup> (or paid 12 months for pupils with special educational needs and orphans). There are three types of scholarships which amount depends on whether the pupil has special educational needs or not; what is the average mark of the pupil; what is the family income of the pupil.

**Scholarship for students, PhD students and post-graduate students** (*Стипендия за студенти, докторанти и специализанти*): it is a non-contributory and means-tested benefit. Scholarships for students are paid for a period of 5 months (per each semester). The eligibility rules and scholarship amounts are determined by each university. While determining the eligibility rules the state universities shall take into account two criteria: average grade per semester and average monthly income per family member for the last 6 months. PhD students studying in Bulgaria at state-supported organizations (universities, institutes at the Bulgarian Academy of Sciences, or other scientific organizations) can receive a scholarship amounting to BGN 450 per month. The scholarship is paid for a period of 3 years. The rector of a state university can grant students lump-sum awards and allowances in case of severe financial difficulties experienced by the students.

### 1.2.9. Other incomes – not part of the benefit system

**Cash benefit for the first three days of the temporary incapacity** (*Парично обезщетение за временна неработоспособност поради общо заболяване*): The insurer (employer) shall pay out to the insured person, for the first three business days of the temporary incapacity to work – the amount of the benefit is 70% of the contributory income.

**Loans for students and doctoral candidates** (*Кредити за студенти и докторанти*): Eligibility to apply for a loan is limited to students and doctoral candidates who meet simultaneously the following requirements have not attained the age of 35 and are studying full-time. The State guarantees shall guarantee the principal and the interest (interest agreed and interest for delay) on the amount payable under the loan.

## 1.3 Social contributions

The statutory contributions in the Social insurance system in Bulgaria (SIS) are compulsory for all individuals having earnings from at least one source of taxable income. The Social insurance contributions (SIC) are to be split between the employer and employee. There are three different classes of insured (Labour categories) according to the level of professional risk. The vast majority of hired employment in Bulgaria work under the so-called “III Category of Labour”. For this category the proportion of SIC is 56.5% for the employer and 43.5% for the employee (pension insurance) and 60% to 40% (other risks). In addition, the State provides additional funds which amount is determined by the Public Social Insurance Budget Act (*Закон за бюджета на държавното обществено осигуряване*). Until 1<sup>st</sup> of January 2016, the participation of the State was determined as contribution in amount of 12% for each person insured in Pensions Fund. The insurance against employment injury and occupational disease is for the sake of the employer. In the same time, for the public employee (civil servants, military, judicial system) the total amount of compulsory SIC is covered by the State.

**1.3.1. Pensions Fund (Фонд „Пенсии“)**. Bulgarian pension insurance is built on the so called “three pillar” system. The first pillar – called “State Pension Insurance” – is the public PAYG pension insurance. The second pillar is the so called “Supplementary Mandatory Pension Insurance” /SMPI/. It is a fund-based compulsory pension insurance managed by private pension funds. In the second pillar there are two types of pension funds – “Universal” (for all born after 31<sup>st</sup> of December 1959) and “Professional” (only for a narrow set of professions). SIC on this pillar are allocated to an individual retirement account /IRA/ at a private fund selected by each individual. It entitles the employee to a second pension from the IRA at her retirement. The third pillar is the “Voluntary Pension Insurance” which is managed also by private funds and the respective SIC are also allocated to IRAs at these private funds.

**1.3.2. General Diseases and Maternity Fund (Фонд „Общо заболяване и майчинство“)** This SIC is used to provide eligibility of the employee to benefits in cases of general illness or maternity. An exclusion of this duty is applied if the person has been hired for a period shorter than 5 workdays (or 40 hours) during a particular month.

**1.3.3. Unemployment Fund (Фонд „Безработица“)**. The contribution to the Unemployment Fund is used to provide eligibility of the employee to benefits in cases of unemployment spells. Exclusions of this duty are applied if the person has been actually hired for a period shorter than 5 workdays. Also, the self-employed are not obliged to contribute to this fund.

**1.3.5. Employment Injury and Occupational Disease Fund (Фонд „Трудова злополука и професионална болест“)**. The contribution to this fund is between 0.4 and 1.1% and is paid solely by the employer. The contribution rate is determined by economic sector in the Public Social Insurance Budget Act (*Закон за бюджета на държавното обществено осигуряване*).

**1.3.6. Teachers' Pension Fund (Учителски пенсионен фонд).** The teachers insure themselves for old age in the Teachers' Pensions Fund with a separate insurance contribution. The contribution is 4.2% and is paid solely by the employer.

**1.3.7. Fund "Pensions for the individuals under art. 69" (Фонд „Пенсии за лицата по чл. 69“).** The fund has been established since 1<sup>st</sup> of January 2016. The insurance in that fund is obligatory for military servicemen and several categories of civil servants performing their duties within the systems of Ministry of Interior, Ministry of Defense and Ministry of Justice. The contribution rate to the Fund depends on whether the insured have decided not to insure themselves in the Professional Pension Funds.

**1.3.8. Fund "Guaranteed claims of workers and employees".** The insurance to this fund provides protection to workers and employees in case of insolvency of their employer. The contribution is paid by employers only. Since 2011 the contribution rate to this Fund is 0.0% as the accumulated funds are sufficient to cover all arising expenditures on benefits.

**1.3.9. Health insurance (Здравно осигуряване).** The compulsory health insurance is the main source of funding for the public health system. Only the recognized contributors are eligible to use the services of the state health system. If a pensioner continues to work after retirement under a labour contract (or other contractual hired work) or as self-employed, *only the health insurance element* and no other SIC is still due. The state budget contributes to the health fund for the pensioners, registered unemployed, individuals under 18 years, students in the tertiary education and public employees.

## 1.4 Taxes

**1.4.1. Personal Income Tax (данък върху доходите на физическите лица)** Personal income tax /PIT/ is levied on the earnings of the individual defined in the system as "physical" (or "natural") person. The period of taxation with PIT is one fiscal year and every individual with taxable income is obliged to submit a Tax Declaration about her income. There is an important *exclusion* for this duty – in case that the individual has received income *only from* employment relations under a Labour Contract or as a kind of public servant – in this case it is assumed that the employer has calculated, withheld, and transferred the due PIT liability on behalf of the employee and submission of a Declaration is not necessary.

The Tax Declaration consists of several consecutive sections each of which is to be filled out if earnings from the respective source have been received by the individual. Specific preliminary treatment of the income from some sources is applied (for example, in respect of the standard rates for exempting parts of the gross taxable income). After deriving the amounts of tax bases in each section, the total annual tax base is obtained as a sum of the tax bases from the sections. All contributory and non-contributory (social assistance) benefits are exempted from income taxation, the main of which are. The interests on deposits in commercial banks were exempted in the period 2011-2012. Since the beginning of 2013 incomes from interest on deposits have been included in the annual tax base. In the tax base are included also incomes from sole entrepreneurship and the tax base from this source is obtained as an annual financial result of the business activity. It can be assumed that the net income from this source has been utilized by the family budget and is plausibly recorded in the survey data.

**1.4.2. Property (real estate) tax (данък сгради)** Property tax is a local tax levied on the so called "tax estimate" of the value of any real estate object (building, land spot, etc.). Its revenues are allocated directly to the respective local (or municipal) budget. The tax on buildings is determined along with the sewage fee using differentiated rates on the basis of the tax estimate. The local governments (Municipal Councils) are allowed to set the local tax rates by their own legal act in established by the National Parliament limits (minimum and maximum thresholds).

**1.4.3. Inheritance tax (данък наследство)** Inheritance tax is also a local tax and is a version of a tax on capital transfer. It is a liability of both the heritor and heritage-giver and emerges as

payable at the time of enacting the inheritance. Any kind of assets (both non-financial and financial) can be objects of the tax and its rate is determined differentially for each inheritor depending on her relation to the heritage-giver and the legal evaluation of the amount inherited. If the recipients are the partner and/or/ the children there is no liability for inheritance tax. In other cases the rates vary between 0.4% and 6.6% for amounts higher than BGN 250,000.

**1.4.4. Motor vehicle tax (данък превозни средства)** Motor vehicle tax is also a local tax and is determined by the Municipal Councils. The local government can set the unit tax as much as three times its minimum threshold. The tax is due to the owners of motor vehicles and is determined according to the power of the engine corrected by a coefficient depending on the year of its first registration.

**1.4.5. Corporate profit tax (корпоративен данък)** Corporate tax is due by all resident companies – Bulgarian or foreign controlled – that are registered as legal entities under the Commercial Law. Also, non-profit organizations or public bodies that have own divisions operating as business units are also subject to the corporate tax. For the period 2011-2015 the tax rate is 10% and is levied on the corporate profit value specifically assessed by a financial accounting procedure under the regulations of the Accounting Law and the Law on Corporate Taxation.

**1.4.6. Value added tax (данък върху добавената стойност)** Value added tax has a rate for the period 2013-2015 of 20% for almost all goods and services. Since 01.04.2011 **for hotel accommodation the rate has been 9%**. VAT is levied on the sales of domestically produced goods and services as well as on the sale of products imported to Bulgarian market, except on a list of VAT-exempted products.

**1.4.7. Excise duties (акцизи)** Excise duties are levied on various products (so called “excise goods”), e.g. alcohol and alcohol beverages, coffee, tobacco products, fuels and energy products (mineral oils, gas, etc.), electricity, and gambling. The amount of each excise duty is determined per unit of the naturally measured quantity of the respective excise good (e.g. per kilogram, liter, cubic meter, etc).

## 2. Simulation of taxes and benefits in EUROMOD

### 2.1 Scope of simulation

The scope of taxes and benefits in Bulgarian tax-benefit system 2013-2016 simulated by EUROMOD covers only those instruments that have been identified as feasible for simulation in the framework of EU-SILC 2012 survey data coverage. Tables 2.1 and 2.2 present the status of simulation feasibility about social benefits and taxes covered by this country report along with brief comments on the main reasons for each instrument not simulated.

- Some items such as VAT and excise taxes are beyond the scope of the model. The reason is the lack of information in the underlying dataset on these items and/or on the components necessary to simulate them in EUROMOD .
- Other items available in SILC were, however, found to be infeasible to simulate due to lack of data which would allow for simulating eligibility conditions and/or conditions for the assessment of tax or benefit amount (e.g. information on contributory history necessary to simulate IOA pension, or on rights necessary for “patent” income tax, etc.).
- In fact, most of the contributory benefits are not simulated by EUROMOD due to lack of data essential for the simulation of entitlement rights (e.g. contribution and/or former employment history /including earnings received/, occurrence of disability or work accident, deceased spouse contribution history, etc.). There are several exclusions from this rule (marked as “partially

simulated”). For these cases, some necessary conditions have been plausibly assumed in order to identify eligible individuals and simulate their entitlements.

- As a rule, the major direct income taxes and SIC are simulated (as far as they are assessed on the basis of the gross employment and self-employment available in the EU-SILC database). However, application of some income tax or SIC legal rules in detail is not practically possible due to lack of information about some economic activity type, specific income sources or other elements that are not recorded by the EU-SILC survey. A particular case is the social insurance of the self-employed where the minimum wage is used as a simulation basis for SIC. In reality, the minimum contributory base differs depending on the occupation (type of profession and type of the industry).

- For some of the contributory and for most of the non-contributory means-tested benefits the assessment unit is the family. Family shall mean parents (married or cohabiting) and their dependent children till the age of 18 or till the age of 20 but only if they are enrolled in school (see page 5).

**Table 2.1 Simulation of benefits in EUROMOD**

Benefit	Variable name(s)	Why not fully simulated?				
		2013	2014	2015	2016	
Unemployment benefit	<i>bunct_s</i>	PS	PS	PS	PS	No data on contribution history; eligibility partially simulated based on observed receipt of the benefit
Benefit for long-term unemployment						The benefit was abolished
Cash benefit for sickness due to general disease		IA	IA	IA	IA	No data on contribution history and sickness duration
Cash benefit for sickness due to employment injury or occupational disease		IA	IA	IA	IA	No data on contribution history and events occurrence
Cash benefit for the quarantine		E	E	E	E	
Cash benefit for sanatorium treatment		E	E	E	E	
Cash benefit for caring for a sick family member		E	E	E	E	
Cash benefit for reassignment		E	E	E	E	
Cash benefit for pregnancy and childbirth	<i>bmaprct_s</i>	PS	PS	PS	PS	No data on contribution history; eligibility partially simulated based on observed receipt of the benefit
Cash benefit for bringing up child up to age of 2	<i>bmayect_s</i>	PS	PS	PS	PS	No data on contribution history; eligibility partially simulated based on observed receipt of the benefit
Cash benefit in case of adoption of child between 2 and 5 years						No data on whether the children in the household are adopted or not; No data on contribution history
Monthly allowance for bringing up child up to age of 1	<i>bmaprnc_s</i>	S	S	S	S	
Monthly child allowance for bringing up a child until completion of secondary education but not longer than 20 years of age	<i>bchmt00_s</i>	S	S	S	S	
Monthly child allowance for bringing up a permanently disabled child up to 18 years of age and until completion of secondary education but not longer than 20 years of age		IA	IA	IA	IA	No data on individual disability level
Lump sum pregnancy grant		IA	IA	IA	IA	
Lump sum allowance upon childbirth	<i>bchbals_s</i>	S	S	S	S	
Targeted allowance for pupils	<i>bchedyc_s</i>	S	S	S	S	

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Lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students	<i>bchnm01_s</i>	S	S	S	S	
Lump sum allowance for raising twins until 1 year of age	<i>bchnm02_s</i>	S	S	S	S	
Lump sum allowance in case of adoption						No data on whether the children in the household are adopted or not
Pension for insurance and old age /IOA/		IA	IA	IA	IA	No data on contribution history
Pension for invalidity due to general sickness		IA	IA	IA	IA	No data on contribution history and incapacity occurrence
Pension for invalidity due to employment injury or occupational disease		IA	IA	IA	IA	No data on contribution history and incapacity occurrence
Social old-age pension	<i>poamt_s</i>	S	S	S	S	
Social invalidity pension		IA	IA	IA	IA	No data on individual disability level
Survivor's pension		IA	IA	IA	IA	No data on the loss of family members, their contribution history, and benefit split among the relatives
Pension supplement in case of deceased spouse		IA	IA	IA	IA	No data on the loss of family members and their contribution history
Pension from voluntary pension insurance		I	I	I	I	No data on contribution history
Monthly social assistance allowance	<i>bsa00_s</i>	S	S	S	S	
Targeted allowance for heating	<i>bsaht_s</i>	S	S	S	S	
Monthly allowance for social integration		IA	IA	IA	IA	No information on special purchases or other relevant conditions
Targeted financial support for buying and repairing of supportive means, devices, equipment and medical products		IA	IA	IA	IA	No information on special purchases or other relevant conditions
Supplement for care by assistant		IA	IA	IA	IA	No data on explicit medical certification of a person in need of such care
Scholarships		IA	IA	IA	IA	No information on school achievements and grades

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



**Table 2.2 Simulation of taxes and social contributions in EUROMOD**

Benefit	Why not fully simulated?				
	2013	2014	2015	2016	
Employers SIC	S	S	S	S	Only IIIrd category employees; no data necessary to identify the three different categories
Employees SIC	S	S	S	S	Only IIIrd category employees; no data necessary to identify the three different categories
Self-employed SIC	S	S	S	S	Note: minimum compulsory insurance assumed
Health insurance contributions	S	S	S	S	
Personal income tax	S	S	S	S	Note: “patent” tax on small businesses excluded
Motor vehicle tax	E	E	E	E	No relevant characteristics of the vehicles owned
Real estate tax	E	E	E	E	No relevant characteristics of the real estate assets owned
Value added tax	E	E	E	E	Out of scope of the model; no data on consumption
Excise taxes	E	E	E	E	Out of scope of the model; no data on consumption

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.

**Table 2.3 Means-testing and legal provisions of the social benefits covered by the Country Report for Bulgaria, 2013-2016**

Social benefit	Means test	Provided under the regulation of:
1. Unemployment benefit	No	CSI
2. Cash benefit for sickness due to general disease	No	CSI
3. Cash benefit for sickness due to employment injury or occupational disease	No	CSI
4. Cash benefit for the quarantine	No	CSI
5. Cash benefit for sanatorium treatment	No	CSI
6. Cash benefit for caring for a sick family member	No	CSI
7. Cash benefit for reassignment	No	CSI
8. Cash benefit for pregnancy and childbirth	No	CSI
9. Cash benefit for bringing up child up to age of 2	No	CSI
10. Cash benefit in case of adoption of child between 2 and 5 years	No	CSI
11. Monthly allowance for bringing up child up to age of 1	Yes	FACA
12. Monthly child allowance for bringing up a child until completion of secondary education but not longer than 20 years of age	Yes	FACA
13. Monthly child allowance for bringing up a permanently disabled child up to 18 years of age and until completion of secondary education but not longer than 20 years of age	No	FACA
14. Lump sum pregnancy grant	Yes	FACA
15. Lump sum allowance upon childbirth	No	FACA
16. Targeted allowance for pupils	Yes	FACA
17. Lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students	No	FACA
18. Lump sum allowance for raising twins until 1 year of age	No	FACA
19. Lump sum allowance in case of adoption	No	FACA
20. Pension for insurance and old age	No	CSI
21. Pension for invalidity due to general sickness	No	CSI
22. Pension for invalidity due to employment injury or occupational disease	No	CSI
23. Social old-age pension	Yes	CSI
24. Social invalidity pension	No	CSI
25. Survivor's pension	No	CSI
26. Pension supplement in case of deceased spouse	No	CSI
27. Pension from voluntary pension insurance	No	CSI
28. Monthly social assistance allowance	Yes	SAA
29. Targeted allowance for heating	Yes	SAA
30. Monthly allowance for social integration	No	IPDA
31. Targeted financial support for buying and repairing of supportive means, devices, equipment and medical products	No	IPDA
32. Supplement for care by assistant	No	CSI
33. Scholarships	No	Reg.№ 90 & 207*

## Abbreviations:

 CSI – Code on Social Insurance (*Кодекс за социално осигуряване*)

 FACA – Family Allowances for Children Act (*Закон за семейни помощи за деца*)

 SAA – Social Assistance Act (*Закон за социално подпомагане*)

 IPDA – Integration of Persons with Disabilities Act (*Закон за интеграция на хората с увреждания*)  
 Regulation № 207 of the Council of Ministers: On the conditions for receiving scholarships by pupils after completion of basic education/ Regulation № 90 of the Council of Ministers: On the conditions and procedure for granting scholarships to students, PhD and other post-graduate students at the state tertiary schools and scientific organizations.

Table 2.3 summarizes the sources of legal regulations of the tax-benefit instruments covered by this Country Report. Regarding the means tested benefits, four of them are child-related allowances which are simulated according to the Family Allowances for Children Act /FACA/. As a general rule, for each such benefit the scope of income test excludes any benefit received under the same law. The other three benefits (social old age pension, targeted heating allowance and monthly social assistance allowance) are simulated according to different regulations: the first one under the Code on Social Insurance /CSI/ and the next two under the Social Assistance Act /SAA/. The benefits provided under SAA are subjected to the same rule as those under FACA, i.e. the scope of the income tests excludes any benefit received under SAA.

Benefits which entitlement is granted after a submission of a medical evidence for a type/level of disability or pregnancy/childbirth are assumed to have fulfilled this condition. Such benefits are the social invalidity pension, supplement for care by assistant, cash benefit for pregnancy and childbirth, cash benefits for bringing up child up to 2 years of age, monthly child allowance for bringing up a permanently disabled child up to 18 years of age and until completion of secondary education.

Following the logic of the social protection system, the last benefit in the order of simulation should be the social assistance for low income – if the family unit does not have any other sources of income (which otherwise can be received due to various circumstances, e.g. retirement and/or old age, large multi-child families, health problems and/or disability, etc.) or the income is at a very low level, the system evaluates the necessity of income support at a level related to GMI.

## 2.2 Order of simulation and interdependencies

**Table 2.4 EUROMOD Spine: order of simulation, 2013-2016**

Policy	Description	Main output
SetDefault_bg	Set default values	
UAA_bg	Uprating by Average Adjustment (switch policy, off in the baseline)	
Uprate_bg	Uprating factors	
Uprate_bands_bg	Uprating pensions in bands	
ConstDef_bg	Definition of constants used in the simulation	
Ildf_bg	Definition of income lists	
Tundef_bg	Definition of tax and benefit units	
TCA_bg	correction for tax evasion: 1) UDB SILC - comparing gross and net income from employment; 2) UDB SILC+ national SILC variables - using information on base for calculating SIC (switch policy, on in the baseline)	
yem_bg		
neg_bg	Recoding negative values of self-employment income to 0	
tscer_bg	Employers social insurance contributions	ils_sicer
tscee_bg	Employees social insurance contributions	ils_sicee
tsce_bg	Self-employed social insurance contributions	ils_sicse
tin_bg	Personal income tax	tin_s
bunct_bg	Unemployment benefit	bunct_s
bmaycct_bg	Contributory maternity benefit: cash benefit for bringing up child up to age 2	bmaycct_s
bmaprct_bg	Contributory maternity benefit: cash benefit for pregnancy and childbirth	bmaprct_s
bsa00_bg	Social assistance - guaranteed minimum income ( <i>1<sup>st</sup> run</i> )	bsa00_s
bsaht_bg	Means tested benefit for heating ( <i>1<sup>st</sup> run</i> )	bsaht_s
Bchmt00_bg	Child benefit means-tested (Monthly child allowance for bringing up a child until completion of secondary education but not longer than 20 years of age)	bchmt00_s
bchedyc_bg	Targeted allowance for pupils	bchedyc_s
bchbals_bg	Birth grant (also for adoption)	bchbals_s
bmaprnc_bg	Benefit for raising a child under the age of 1, non-contributory	bmaprnc_s
bchnm01_bg	Lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students	bchnm01_s
bchnm02_bg	Lump sum allowance for raising twins until 1 year of age	bchnm02_s
poamt_bg	Social old-age pension	poamt_s
bsa00_bg	Social assistance - guaranteed minimum income ( <i>2<sup>nd</sup> run</i> )	bsa00_s
bsaht_bg	Means tested benefit for heating ( <i>2<sup>nd</sup> run</i> )	bsaht_s

Bulgarian tax-benefit system has not undergone any substantial structural changes for the 5-years period covered, so the spine sequence is identical for all five years. For this reason we present only one table with the suggested order of simulation (table 2.4).

Several structural changes can be outlined for the period 2013-2016:

- Since the beginning of 2013 incomes from interest on deposits have been included in the annual tax base. These incomes are taxed automatically and paid directly from the bank account (there is no information about incomes from interest on deposits in the tax declaration) and the incomes and the taxes cannot be simulated

- The minimum monthly payment for uninsured people only for health insurance 16.80 BGN (2011-2015).

- From 2016 onwards, the definition of “family” for the purposes of the family allowances is expanded to include cohabiting individuals who are not married but share a common dwelling and are registered at the same current address.

The order of simulation is dependent on some interactions between particular tax and benefit policies. For example, the entitlement for the “lump sum pregnancy grant” (a non-contributory benefit) is granted only for those mothers who have not received “cash benefit for pregnancy and childbirth” (a contributory benefit). Hence, the contributory cash benefit is simulated before the non-contributory one.

The order of simulation is established as a sequence of the social transfers that can facilitate an accurate – as much as possible – application of the income tests. These tests are conducted on the basis of the gross income of the assessment units. In fact, no social transfer is subjected to SIC and PIT so income taxation could be positioned at the start of the policy spine. Employee’s SIC are simulated before PIT since they are deductible from the taxable income assessed for PIT.

### 2.3 Policy switches

The policy TCA\_bg calibrates the results from the policy simulations by taking into account potential tax evasion. TCA\_bg is a switch policy, i.e. the model can be run both with and without the correction taking place (i.e. the policy can be switched on or off). In the baseline, the policy is switched on in all policy years; hence, the results are calibrated for tax evasion. For detailed explanation on how the correction is carried out, see section 3.3.4.

UAA\_bg is another switch policy in the Bulgarian model which adjusts the uprating of public pensions. In the baseline simulations, the switch policy UAA\_bg is off and public pensions are uprated over time by taking into account the indexation rules (see section 3.4 for more details on uprating). However, for certain research purposes e.g. nowcasting poverty figures it might be more useful to adjust pensions by the growth in their average amounts. By doing so, pensions will be adjusted not only according to the indexation rules but also by taking into account compositional changes e.g. in the pensioners population. This adjustment can be enabled by switching on the policy UAA\_bg.

### 2.4 Social benefits

#### 2.4.1 Unemployment benefit (обезщетение за безработица) (*bunct\_s*)

- *Definition*

The unit of analysis is the individual (*tu\_individual\_bg*).

- *Eligibility conditions*

This is a contributory benefit. It is granted to a resident person who:

- is currently not entitled to an old-age pension;

- is not undertaking an economic activity requiring compulsory social insurance (i.e. employed or self-employed; registered agricultural producer) became unemployed involuntarily;
- has been insured for *at least 9 months* amid the last 15 months before the termination of the employment;
- is registered at the Territorial Public Employment Office as an unemployed person and is ready to accept a proposed job.

- **Income test**

Not applicable

- **Benefit amount**

The amount of the benefit is equal to 60% of the average gross contributory income calculated for the assessment period which is the last 24 months (since 1<sup>st</sup> of January 2012). The amount of the benefit shall not be lower than a certain amount (BGN 7.2 per day or approximately 151.20 per month since 2012):

Monthly thresholds for the unemployment benefit:	2013	2014	2015	2016
Minimum (BGN)	151.20	151.20	151.20	151.20
Maximum (BGN)	N/A	N/A	N/A	N/A

The benefit is provided for a duration that depends on the length of the contribution history at the moment of benefit assessment. The following table contains the duration of the payment:

Contribution period (years)	0 to 3	3 to 5	5 to 10	10 to 15	15 to 20	20 to 25	Over 25
Payment period (months)	4	6	8	9	10	11	12

**EUROMOD Note:** The estimation of contributory history is based on the variable for time spent in work (*liwwh*). Previous earnings for those who are observed to receive the unemployment benefit in SILC survey are imputed based on the amount of the benefit (using the inverse function). For those not observed to receive the unemployment benefit in SILC, previous earnings are assumed to be equal to either current earnings or to estimated income from employment.

#### 2.4.2 Contributory maternity benefit for pregnancy and childbirth (обезщетение за бременност и майчинство) (*bmaprct\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bmaprct\_bg*).

- **Eligibility conditions**

This is a contributory benefit provided to mothers who have been insured for a certain period before the childbirth. There is a minimum contributory period at the time the benefit is claimed:

Years	2013	2014	2015	2016
Contributory period	12 months			

- **Income test**

Not applicable

- **Benefit amount**

The amount of the benefit is 90% of the average gross contributory income for the last 24 calendar months (24 months – in 2013; 18 months in 2014; 24 months – since 1<sup>st</sup> of January 2015). The amount of the benefit should not be lower than the statutory minimum wage and not higher than the person's net wage:

Thresholds	2013	2014	2015	2016
Minimum (BGN)	Minimum monthly wage			
Maximum (BGN)	Person's net wage			

The benefit is paid for a particular period linked to the birth date. It is split into two parts: (1) 45 days – before the anticipated date of birth delivery; (2) the rest of the days – after the birth.

Years	2013	2014	2015	2016
Payment period	410 days (45/365)			

**EUROMOD Note:** The estimation of contributory history is based on the variable for time spent in work (*liwwh*). Previous earnings for those who are observed to receive the cash benefit for pregnancy and childbirth in SILC are imputed based on the amount of the benefit (using the inverse function). For those not observed to receive the benefit in SILC, previous earnings are assumed to be equal to either current earnings or to an estimated income from employment.

#### 2.4.3 Birth grant (еднократна помощ при раждане) (*bchbals\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bmaprct\_bg*).

- **Eligibility conditions**

The benefit is a non-contributory benefit performing as a universal birth grant paid to every mother upon childbirth. The benefit is not paid if the child is placed in a specialized child-care institution after the birth.

- **Income test**

Not applicable

- **Benefit amount**

The amount of the benefit depends on the child rank:

Birth grant amount (BGN)	2013	2014	2015	2016
First child	250	250	250	250
Second child	600	600	600	600
Third child	200	200	200	300
Fourth and each subsequent child	200	200	200	200

#### 2.4.4 Contributory maternity benefit for bringing up a child up to the age of 2 (обезщетение за отглеждане на дете до 2г.) (*bmaycct\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bmaycct\_bg*).



- **Eligibility conditions**

This is a contributory benefit provided to an insured mother with a dependent child of age 1 until completion of age 2. It is paid after the expiration of the pregnancy-and-childbirth leave during which the mother receives the cash benefit for pregnancy and childbirth. There is a minimum contributory period at the time of benefit claim:

Years	2013	2014	2015	2016
Contributory period	12 months			

However, according to the Bulgarian social insurance legislation all periods of leave (paid or not paid) due to pregnancy and childbirth are recognized as a period of insurance.

- **Income test**

Not applicable

- **Benefit amount**

:

Years	01.01-30.06.2013	01.07-31.12.2013	2014	2015	2016
Benefit amount (BGN)	240	310	340	340	340

The benefit is paid for up to 12 months (after 1 year of age and up to 2 years of age of the child).

**EUROMOD Note:** Assumptions for contributory history and previous earnings are the same as for the cash benefit for pregnancy and childbirth (see 2.4.2).

#### 2.4.5 Non means-tested child benefit for mothers in tertiary education (*bchnm01\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bmaprnc\_bg*).

- **Eligibility conditions**

This is a non-contributory lump sum benefit for a mother of a child up to age 1 under the condition that she is a regular tertiary student. The benefit can be received if the child is not placed in a specialized child-care institution. In addition, the mother shall not be insured and shall not receive contributory maternity benefit for pregnancy and childbirth or contributory maternity benefit for bringing up a child up to the age of 2.

- **Income test**

Not applicable

- **Benefit amount**

The benefit is introduced in 2009 and is determined as a fixed amount.

Year	2013	2014	2015	2016
Benefit amount (BGN)	2 880	2 880	2 880	2 880

**EUROMOD Note:** Since 1<sup>st</sup> of January 2016, the benefit is paid on two instalments. The first instalment is paid immediately after the approval of the application and the second – after the mother proves that she has been enrolled in the next semester. For the purposes of the simulations, it is presumed that the benefit is paid in full during the policy year.

#### 2.4.6 Non means-tested child benefit for twins (*bchnm02\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bmaprnc\_bg*).

- **Eligibility conditions**

This is a non-contributory lump sum benefit for a mother of twins up to age 1. The benefit cannot be received if even one of the children is placed in a specialized child-care institution.

- **Income test**

Not applicable

- **Benefit amount**

The benefit was introduced in 2009.

Year	2013	2014	2015	2016
Benefit amount (BGN)	2 400	2 400	2 400	2 400

#### 2.4.7 Child benefit for education (целева помощ за ученици) (*bchedyc\_s*)

- **Definition**

The unit of analysis is the family (*tu\_bchedyc\_bg*).

- **Eligibility conditions**

It is a non-contributory lump-sum allowance paid to a family which has one or more children enrolled in 1<sup>st</sup> grade at state or municipal schools in the respective calendar year.

- **Income test**

The benefit is paid to a family with average monthly income per family member for the last 12 months up to the following threshold:

Year	2013	2014	2015	1 <sup>st</sup> of January - 30 <sup>th</sup> of June	1 <sup>st</sup> of July - 31 <sup>th</sup> of December
Upper monthly threshold (BGN)	350	350	350	350	400

Calculation of the average income does not apply any equalization method. The income definition for the test includes the **gross income from all sources** of all family members, namely:

- (1) All components of the original (market) income which are defined as taxable by PITA.
- (2) All pensions:
  - pension for insurance and old age /IOA/;
  - pensions for invalidity due to general sickness;
  - pension for invalidity due to employment injury or occupational disease;
  - social old-age pension;
  - social invalidity pension;
  - survivor's pension;

- pension supplement in case of deceased spouse;
  - pension from voluntary pension insurance.
- (3) All contributory benefits:
- unemployment benefit (incl. the benefit for long-term unemployment);
  - cash benefit for sickness due to general disease;
  - cash benefit for sickness due to employment injury of occupational disease;
  - cash benefit for pregnancy and childbirth;
  - cash benefit for bringing up a child up to the age of 2.
- (4) All social assistance benefits and allowances:
- monthly social assistance allowance;
  - targeted allowance for heating;
  - monthly allowances for social integration.
- (5) All tertiary education scholarships (for students, PhD and other post-graduate students).

Exceptions:

- (1) All benefits granted under FACA:
- monthly allowance for bringing up child up to age of 1;
  - monthly child allowance for bringing up a child until completion of secondary education (but not longer than 20 years of age);
  - monthly child allowance for bringing up a permanently disabled child up to 18 years of age and until completion of secondary education but not longer than 20 years of age;
  - lump sum allowance upon childbirth;
  - lump sum pregnancy grant;
  - lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students;
  - lump sum allowance for raising twins until 1 year of age.
  - lump sum allowance in case of adoption
- (2) All secondary education scholarships (for pupils still in secondary school)
- (3) Supplement for care by assistant
- (4) Monthly child allowance for bringing up a permanently disabled child

- **Benefit amount**

School year	2012/13	2013/14	2014/15	2015/16
Lump-sum amount (BGN)	150	250	250	250

**EUROMOD Note:** It is a lump-sum benefit paid in the beginning of the school year (September of the respective year). The amount of the benefit is determined for a school year (September – May of the respective calendar year). Thus, the school year differs from the calendar year.

**2.4.8 Non-contributory benefit for raising a child under the age of 1 (месечна помощ за отглеждане на дете до 1 г. възраст) (*bmapnc\_s*)**

- **Definition**

The unit of analysis is the family (*tu\_bmapnc\_bg*).

- **Eligibility conditions**

This is a non-contributory allowance paid to mothers of children up to one year of age. The benefit is granted under the condition that the mother is not in receipt of the cash benefit for

pregnancy and childbirth or the cash benefit for bringing up a child up to age of 2, i.e. it is granted only to the so-called „non-insured mothers”.

**EUROMOD Note:** Some specific eligibility rules are not simulated here but a substantial bias is not expected as a result of this.

- **Income test**

The benefit is paid to individuals living in families with average monthly income per family member for the last 12 months (preceding the childbirth) up to the following threshold:

Year	2013	2014	2015	1 <sup>st</sup> of January - 30 <sup>th</sup> of June 2016	1 <sup>st</sup> of July - 31 <sup>st</sup> of December 2016
Upper monthly threshold (BGN)	350	350	350	350	400

The components included in the income test are the same as for benefit 2.3.7.

**NB!** One change is necessary in the “Exceptions” list: the current benefit (monthly allowance for bringing up child up to age of 1) must be replaced with “targeted allowance for pupils”.

- **Benefit amount**

The monthly amount of the benefit is BGN 100 and is a constant for the period 2007-2016. It is paid each month until the completion of age 1 of the child.

**2.4.9 Means-tested child benefit (месечна помощ за отглеждане на дете до завършване на средното образование, но не по-късно от 20-годишна възраст) (bchmt00\_s)**

- **Definition**

The unit of analysis is the family (*tu\_bchmt00\_bg*).

- **Eligibility conditions**

This is a non-contributory allowance paid to families with children up to 18 years of age (or 20 years of age if the child is enrolled in secondary education).

- **Income test**

The benefit is paid to families with average monthly income per family member for the last 12 months up to the following threshold:

Year	2013	2014	2015	1 <sup>st</sup> of January - -30 <sup>th</sup> of June 2016	1 <sup>st</sup> of July - 31 <sup>st</sup> of December 2016
Upper monthly threshold (BGN)	350	350	350	350	400

The components included in the income test are the same as for benefit 2.3.7.

**NB!** One change is necessary in the “Exceptions” list: the current benefit (monthly child allowance for bringing up a child until completion of secondary education) must be replaced with “targeted allowance for pupils”.

- **Benefit amount**

Since 1<sup>st</sup> of January 2016, the amount of the benefit is determined at family level, i.e. not per child and depends on how many children are entitled to monthly allowances.

Year	2013	2014	2015
First child (per child)	35	35	35
Second child (per child)	35	50	50
Third child and each consequent child (per child)	35	35	35
Twins (per child)	52.5	75	75
Permanently disabled child (per child)	70	100	100

Note: Figures are in BGN, per month.

Year	2016
Family with one child	37
Family with two children	85
Family with three children	130
Family with four children	140
Each child after the fourth	+ 20
Twins (per child)	75
Permanently disabled child (per child)	100

Note: Figures are in BGN, per month.

**EUROMOD Note:** Special case: (1) Until 1<sup>st</sup> of January 2016, the amount of the allowance for twins was determined as 50% higher than the standard amount of the benefit (per each child). From 1<sup>st</sup> of January 2016, the Family Allowances Act (*Закон за семейни помощи за деца*) stipulates that when determining the amount of family allowances per family, the amount of the allowance for twins shall be at least 1.5 times the amount of the allowances for family with one child. The exact amount is determined in State Budget Act and in 2016 it is BGN 75 per month per each child. (2) Until 1<sup>st</sup> of January 2016, the amount of the allowance for a child with permanent disability (i.e. with reduced capacity level of 50% or more) was 2 times the amount of the allowance for the 1<sup>st</sup> child. From 1<sup>st</sup> of January 2016, the Family Allowances Act (*Закон за семейни помощи за деца*) stipulates that when determining the total amount of all family allowances to be received by a given family, the amount of the allowance for a permanently disabled child shall be at least 2 times the amount of the allowances for family with one child. The exact amount is determined in State Budget Act and in 2016 it is BGN 100 per month per each child. The monthly allowance for permanently disabled children is granted without means-testing (this is valid for the whole period from 2013-2016).

#### 2.4.10 Social old-age pension (*poamt\_s*)

- **Definition**

The unit of analysis is the household (*tu\_individual\_bg*).

The legislation does not use the term “household” but the actual scope of the assessment unit practically includes all individuals which cohabit with the claimant in the same dwelling.

- **Eligibility conditions**

This is a non-contributory benefit granted to a person who has turned 70 years of age. The person should not be in receipt of any other pension.

- **Income test**

The benefit is paid to individuals living alone or in households with annual income per household member which is below a threshold obtained as “annual Guaranteed Minimum Income”:

Year	2013	2014	2015	2016
Monthly GMI (BGN)	65	65	65	65
Annual GMI (BGN)	780	780	780	780

The amount of the “annual GMI” for the test of particular claimant is obtained as a sum of the monthly amounts of GMI for the last 12 months preceding the date of turning the age of 70.

The income definition for the test includes the **gross income from all sources** of all household members, namely:

- (1) All components of the original (market) income which are defined as taxable by PITA.
- (2) All pensions:
  - pension for insurance and old age /IOA/;
  - pensions for invalidity due to general sickness;
  - pension for invalidity due to employment injury or occupational disease;
  - social old-age pension;
  - social invalidity pension;
  - survivor’s pension;
  - pension supplement in case of deceased spouse;
  - pension from voluntary pension insurance.
- (3) All contributory benefits:
  - unemployment benefit (incl. the benefit for long-term unemployment);
  - cash benefit for sickness due to general disease;
  - cash benefit for sickness due to employment injury of occupational disease;
  - cash benefit for pregnancy and childbirth;
  - cash benefit for bringing up a child up to the age of 2.
- (4) All family benefits:
  - monthly allowance for bringing up child up to age of 1;
  - monthly child allowance for bringing up a child until completion of secondary education but not longer than 20 years of age;
  - monthly child allowance for bringing up a permanently disabled child up to 18 years of age and until completion of secondary education but not longer than 20 years of age;
  - targeted allowance for pupils;
  - lump sum allowance for raising a child until 1 year of age for mothers who are regular tertiary students;
  - lump sum allowance for raising twins until 1 year of age;
  - lump sum allowance in case of adoption.
- (5) Irregular income sources (e.g. lottery winnings, bequests, etc.).

Exceptions:

- (1) All benefits granted under LSA:
  - monthly social assistance allowance;
  - targeted allowance for heating.
- (2) Supplement for care by assistant
- (3) All allowances for social integration of disabled people
- (4) Lump sum pregnancy grant
- (5) Lump sum grant upon childbirth.

- **Benefit amount**

Year	2013	2014	2015	2016
Social old-age pension	107.72	111.50	114.08	116.65

Note: Figures are in BGN, annual averages, per month. The 2016 data is based on the legislation currently in force, i.e. on the presumption that as of 1<sup>st</sup> of July all pensions will be increased by 2.6%.

#### 2.4.11 Targeted allowance for heating (*bsaht\_s*)

- **Definition**

The unit of analysis is the household (*tu\_hh\_bg*).

- **Eligibility conditions**

This is a non-contributory allowance granted to lone persons or households with low incomes.

- **Income test**

The allowance is granted to households whose average income per household member is below the threshold of the so-called “Differentiated Minimum Income for Heating” (DMIH). The following table contains the levels of DMIH for various categories of persons.

Category of person	2013	2014-2016
person living alone	233.08%	233.08%
person with reduced working capacity of 50% or more living alone	272.68%	272.68%
orphan child	219.88%	219.88%
lone parent with one or more children aged under 18 (under 20 for children attending school)	272.68%	272.68%
two spouses living together (per each spouse)	167.08%	167.08%
child aged between 0-18 (up to 20 when studying)	180.28%	180.28%
child with permanent disabilities	219.88%	219.88%
child accommodated in relatives’ family or in foster family (as a result of a child protection measure)	N/A	224.68%
person cohabiting with other persons	224.68%	224.68%
pregnant woman 45 days before the term	206.68%	206.68%
parent taking care of a child under age of 3	206.68%	206.68%
person over the age of 70	206.68%	206.68%
person over the age of 75 living alone	297.88%	297.88%
person over the age of 65 living alone	311.08%	311.08%
person with reduced working capacity of 50% or more	206.68%	206.68%
person with reduced working capacity of 70% or more	246.28%	246.28%
person with reduced working capacity of 90% or more	297.88%	297.88%

Calculation of the average income does not apply any equalization method. The income definition for the test is the same as defined for 2.3.10.

Exceptions:

- (1) All benefits granted under LSA: monthly social assistance allowance.
- (2) Supplement for care by assistant
- (3) All allowances for social integration of disabled people
- (4) Lump sum pregnancy grant
- (5) Lump sum grant upon childbirth.



**EUROMOD note:** While determining the right to a benefit, the income from pensions, determined after 01.07.2008, shall be reduced by a coefficient equal to 1.269 (1.245 for the heating season 2014/2015).

- **Benefit amount**

The amount of the benefit is determined by the Minister of Labour and Social Policy for each “heating season” (a period of 5 months: from 1<sup>st</sup> of November to 30<sup>th</sup> of March). The allowance for electricity, solid fuel and natural gas is paid to the beneficiary in accordance with the following schedule: 1) for November and December – not later than the month in which the allowance is granted; 2) for January, February and March – not later than 31 January. The allowance for central heating is paid by the Social Assistance Agency to the given heating companies, i.e. in that case this is in-kind (not cash) benefit. It is paid for each month of the heating season. The amount of the allowance is the same for all heating types.

	2012/2013	2013/2014	2014/2015	2015/2016
	heating	heating	heating	heating
	season	season	season	season
Benefit amount	65.72	65.72	72.20	72.20

Note: Figures are in BGN, per month of the heating season.

#### 2.4.12 Monthly social assistance allowance (guaranteed minimum income) (*bsa00\_s*)

- **Definition**

The unit of analysis is the household (*tu\_hh\_bg*). See also the definition in 2.3.14.

- **Eligibility conditions**

This is a non-contributory allowance granted to households with low incomes. However, there are particular categories of persons who are non-eligible for this benefit. If such persons are part of the household, then they should be removed from the assessment unit. These categories are:

- adults up to 30 years of age, living with their parents, whose income exceeds 3 times the amount of GMI, unless these adults and/or their parents are not disabled persons;
- persons who have relatives that are legally obliged to maintain them;
- persons accommodated for more than 30 days in medical, social, military or other institutions;
- persons studying in high schools or in evening form of education, including pupils who are enrolled in private schools (exceptions: disabled persons, pregnant women, and parents caring for a child up to age 3);
- persons who have refused cultivating state or municipal land suggested to them.

In addition, the right to monthly social assistance benefits depends on the following conditions:

- the claimant should live in a lodging composed of maximum 1 room per household member;
- the claimant should not possess mobile and immobile assets that can be a source of income, except for the belongings that serve the usual needs of the family (this is evaluated by the social worker);
- the claimant should not have contracts for a transfer of property in return for the obligation for support and care (e.g. caring for lone elderly owners);
- the claimant should not have acquired residential or summerhouse property or ideal parts of such property through purchase or donation during the last 5 years.

**EUROMOD note:** It is assumed that all additional requirements for granting a monthly social assistance allowances are met.

- **Income test**

The allowance is granted to households whose average income per household member is below the threshold of the so-called “Differentiated Minimum Income” (DMI). DMI is determined for each category of a beneficiary as a percentage of GMI. It is calculated for each individual depending on her/his age, health, family and educational status. The sum of all DMIs represents the DMI for the whole assessment unit (the household). The following table contains the levels of DMI for various categories of persons:

Category of person	2013	2014	2015	2016
person over the age of 75 living alone	165.0%	165.0%	165.0%	165.0%
person over the age of 65 living alone	140.0%	140.0%	140.0%	140.0%
person over the age of 65, cohabiting with other persons	100.0%	100.0%	100.0%	100.0%
person under the age of 65 living alone	73.0%	73.0%	73.0%	73.0%
person under the age of 65, cohabiting with other persons	66.0%	66.0%	66.0%	66.0%
two spouses living together (per each spouse)	66.0%	66.0%	66.0%	66.0%
person with reduced working capacity of 50% or more	100.0%	100.0%	100.0%	100.0%
person with reduced working capacity of 70% or more	125.0%	125.0%	125.0%	125.0%
child aged between 0 and 16 (up to 20 if attending school)	91.0%	91.0%	91.0%	91.0%
child aged between 7 and 16 (up to 20 if attending school), if having 5 or more unexcused absences from school	30.0%	30.0%	30.0%	30.0%
child aged between 7 and 16 and not attending school	20.0%	20.0%	20.0%	20.0%
child aged 0-18 (up to 20 when studying) – if a certificate asserting that all statutory immunisations and medical examinations are passed is not presented	30.0%	30.0%	30.0%	30.0%
orphan or child accommodated in a host family	100.0%	100.0%	100.0%	100.0%
child with permanent disability	100.0%	100.0%	100.0%	100.0%
lone parent taking care of a child under age of 3	120.0%	120.0%	120.0%	120.0%
lone parent with one or more children aged under 16 (under 20 if attending school)	100.0%	100.0%	100.0%	100.0%
pregnant woman 45 days before the term	100.0%	100.0%	100.0%	100.0%
parent taking care of a child aged under 3	100.0%	100.0%	100.0%	100.0%

Calculation of the average income does not apply any equalization method. The income definition for the test is the same as defined for 2.3.10.

Exceptions:

- (1) All benefits granted under SAA: targeted allowance for heating.
- (2) Supplement for care by assistant
- (3) All allowances for social integration of disabled people
- (4) Lump sum pregnancy grant
- (5) Lump sum grant upon childbirth.

- **Benefit amount**

The amount of the benefit is determined as a difference between the DMI of the household and the gross family income from all sources, excluding the aforementioned exceptions.

Example: The household consists of: two adults (spouses), one child aged 16 and studying, and one more adult aged up to 65. Those persons do not have any sources of income but social assistance benefits.

Step 1: Calculating DMI

$DMI = DMI \text{ 1st spouse (66\% GMI)} + DMI \text{ 2nd spouse (66\% GMI)} + DMI \text{ 1st adult (66\% GMI)} + DMI \text{ child (91\% GMI)} = BGN 42.9 + BGN 42.9 + BGN 42.9 + BGN 59.2 = BGN 187.85$

Step 2: Calculating incomes

All cohabiting persons don't have any incomes in the defined range, i.e. their income is 0.

Step 3: Calculating benefit amount

$Benefit = DMI - incomes = 187.85 - 0 = 187.85$

## 2.5 Social contributions

Depending on the occupation and the risk undertaken at work individuals may refer to I-st, II-nd or III-rd labour category. Based on the category employer's SIC vary. However, labour category of employees is not directly recorded in SILC survey data. Hence, it is assumed that all employees in the sample belong to the III-rd labour category. This assumption is based on the fact that the vast majority of employees (over 95%) are hired under III-rd category labour regime. An underestimation bias could be expected regarding the simulation of SIC that are due to the employers. However, this bias is of minor significance because cases of employment on II-nd and especially on I-st category are rarely met in the population of employed.

The social insurance and personal income taxation systems have not undergone substantial structural changes for the period after 2008. For all cases of simulation of **social insurance contributions, health insurance contributions and personal income taxes the tax unit is *tu\_individual\_bg***.

### 2.5.1 Employee social contributions (*ils\_sicee*)

Liability to contributions:

- The employee social contributions for Pension fund are compulsory paid by all employees hired on a Labour Contract and on Civil Contract.
- The employee social contributions for General Sickness and Maternity Fund and Unemployment Fund are compulsory paid by all employees hired on a Labour Contract
- For the public employee (civil servants, military, judicial system) the total amounts of compulsory SIC is paid by the State.
- If the employee is simultaneously in receipt of a pension, then he/she has a duty only for health insurance. Pensioners hired on a Civil Contract are excluded from the range of compulsory insured. Pensioners working under a Labour Contract, can decide to pay social insurance contributions (with the exception of contributions to Unemployment Fund) on a voluntary basis.

Income base used to calculate contributions:

- CI includes all gross incomes from hired employment on Labour Contract and Civil Contract received during the month.
- There is a minimum threshold for the monthly contributory base. The threshold varies by profession of the employee and economical activity of the company where the employee is hired.
- There is a maximum threshold (table 2.5.1) for the monthly contributory base when the compulsory SIC are assessed – they are not due on the fraction of income beyond the threshold.

Table 2.5.1 Social insurance contribution rates for employees at Labour Contract

	2013	2014	2015	2016
1. Pension Fund				
1.a. PF rate for persons born before 1960	7.9	7.9	7.9	7.9
1.b. PF rate for persons born after 1959	5.7	5.7	5.7	5.7*
2. Supplementary Mandatory Pension Insurance Fund (Universal Pension Funds)				
2.a. SMPIF rate for persons born before 1960	–			
2.b. SMPIF rate for persons born after 1959	2.2	2.2	2.2	2.2*
3. General Sickness and Maternity Fund	1.4	1.4	1.4	1.4
4. Unemployment Fund	0.4	0.4	0.4	0.4
5. Work Injury and Occupational Disease Fund	–			
<b>Total</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>
<b>Upper threshold for the contributory income (BGN)</b>	<b>2200</b>	<b>2400</b>	<b>2600</b>	<b>2600</b>
<b>Minimum wage (BGN)</b>	<b>310</b>	<b>340</b>	<b>360**380/</b>	<b>420</b>
<b>Average contributory income (BGN)</b>	<b>649</b>	<b>683</b>	<b>726</b>	

Notes: \* Since 1<sup>st</sup> of January 2016, people insured in Universal Pension Funds (have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance with rate 7.9% (see p.14)\*\* from 01.01.2015 to 30.06.2015 – **360 lv**, from 01.07.2015 – **380 lv**

**EUROMOD notes:**

The following assumptions are made:

- The first one concerns the minimum thresholds for the monthly contributory base. The survey does not provide data for reliable identification of each category for which a different minimum threshold is normatively set. Furthermore, in EU-SILC there are about 5 percent (weighted) of people who report employment income lower than the minimum wage level – they may belong to a labour category with lower minimum threshold than the minimum wage or they may be involved in the informal economy. Because of lack of data, in the simulations we have not taken into account for the minimum thresholds.
- Labour remuneration for each month of the year is not available in EU SILC survey. Hence, the average monthly amount of the earnings is assessed on the basis of the annual gross employment income (PY010G) and the number of months in hired employment as declared by the individual during the survey.
- Due to lack of reliable data about remunerations received on Civil Contracts in the EU SILC survey the gross earnings from Civil Contracts are merged with the major source, i.e. the earnings from Labour Contracts. For this reason, an overestimation bias could be expected regarding the compulsory SIC. However, this bias is of minor significance due to the following reasons:

- a. *Partial exemption.* The gross remuneration on a Civil Contract is reduced for social insurance and income tax purposes by the standard exemption applied to obtain CI.
- b. *Low levels of SIC rates on the skipped items.* The total rates applied on CI from Labour and Civil Contracts differ by less than 2 percentage points.
- c. *Low share in the total employment income.* The share of employers' SIC revenue from this source is about 1% of total revenues from Labour and Civil Contracts (NSSI Yearbooks 2011-2013).

### 2.5.2 Employer social contributions (ils\_sicer)

The clauses stated in the preceding section 2.5.1 (regarding the employee share of SIC) are valid also for the SIC due by the employers. Hereafter only the specific issues are presented regarding the duties of the employer of an employee hired on a Labour Contract, on a Civil Contract, or as a Public Servant.

Since this is the typical case of a regular labour relation, SIC due to the employer are set in more detail (Table 2.5.2. 1a)

- The duty on “Work Injury and Occupational Disease” /WIOD/ Fund varies from 0.4% to 1.1% depending on the type of economic activity of the employer.
- For employees working under the I-st or II-nd category Labour Contract an additional component emerges regarding the second pillar – contribution to Professional Pension Fund. The rates on this fund increase from 0 (for category III) to 7% (category II) and 12% (category I). The rate applied for the III-rd category (allocated to a Universal Pension Fund) is held constant for all three categories

**Table 2.5.2a**

Labour Category III	2013	2014	2015	2016
1. Pension Fund				
1.a. PF rate for persons born before 1960	9.9	9.9	9.9	9.9
1.b. PF rate for persons born after 1959	7.1	7.1	7.1	7.1*
2. Supplementary Mandatory Pension Insurance Fund (Universal Pension Fund)				
2.a. SMPPIF rate for persons born before 1960	–	–	–	
2.b. SMPPIF rate for persons born after 1959	2.8	2.8	2.8	2.8*
3. General Sickness and Maternity Fund	2.1	2.1	2.1	2.1
4. Unemployment Fund	0.6	0.6	0.6	0.6
5. Work Injury and Occupational Disease Fund	0.7**	0.7**	0.7**	0.7**
<b>Total</b>	<b>13.3</b>	<b>13.3</b>	<b>13.3</b>	<b>13.3</b>

\* Since 1<sup>st</sup> of January 2016, people insured in Universal Pension Funds have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance with rate 9.9% (see p.14)

\*\* on average

### EUROMOD Notes:

- The exact WIOD rate is not simulated since it is infeasible to identify the necessary categorization of the employer in the EU SILC survey data. For simulation purposes a uniform value is assigned at the mean level (0.7%).
- It is assumed that all employees belong to the III-rd labour category. That is why for the simulation of the policy “SIC paid by employers” only the III-rd category

contributory rates are considered. Table 2.5.2.1b shows the SIC for I-st and II-nd labour categories.

- Contributions for hired employment on Civil Contract are not simulated in 2013 - 2016 policy systems (see EUROMOD Note in 2.5.1).

**Table 2.5.2b SIC rates for employers-insurers on Labour Contract – Ist and II-nd category**

<b>Labour Category II</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
1. Pension Fund				
1.a. PF rate for persons born before 1960	12.9	12.9	12.9	12.9
1.b. PF rate for persons born after 1959	10.1	10.1	10.1	10.1*
2. Supplementary Mandatory Pension Fund				
2.a. SMPFI rate for persons born before 1960				
PPF (Professional Pension Fund)	7.0	7.0	7.0	7.0**
UPF (Universal Pension Fund)	-			
2.b. SMPFI rate for persons born after 1959				
PPF (Professional Pension Fund)	7.0	7.0	7.0	7.0**
UPF (Universal Pension Fund)	2.8	2.8	2.8	2.8*
3. General Sickness and Maternity Fund	2.1	2.1	2.1	2.1
4. Unemployment Fund	0.6	0.6	0.6	0.6
5. Work Injury and Occupational Disease Fund	0.7***	0.7***	0.7***	0.7***
<b>Total</b>	<b>23.3</b>	<b>23.3</b>	<b>23.3</b>	<b>23.3</b>

  

<b>Labour Category I</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2015</b>
1. Pension Fund				
1.a. PF rate for persons born before 1960	12.9	12.9	12.9	12.9
1.b. PF rate for persons born after 1959	10.1	10.1	10.1	10.1*
2. Supplementary Mandatory Pension Fund				
2.a. SMPFI rate for persons born before 1960				
PPF (Professional Pension Fund)	12.0	12.0	12.0	12.0**
UPF (Universal Pension Fund)	-	-	-	-
2.b. SMPFI rate for persons born after 1959				
PPF (Professional Pension Fund)	12.0	12.0	12.0	12.0**
UPF (Universal Pension Fund)	2.8	2.8	2.8	2.8*
3. General Sickness and Maternity Fund	2.1	2.1	2.1	2.1
4. Unemployment Fund	0.6	0.6	0.6	0.6
5. Work Injury and Occupational Disease Fund	0.7***	0.7***	0.7***	0.7***
<b>Total</b>	<b>28.3</b>	<b>28.3</b>	<b>28.3</b>	<b>28.3</b>

\*Since 1<sup>st</sup> of January 2016, people insured in Universal Pension Funds have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance with an increased pension contribution 12.9%(see p.14)

\*\* Since 1<sup>st</sup> of January 2016, people insured in Professional Pension Funds have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance with an increased pension contribution – 7% additional for Labour Category II and 12% additional for Labour Category I. (see p.14)

\*\*\* on average

### 2.5.3 Self-employed social contributions (ils\_sicse)

Self-employed individuals have a legal duty to contribute to social insurance funds at a minimum level which covers only pension and health insurance. The rates for this compulsory state social and health insurance are presented in table 2.4.3.



- A self-employed individual can choose a particular monthly value for her contributory base which could be higher than the minimum threshold and up to the ceiling.
- Compulsory SIC are due by entrepreneurs and other self-employed only for those months during which they have conducted business activity (i.e. have maintain records for business expenditures and revenues).
- Self-employed individuals can decide to pay contributions to General Sickness and Maternity Fund of the State Public Social Insurance on a voluntary basis.

Table 2.5.3 Social insurance contribution rates for self-employed

	2013	2014	2015	2016
<b>1. Pension Fund</b>	<b>17.8%</b>	<b>17.8%</b>	<b>17.8%</b>	<b>17.8%</b>
Lower threshold	420	420	420	420
Upper threshold	2200	2400	2600	2600
<b>Lower threshold for the contributory base for registered agricultural or tobacco producers:</b>				
If this is their only source of income (25%)				
If there are also other sources (50%)	240	240	300	300

Note: \* The minimum threshold depends on the taxable income for the previous year: Up to 5400 BGN – 420 BGN; from 5401.01 to 6500 BGN – 450 BGN; from 6501.01 to 7500 BGN – 500 BGN; for 7500.01 BGN and more– 550 BGN. For new self-employed and for self-employed without incomes form previous year the threshold is 420lv.

**EUROMOD Note:** Due to lack of data in EU-SILC, we have assumed that the contributory income for each self-employed is equal to her income from self-employment. Self-employed individuals can expand the range of the insurance risks by deliberately contributing to “General Sickness and Maternity” Fund but this decision cannot be taken into account in the simulation.

#### **2.5.4 Health insurance contributions**

- The health insurance contributions are legal duty for all citizens in Bulgaria.
- The employees and employers pay different proportions from the rate of health insurance contributions
- Health insurance contributions are due by entrepreneurs and other self-employed only for all months in the year
- The state budget contributes to the health fund for the pensioners, registered unemployed, individuals under 18 years, students in the tertiary education and public employees
- The unregistered unemployed, economically inactive and other uninsured people have the duty to pay health insurance contributions
- If a pensioner continues to work after retirement **only the health insurance element** (and no other SIC) is still due.
- The health insurance total rate is **8%** for the period 2013-2016
- By labour contract or other contractual hired work the rate is split into 4.8% due to the employers and 3.2% due to the employees
- The minimum and maximum thresholds for the contributory income for the health insurances are the same as those for other social insurances (table 2.5.1 for employee and 2.5.3 for self-employed)

- The monthly payment for uninsured people only for health insurance 16.80 BGN in 2013--2016

### 2.5.5 Credited insurance contributions (ils\_sicct)

Credited insurance contributions are the typical case for hired employment in the public administration system. Other special cases of central government jobs (e.g. military, judicial, and law enforcement employees) have almost the same treatment by the compulsory social insurance, thus no separate simulation is conducted about them. Table 2.5.5 contains the total SIC rates which are entirely due by the employer of public employees (no contributions are paid by the employees), up to the maximum thresholds.

Table 2.5.5 Social insurance contribution rates for employers-insurers of Public Servants

	2013	2014	2015	2016
1. Pension Fund				
1.a. PF rate for persons born before 1960	17.8	17.8	17.8	17.8
1.b. PF rate for persons born after 1959	12.8	12.8	12.8	12.8*
2. Supplementary Mandatory Pension Insurance Fund (Universal Pension Funds)				
2.a. SMPIF rate for persons born before 1960				
2.b. SMPIF rate for persons born after 1959	5	5	5	5*
3. General Sickness and Maternity Fund	3.5	3.5	3.5	3.5
4. Unemployment Fund	1	1	1	1
5. Work Injury and Occupational Disease Fund	0.7	0.7	0.7	0.7
6. Health insurance	8	8	8	8
<b>Total</b>	<b>31.0</b>	<b>31.0</b>	<b>31.0</b>	<b>31.0</b>
<b>Upper threshold for the contributory income</b>	<b>2200</b>	<b>2400</b>	<b>2600</b>	<b>2600</b>

\*Since 1<sup>st</sup> of January 2016, people insured in Universal Pension Funds have been given the opportunity to decide whether to remain insured only in the State Public Social Insurance with an increased pension contribution 17.8% (see p.14)

**EUROMOD Note:** Identification of such employees is informed by the EU-SILC survey concerning the type of hired employment contracts on the main job as declared by the individuals for the respective income year.

## 2.6 Personal income tax (tin\_bg)

### 2.6.1 Tax unit

- PIT system in Bulgaria in 2013-2016 is based on the taxation of the individual (The unit of analysis is the individual (*tu\_individual\_bg*))
- PIT is due by any resident person who has earned income from one or more taxable sources in Bulgaria or from abroad during the fiscal year. It is assumed that an individual having one or more sources of taxable income *different from the earnings from employment on Labour Contract or on Public Servant Contract* has submitted a Tax Declaration about her income

### **2.6.2 Exemptions**

A wide range of sources are exempted from personal income taxation (27 items explicitly defined in PITA). The main sources of income that are not included in the range of taxable income are:

- (a) all social insurance benefits and social assistance allowances;
- (b) income from private pension insurance (after regularly obtaining the right for pension);
- (c) . Since the beginning of 2013 incomes from interest in local commercial banks on deposits are taxed automatically and paid directly from the bank account (there is no information about incomes from interest on deposits in the tax declaration)
- (d) income from interest on treasury bills and bonds issued by the central or local governments;
- (e) insurance indemnities and compensations received;
- (f) income obtained by registered agricultural or tobacco producers from selling unprocessed agricultural goods;

### **2.6.3 Tax allowances**

Tax deductions (allowances) are applied in numerous sections of the Tax Declaration where each itemized tax base is obtained for every taxable income source. Table 2.6.3.1 presents the deductions from the major income sources that constitute the consolidated tax base on PIT.

**Table 2.6.3.1 Derivation of itemized tax bases from the main income sources**

## EUROMOD Country Report – BULGARIA

<b>1. Earnings from Labour Contract</b>	2013	2014	2015	2016
Gross earnings				
SIC	9.70%	9.70%	9.70%	9.70%
HIC	3.20%	3.20%	3.20%	3.20%
Tax base = Gross earnings – SIC – HIC				
<b>2. Earnings from Civil Contract</b>	2013	2014	2015	2016
Gross earnings				
Normatively recognised expenditures (NRE)	25%	25%	25%	25%
Taxable income = Gross earnings – NRE				
SIC	7.90%	7.90%	7.90%	7.90%
HIC	3.20%	3.20%	3.20%	3.20%
Tax base = Taxable income – SIC – HIC				
<b>3. Income from self-employment as sole entrepreneur</b>	2013	2014	2015	2016
Gross self-employment earnings				
SIC	17.80%	17.80%	17.80%	17.80%
HIC	8%	8%	8%	8%
Tax base = Gross earnings – SIC – HIC				
<b>4. Other sources of self-employment income</b>	2013	2014	2015	2016*
Gross self-employment earnings from each source				
NRE (separate by income source)				
• Freelance professions	25%	25%	25%	25%
• Agricultural activity (processed products)	40-60%	40-60%	40-60%	40-60%
• Forestry and fishery activity	40%	40%	40%	40%
• Income from crafts, trade with decorative plants	40%	40%	40%	40%
• Artistic/performance activities	40%	40%	40%	40%
• Income from authorship rights (scientific/art products)	40%	40%	40%	40%
Taxable income = Gross Earnings – NRE				
SIC	17.8%	17.8%	17.8%	17.8%
HIC	8%	8%	8%	8%
Tax base = Taxable income – SIC – HIC				
<b>5. Incomes from renting (real estate, non-financial assets)</b>	2013	2014	2015	2016*
Gross income				
NRE	10%	10%	10%	10%
Taxable income = Gross income – NRE				
SIC	–	–	–	–
HIC	8%	8%	8%	8%
Tax base = Taxable income – SIC – HIC				

\*preliminary unpublished information

The tax allowances are subtracted from the consolidated tax base before the final calculation of PIT duty. The final tax base is obtained by reduction of the consolidated tax base by the amount of allowances. These allowances are stipulated in annual values.

### **Table 2.6.3.2 Tax allowances from the consolidated tax base**

Allowances (annual amounts)	2013	2014	2015	2016*
1. Standard deduction for permanently disabled persons, BGN (i.e. with 50% or higher level of disability)	up to 7920	up to 7920	up to 7920	up to 7920
2. Deduction for voluntary social, unemployment, health and life insurance (max.% from the consolidated tax base)	10%	10%	10%	10%
3. Standard child deduction				
For 1 child (BGN)	–	–	200	200
For 2 children (BGN)	–	–	400	400
For 3 and more children (BGN)	–	–	600	600
For permanently disabled child (BGN)	–		2000	2000
4. Deduction of bequests (max.% from the consolidated tax base)				
• For social and health institutions, Red Cross, NGOs	5%	5%	5%	5%
• For sponsoring cultural events or products	15%	15%	15%	15%
• For the National Fund “Children’s Health”	50%	50%	50%	50%

\*preliminary unpublished information

In the period 2013 – 2016 there is a specific tax allowance for young families with mortgage. The amount of the mortgage interest paid during the year is subtracted from the annual consolidated tax base. The tax allowance for mortgage interest can be applied, if the family fulfill the following conditions simultaneously:

1. The mortgage contract is signed by a person with a registry marriage.
2. At least one of the married partners is below 35 years old.
3. The home with the mortgage is the only dwelling owned by the family.

The mortgage interest tax allowance is valid only for interests paid on the first 100 000 leva (50 000 Euro) of the principal amount.

The mortgage interest tax allowance can be taken only by one of the partners.

#### **2.6.4 Tax base**

On the first stage, the consolidated tax base is obtained by summing-up all itemized tax bases from the specified taxable income sources. On the second stage, the final consolidated tax base is further reduced by the allowances in Table 2.6.3.2 (if applicable to a particular individual).

#### **2.6.5 Tax schedule**

The tax rate for 2013-2016 is flat: **10% of the final consolidated tax base.**

**Only in 2014 for earnings from labour contract up to 4080 (on annual bases) PIT is not due.** PIT is currently withdrawn monthly during the year and is refunded after the submission of the tax declaration in 2015. To use this tax credit the individual has to fulfill simultaneously the following conditions:

1. The incomes during the year are only from labour contracts;
2. The annual incomes from labour contracts do not exceed the amount of 4080 BGN, excluding the additional seniority bonus (i.e. additional top-up monthly percentage for each year of labour service).

Since the beginning of 2013 incomes from interest on deposits have been included in the annual tax base. The tax rate is 10% for 2013 and 8% for 2014-2016. (for 2016 according preliminary information the tax rate remains 8%).

### **3. Data**

#### **3.1 General description**

The Bulgarian dataset for EUROMOD 2013-2016 simulation is derived from the EU-SILC standard UDB 2014 (income reference year 2013)). It contains the data from wave 2014 of the Bulgarian SILC survey which is implemented as a 4-year rotating household panel survey. The field work for the observation usually takes place in the period April-July each year.

The 2014 EU-SILC sample is designed as a stratified two-stage cluster sample representative for all private households in the country and is stratified by administrative districts and urban-rural type of residence. The primary sampling units are the so called “census enumeration clusters” and the final sampling units are the households. At the first stage, PSUs are selected with probability proportional to size (i.e. the number of households) and at the second stage the households are selected by systematic sampling within the respective cluster.

According to the EU-SILC general guidelines the data about living conditions, housing, and social exclusion is collected at the household level while personal, labour, and health information is recorded at the individual level – for each person aged 16 or over. Income components data is partially recorded at the individual level, however, some components are included in the household section of SILC.

**Table 3.1 EUROMOD database description**

EUROMOD database	BG_2014_b3
Original name	Статистика на доходите и условията на живот, 2014 (EU-SILC, version UDB_ver 2014-1 from 01-01-16)
Provider	National Statistical Institute of Bulgaria
Year of collection	2014
Period of collection	2014
Income reference period	2013
Unit of assessment	Household
Sample size	4.963 HH 12,170 IND

Notes: “Household” is defined as a person living alone or a group of people who live together in the same dwelling and share expenditures, including the joint provision of the essentials of living. Family members living together but not sharing their income and expenditure with other family members make up separate households.

The sample for EU-SILC 2014 is selected from the sampling frame based on the Population Census 2013. The database includes all private households and their current members residing in the respective territory. Persons living in collective households and in institutions are excluded from the target population. Students’ and workers’ hostels are excluded at the first stage of selection of PSUs because these individuals rarely stay on the same addresses and are difficult for tracing.

The sampling frame was updated according to the administrative changes occurred regarding the statute of some settlements (e.g. some villages were re-categorized as towns; transitions of municipalities or settlements from one administrative district to another were ratified, etc.).



The sample is stratified by the administrative-territorial districts of the country (28 districts, NUTS3 level) and the type of residence of the household. As a result 56 strata are formed (28 of urban and 28 of rural population). In order to apply PPS sampling of clusters the settlements are sorted within each stratum according to the number of their population. The clusters on the first stage are chosen with probability proportional to size (i.e. the number of households in the PSUs). Systematic random sampling of secondary units (households) in each selected PSU is applied and 5 households are selected from the PSU. Addresses and household data within the selected PSUs are updated according to the Information System “Demography” /ISD/ data.

### **3.2 Data adjustment**

Data adjustments were performed occasionally as a result of edit checks and other controls. These validations were implemented for ensuring data correctness and consistency. Addresses and household data within the selected PSUs are updated according to the Information System “Demography” data (ISD). Data source for the natural movement and the internal migration of the population is the National Civil Registration System. ISD were used for verifying correctness of identifiers and for checking against previously collected information (e.g. household composition, birth dates, gender, etc.) for those individuals who are not observed for the first time.

Weighting factors were calculated as required to take into account the units’ probability of selection, non-response and to adjust the sample to external data relating to the distribution of households and persons in the target population, such as sex and age, residence or administrative-territorial districts (NUTS 3).

All gross income values were checked whether they are equal or greater than the net values and whether the net values are greater or equal than half the gross values (so called “soft error” check). Also, lower and upper boundaries were used to check for most of recorded social transfer components (e.g. social benefits, pensions) based upon the national legislation. Extreme income values (outliers) were compared with data provided by the National Social Security Institute (NSSI), other administrative sources, and data from previous waves.

The person-level National SILC survey records the main items of the maternity benefits that are by nature related to the social insurance rights of the insured individuals. Though, if an individual receives family-related social insurance benefits she is generally not eligible for non-contributory social assistance benefits. NSI checks for consistency of data collection in this particular case and adjusts the data records accordingly.

Relevant corrections and adjustments are conducted if necessary, e.g. if some values are found to exceed the maximum possible amounts of unemployment, old-age, survivor, sickness and disability benefits. Adjustments have been performed also in order to correct for possible double registration of income components. As typical examples, in particular cases child allowances or personal income from agriculture, property or land were found to be recorded in both household and individual questionnaires.

During the preparations of the EUROMOD input database, in order to guarantee consistency between demographic variables and income variables which refer to the previous year (and on which EUROMOD simulation are based), 14 children aged 0, i.e. born between the end of the income reference period and the date of interview, have been dropped from the sample. The resulting sample includes 4,963 households or 12,170 individuals.

### **3.3 Imputations and assumptions**

#### **3.3.1 Time period**

The reference period for the various attributes is:

- demographic variables (age, marital status, education): at the date of the interview;
- economic activity status: recorded both at the date of interview (RB210) and for each month during the income reference year (PL211A-L);
- current employment variables: at the date of the interview;
- income data: calendar year 2013 (based on 12-months period of receipt);
- housing, durables possessions, financial, social, and health situation of household: at the date of the interview;

All monetary incomes in the Bulgarian part of EUROMOD database are converted into monthly levels.

#### **3.3.2 Gross incomes**

In the Bulgarian SILC data missing values have been imputed, where necessary. Most of the imputations have been done by National Statistical Institute in Bulgaria. A few remaining imputations were done by the EUROMOD developer and they are described in detail in the Data Requirement Document (DRD).

Bulgarian SILC 2014 survey provided the respondents with the option of reporting their income net or gross at component level. The form in which the net amounts were recorded in the database was net of both income tax and SIC. In the same time, each respondent was asked to record explicitly the average contributory base on which she has been insured by the employer (or has paid SIC as self-insured individual) during the income year. This amount was used for the calculation of SIC and PIT duties by “forward calculation” according to the respective legislation (about PIT and compulsory SIC).

However, when both the gross income and the information on the contributory base were missing these amounts were imputed by “backward calculation” applying the PIT-SIC rules on the net income. This net-to-gross conversion was performed internally by NSI without making special adjustments for tax evasion, i.e. assuming full tax compliance. The procedure was informed by all the relevant information available in the national SILC database. Moreover, administrative records from NSSI were used to assist this procedure. The gross income was obtained by summing up the assessed PIT duty and compulsory SIC to the recorded net income.

#### **3.3.3 Disaggregation of benefit variables**

A range of UDB EU-SILC benefit variables have been obtained after aggregation of several country-specific benefits that are recorded by the National SILC survey. The aggregation is done by benefit function, e.g. old-age, disability, sickness, unemployment, family. A typical case is the target variable HY052 “contributory non-means-tested family / children related allowances” which are aggregate variables that include the sum of maternity benefits (see 1.3.3). However, to simulate certain policies in EUROMOD information about the entitlement of single benefits is required. Thus, efforts were made to disaggregate the broader benefit categories by imputing the separate components. The imputations have been done using

information in EU-SILC on individual/household characteristics and receipt of the aggregated variables.

Table 3.3.3.1 lists the benefits imputed into the EUROMOD input data set based on information from the aggregated EU-SILC variables for family/maternity (HY052, HY053 and HY054), unemployment (bun/PY090) and social assistance (HY063 and HY064) benefits. These variables were disaggregated into as much detail as possible. After the disaggregation, the remaining benefit amounts which could not be split further were included in the benefits bfamtot and bfanmot (Other means-tested and non-means-tested family benefits), bunot (Other unemployment benefits), bsaot (Other social assistance benefits) as well as bsacm (Complementary social assistance benefits).

All benefits listed in Table 3.3.3.1 are also simulated in EUROMOD apart from the following five benefits – bfamtot, bfanmot, bunot, bsaot and bsacm. Thus, among all imputed benefits only these five are used in the baseline simulations and the calculation of household disposable income. The rest of the imputed benefits are not used as their simulated in EUROMOD counterparts are taken into account instead.

**Table 3.3.3.1 Imputed variables from EU-SILC 2014**

Variable name in EUROMOD input data	Variable description	Component of the aggregated variable in EU-SILC
bmaprct	Cash benefit for pregnancy and childbirth (обезщетение за бременност и раждане на дете)	HY052
bmaycct	Cash benefit for bringing up child up to age 2 (обезщетение за отглеждане на дете до 2 г.)	HY052
bchbals	Lump sum benefit for childbirth (еднократна помощ при раждане)	HY054
bchedyc	Child benefit for education (целева помощ за ученици)	HY053
bmaprnc	Monthly benefit for bringing up child up to age 1 (месечна помощ за отглеждане на дете до 1 г. възраст)	HY053
bchmt00	Monthly child allowance (месечна помощ за отглеждане на дете)	HY053
<b>bfamtot</b>	<b>Other means-tested family benefits</b>	<b>The residual benefit from HY053</b>
<b>bfanmot</b>	<b>Other non-means-tested family benefits</b>	<b>The residual benefits from HY052 and HY054</b>
bunct	Unemployment benefit (обезщетение за безработица)	bun/PY090
<b>bunot</b>	<b>Other unemployment benefits</b>	<b>The residual benefit from bun/PY090</b>
bsa00	Monthly monetary SA benefit (месечна парична помощ поради ниски доходи)	HY063
bsaht	Targeted benefit for heating (целева помощ за отопление)	HY063
<b>bsaot</b>	<b>Other social assistance benefits</b>	<b>The residual benefit from HY063</b>
<b>bsacm</b>	<b>Complementary social assistance benefits</b>	<b>HY064</b>

### 3.3.4 Correction for tax evasion

In the simulation of social insurance contributions, income tax and means-tested family and social assistance benefits, a correction for tax evasion has been taken into account. The approach can be summarized as follows:

The baseline is based on the UDB dataset in which the benefit disaggregation has been informed by imputations (BG\_2014\_b3). The user can apply tax evasion correction through the policy TCA\_bg which is based on a comparison between net and gross employment incomes. Under this approach, it is assumed that an individual is evading taxes if her (positive) net and gross employment incomes are equal. The individual is assumed to be a full tax evader and hence, no income tax and social insurance contributions are simulated.

Furthermore, for the simulation of the income-test for family and social assistance benefits, individual earnings are not taken into account if the individual is assumed to be a full tax evader.

There is no correction for tax evasion of self-employment income.

### 3.4. *Uprating factors*

To account for any time inconsistencies between the input dataset and the policy year, uprating factors are used. Each monetary variable (i.e. each income component) is updated so as to account for changes in the non-simulated variables that have taken place between the year of the data and the year of the simulated tax-benefit system. Uprating factors are generally based on changes in the average value of an income component between the year of the data and the policy year. In case no data were available, official forecasts of prices is used. Uprating factors for pensions are based on the official indexation rules. They cover changes in pension amounts occurred during the period from 1<sup>st</sup> of July of the previous year to 30<sup>th</sup> of June of the current year. For social transfers which amounts are determined by the authorities, the change in the statutory amounts is used. For detailed information about the construction of each uprating factor as well as the sources that have been used, see Table 3.4 in Annex 1.

As a rule, updating factors are provided both for simulated and non-simulated income components present in the input dataset. It should be noted however that in the case of simulated variables, the actual simulated amounts are used in the baseline rather than the uprated original variables in the dataset. Uprating factors for simulated variables are provided so as to facilitate the use of the model in cases when the user wishes to turn off the simulation of a particular variable.

### 3.4.1 Uprating of pensions by bands

Although due to data limitations we do not simulate old-age, disability and survivor pensions, to account for over-time changes we uprate (backrate) pensions by the statutory indexation rule and approximate pension supplements in EUROMOD. Table 3.4.1.1 below shows the indexation rate we apply on pensions; in other words, this is the uprating factor from one year to another. Table 3.4.1.2 summarises the rules for calculating the December and Easter pension supplements.

**Table 3.4.1.1 Implementation of pension indexation rules (2013-2016) in EUROMOD**

	2013-2014	2014-2015	2015-2016
Indexation rate	1	1.027	1.019

**Table 3.4.1.2 Implementation of pension supplements (2013-2016) in EUROMOD**

	2013-2014	2014-2015	2015-2016
December (from start-year) supplement	50#m if pensions<=250#m	- 40#m if pensions<=285#m	- 40#m if pensions<=300#m
Easter (April from end-year) supplement	- 40#m if pensions<=150#m - 30#m if pensions>150#m & pensions<=250#m - 20#m if pensions>250#m	- 40#m if pensions<=285#m	- 40#m if pensions<=300#m

Pension December and Easter supplements are granted to individuals who receive old-age, disability and/or survivor pensions. Whenever supplement entitlement is linked to the income received from pensions, the relevant income concept refers to the sum of all pensions received by the individual (i.e. the sum of all non-zero old-age, disability and survivor pensions).

In terms of receiving the payment, individuals can either collect their pensions and pension supplements from the post office or receive them via bank transfer. In both cases, they receive one payment which comprises the sum of all pensions and supplements they are entitled to and so, supplements are not always directly linked to a particular pension type: As long as the individual receives only one type of pension (e.g. old-age), then it is clear that the supplement is granted on the basis of that particular pension type. However, if the person receives more than one pension type, then the supplement is no longer linked to a particular pension. This latter case poses a difficulty in identifying the pension supplements in the household survey data because it is unclear as part of which pension type respondents report their supplements.

To be able to uprate (or backrate) pension supplements over time, we have made the following assumptions in EUROMOD about the way supplements have been reported in EU-SILC:

- a. If the person receives a non-zero amount of old-age pension ( $poa > 0$ ), we assume that the old-age pension variable contains the supplement. In case supplement entitlement is linked to the level of pension income, we consider the level of  $poa$  or the sum of  $poa$  and any other pension type that has been received ( $pdi$  and/or  $psu$ ).
- b. If the person does not receive  $poa$  but receives disability pension ( $pdi > 0$ ) (with or without survivor pension ( $psu$ )), we assume that the disability pension variable contains the information on the supplement. In case supplement entitlement is linked to the level of pension income, we consider the level of  $pdi$  or the sum of  $pdi$  and  $psu$  (if survivor pension is also received).
- c. If the person does not receive  $poa$  and  $pdi$  but receives  $psu$ , we assume that  $psu$  contains the information on the supplement. In case supplement entitlement is linked to the level of pension income, we consider the level of  $psu$ .

Finally, in terms of the order of calculations:

- i. Uprating: 1. apply the indexation rate; 2. add the December supplement; 3. add the Easter supplement
- ii. Backrating: 1. subtract the Easter supplement; 2. subtract the December supplement; 3. apply the indexation rate.

## 4. Validation

### 4.1. Aggregate Validation

EUROMOD results are validated against external figures. Detailed comparisons of the number of people receiving a given income component and total yearly amounts are shown in Annex 2. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against external official data which is available for most items up to year 2015 at the moment of finalisation of this report. The main discrepancies between EUROMOD results and the external data are discussed in the following subsections. Factors that may explain the observed differences are also discussed.

#### 4.1.1. Components of disposable income

EU-SILC gross incomes are obtained following the standard Eurostat instruction regarding the common elements. The disposable household income variable is derived after the subtraction of the regular taxes on wealth (HY120G), income tax and SIC (HY140G), and any regular transfers paid to other households (HY130G).

**Table 4.1 Components of disposable income**

	EUROMOD [2013-2016]	Bulgarian EU-SILC 2014 [income year 2013]
	ils_dispy	HY020
Employee cash or near cash income	+	+
Employer's social insurance contribution	+	n/a
Company car	n/a	+
Contributions to individual private pension plans	n/a	n/a
Cash benefits or losses from self-employment	+	+
Pension from individual private plans	+	n/a
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	n/a	n/a

#### 4.1.2. Validation of incomes (not simulated in EUROMOD)

Table 4.2 presents the annual average level of employment and unemployment in Bulgaria for the period 2013-2016. The official number of employed – as collected by the annual compulsory census of enterprises – underestimates the actual number because of the systematic downward bias of the employment figures officially reported by small and medium-sized businesses /SMEs/. For this reason data from the Labour Force Survey (LFS) are preferred since the LFS estimates the quarterly number of employed and unemployed taking into account the *actual* employment status of the sampled individuals at the critical moment of observation. This way the LFS statistics are suggested here as a better source of external statistics due to two main reasons:

- methodological consistency of the identification of target individuals;
- high accuracy of LFS (operating with the largest representative sample in the country).

Table 4.2 shows that the number of employed in EU-SILC is very close to the one in LFS. However, this is not the case with the number of unemployed – in 2013 this number is 70% larger in EU-SILC than in LFS. This could be explained by respondents misreporting their employment status, i.e. a tendency of overstating the unemployment status by some individuals, especially self-employed, during the survey.

It should be kept in mind that there are several sources providing data about the number of employed and self-employed (LFS; National Accounts; National Social Security Institute (NSSI): Statistics on insured persons). To maintain consistency, we validated the number of recipients of employment and self-employment income as well as the aggregate amounts of



these income sources in EU-SILC against data from the National Accounts (see Table 4.3 and Table 4.4 in Annex 2).

Table 4.3 shows that the number of individuals with employment income – labeled in EUROMOD as *yem* – in the EU-SILC survey for 2013 is 38% (or 38 percentage points /38pp/) higher than the number from the National Accounts data. This could be explained mainly by unofficial employment providing “grey economy” wages that are not reported to NSSI and the National Revenue Agency (NRA). (For analysis on the grey economy in Bulgaria, see Nonchev et al. (2011).) Another possible explanation is that EU-SILC captures individuals who work in family farms and declare themselves in the survey as employees. In contrast, Table 4.4 shows that the total income from employment in EU-SILC is lower than the National Accounts figure for “Wages and Salaries” by 7-8pp in 2013-2014 and by just 1pp for year 2015. It should be noted though that, in addition to gross wages/salaries, the National Accounts data should include also in-kind payments (e.g. company car) which are reported separately from employment income in EU-SILC, however, these figures for Bulgaria are economically insignificant.

The average employment income in EU-SILC is around 33pp lower than the average in the National Accounts data for 2013-2014; however, this discrepancy is reduced to 28pp for 2015. The main reason for this divergence is the difference in the number of income receivers (larger by 38pp). Another possible reason is that individuals involved in the grey economy – who may be captured in the survey but not in the National Accounts – earn lower wages which could push down the average employment income in EU-SILC. Finally, it is also possible that employment income (on average) has been underreported in EU-SILC.

In terms of self-employment income (*yse*), the total number of self-employed in EU-SILC is quite lower (by 30pp in 2013) than the number from the National Accounts data. These results are validated upon the “Operating surplus / Mixed income” National Accounts indicator for Sector S.14 Households.<sup>1</sup> Notably, the extent of underestimation of the aggregate amount of self-employment income in EU-SILC is practically the same – again at a level of 70% of the amount from the National Accounts for 2013. Such a divergence could also be due to underrepresentation of large-scale entrepreneurs in the survey sample.

Investment income (*yiy*) was found not to be feasible for validation, as the recording of such sources in surveys is usually not reliable. Similarly, the income from shares and other securities, e.g. the dividend income, is not recorded consistently in the National Accounts or in the survey data.

We could not find information from external sources on the number of recipients/payers and total amount of private transfers (paid to and received from other households). The figure for incomes from rent in the National Accounts is not available at the moment of finalization of this report.

Table 4.5 and Table 4.6 contain the validation results for the benefits and pensions in EU-SILC which are not simulated in EUROMOD. As an overall result, EU-SILC provides a relatively good representation of the major cash benefits paid to individuals and households in 2013 in Bulgaria.

Regarding the main types of pensions receivers (old-age, disability, and survivor) the number of recipients identified in EU-SILC seem to be overestimated – by 19-20pp for the IOA pensions and 17-20pp for disability pensions. The survivor pension receivers are however notably overrepresented (more than 4 times a larger number). At the same time, EU-SILC

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<sup>1</sup>The National Accounts include data from the Annual Census of Enterprises which is based on exhaustive and compulsory reporting of enterprises about their economic performance (e.g. number of employees and spending on wages). Additionally, the population of self-employed is estimated using information on the official number of registered self-employed (including employers) and information from LFS and the Household Budget Survey (HBS).

covers relatively accurate the total number of receivers of any pension (or combination of first main and second complementary) – a deviation by 4pp for the period 2013-2015.

As a result we can see that the old-age pensions are expectedly overestimated by EU-SILC compared to the NSSI figures: in 2013 the amount of IOA pension receipts in EU-SILC is 24pp higher than the NSSI reported amount, which slightly reduces to 19pp in 2015. The aggregate amount of disability pensions is slightly underestimated in EU-SILC by 8pp (expanded to 10pp in 2015). As expected, survivor pensions are substantially over-reported in EU-SILC (about 2.5 times in aggregate amount for 2013-2015). The most likely explanation is that EU-SILC respondents may have misclassified or double recorded old-age, survivor and disability pensions..

It should be noted that according to the legislation rules entitlement to family or social assistance benefits which are simulated in EUROMOD is defined **based on the sum of all pensions**. Therefore, we expect that the simulation results for these benefits will be negatively biased due to the overrepresentation of pensions in EU-SILC.

The number of recipients of sickness benefits is lower in EU-SILC compared to external data (in EU-SILC the number of benefit receipts is about 0.7 times the number from the NSSI data). However, in EU-SILC the aggregated amount of sickness benefits is much higher than the external figure – by 77pp in 2013 reduced to 63-67pp from the NSSI figure.

### 4.1.3. Validation of simulated incomes

In this subsection, we validate the results from the policy simulations carried out in EUROMOD. Table 4.7 shows the number of benefit recipients, social insurance contributors and tax payers according to EUROMOD simulations and external sources. Table 4.8 shows the aggregate amount of benefits, social insurance contributions or income tax simulated in EUROMOD and based on external data.

First, both the number of recipients and the aggregate amount of the contributory unemployment benefit (labeled in EUROMOD as `bunct_s`) have been oversimulated in EUROMOD, i.e. they are higher than the figures from external official sources. The number of recipients in EUROMOD is 69pp higher in 2013 (96pp in 2014 and 119pp in 2015) than the external figure. Similar discrepancy could be expected also for the monetary amounts, however, the overestimation of the aggregate amount of `bunct_s` simulated in EUROMOD is only about 3pp higher than the external figure for 2013 (increasing to 11pp for 2014 and 18pp in 2015). The benefit is partially simulated, i.e. it is conditioned on having received the contributory unemployment benefit (`bunct`) which we imputed based on the aggregate EU-SILC variable PY090 (labeled in EUROMOD as `bun`). Our imputations of the contributory unemployment benefit are not accurate and also overstate the number of recipients and aggregate spending of the benefit when compared against external figure. Therefore, the simulation of `bunct_s` which depends on the imputed benefit variable is biased.

Second, there is a mismatch between EUROMOD simulation results and external figures in terms of the contributory benefit for pregnancy and childbirth (`bmaprct_s`). Similar to `bunct_s`, the simulation of `bmaprct_s` is partial, i.e. it is conditioned on reporting to have received the benefit in EU-SILC. As the aggregate variable for family benefits in EU-SILC (HY050 or labeled in EUROMOD as `bfa`) contains receipts of various family transfers, it was more sensible to condition the simulation of `bmaprct_s` on the imputed variable `bmaprct` (for details on the imputations see section 3.3.3). However, as Table 4.7 shows the imputed variable included only 23 thousand (weighted) benefit receipts in 2013 and as a result, so did the simulated variable. This number is much lower than the external figure of 56 thousand benefit receipts in 2013. However, the aggregate amount of the benefit `bmaprct_s` simulated in EUROMOD deviates upward by 16pp from the benefit spending shown by NSSI sources – BGN 307 million based on EUROMOD simulations versus BGN 264 million according to

external figure in 2013. The difference is further reduced to 10pp and only 4pp for years 2014 and 2015 respectively. This could be explained by an oversimulation of the annual benefit amount allocated to the receiving mothers due to two possible sources: (i) number of months in receipt larger than the actual; (ii) monthly amount estimated on over-assessed contributory income base.

In respect to the other benefits targeted at children aged 0 the numbers and respectively the amounts are undersimulated in EUROMOD for the period 2013-2015 – mainly due to underrepresentation of the newborn in EU-SILC 2014.<sup>2</sup> These benefits include:

- the non-contributory benefit for raising a child under the age of 1 (bmaprnc\_s) – at level of 75-76% of the official figures for both the number and the monetary amount,
- the birth grant (bchbals\_s) – about 60% of the number and 40% of the amount,
- the non means-tested child benefit for mothers in tertiary education (bchnm01\_s) – less than the half of the student mothers (45%), and
- the non means-tested child benefit for twins (bchnm02\_s) – almost absent in the sample.

Third, the contributory maternity benefit for bringing up a child up the age of 2 (bmaycct\_s) is also undersimulated in EUROMOD in terms of the number of benefit receipts and total benefit amount. This is probably driven by the underrepresentation of children aged 1 to 4 in EU-SILC: the size of that population group in the survey is about 84% of the size according to official data on the population structure in Bulgaria.<sup>3</sup> The benefit is partially simulated, i.e. it is conditioned on reporting to have received the imputed benefit bmaycct (see section 3.3.3). Table 4.7 shows that in 2013 the number of receipts of the imputed benefit in EU-SILC (28 thousand (weighted)) is lower than the number of benefit receipts according to external data (41 thousand). As a result of the partial simulation, EUROMOD undersimulates the number of entitlements to bmaycct\_s (28 thousand (weighted)) as well as the aggregate benefit amount (BGN 80 million, compared to BGN 116 million) according to external sources for 2013. Similar result is obtained also for the child benefit for education – EU-SILC represents 75% of the first-year pupils, so the amount of the benefit is underestimated in the same extent for year 2013 (reduced to 72-74% for years 2014-2015).

Fourth, the simulation of the standard means-tested child benefit should be considered with caution. In terms of the number of simulated benefit entitlements EUROMOD result is quite well in line with the external data showing a downward deviation of only 12pp of the official number in 2013 (however, this bias increases for 2014-2015 to about 16-18pp). Here we observe a lower degree of positive outcomes for the income test and a reduced number of eligible receiver families. In the same time, the aggregate amount of the allocated benefit is overestimated by 24pp in year 2013. Thus, we overestimate the average benefit entitlement due to unclear reasons.

Fifth, the simulation results for the two main social assistance benefits – the guaranteed minimum income and the heating allowance – show quite different results from the external data. In terms of both the number of benefit receipts and aggregate benefit amounts, the two

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<sup>2</sup> The weighted number of children aged 0 in EU-SILC 2014 is 41, or less than 0.5% of the total number of observations compared to 64.7 thousand according to NSI data for 2013 (0.89% of the total population). See the population statistics produced by the National Statistical Institute in Bulgaria, available online here:

[www.nsi.bg/sites/default/files/files/data/timeseries/Pop\\_6.1.3\\_Pop\\_DR.xls](http://www.nsi.bg/sites/default/files/files/data/timeseries/Pop_6.1.3_Pop_DR.xls)

<sup>3</sup> The weighted number of children aged 1 to 4 in EU-SILC 2014 is 233 thousand (3.2% of the total sample population) compared to 277.7 thousand (3.8% of the total population) according to NSI data for 2013 (see here:

[www.nsi.bg/sites/default/files/files/data/timeseries/Pop\\_6.1.3\\_Pop\\_DR.xls](http://www.nsi.bg/sites/default/files/files/data/timeseries/Pop_6.1.3_Pop_DR.xls))

benefits have been substantially oversimulated in EUROMOD (more than twice) which could be due to various reasons.

- In the presence of benefit non take-up (see Tasseva, 2016), the number of benefit entitlements and the total benefit amounts will be oversimulated in EUROMOD as the model assumes full take-up.
- Oversimulation could also occur when income bases (on which benefit entitlements are determined) are underreported in EU-SILC.
- Another important reason is the lack of data on assets ownership in EU-SILC. We could not simulate the asset-test (which frequently restricts the actual eligibility for the two benefits) hence these benefits are oversimulated because in reality many of the households may have not fulfilled the asset-test.
- In EUROMOD we have also assumed the maximum length of benefit receipt: 12 months for the guaranteed minimum income and 5 months for the heating allowance. However, benefits may have been received for shorter periods of time. For example, the heating allowance is provided for the heating season which includes only the third quarter of year “t” and first quarter of year “t+1”. For more details on issues related to the targeting efficiency of the benefits (i.e. benefit non take-up and leakage) and data issues, see Tasseva (2016).

Finally, the simulation results of income tax and social insurance contributions (SICs) show the following results:

Table 4.7 shows that EUROMOD oversimulates the number of employer and credited SICs in 2013-2015 by about 28-29pp than the figure from the external source (NSSI). The number of employee SICs simulated in EUROMOD is also higher than the external figure on employee SICs (21pp more than the validation figure for the number of insured employees).

The oversimulations in EUROMOD could be due to the potential presence of informal economy. Although EUROMOD results are calibrated to account for potential tax evasion, the adjustment is very crude due to lack of data and perhaps underestimates the extent of income underreporting to the National Social Security Institute and the National Revenue Agency (see section 3.3.4). In fact, many respondents have reported in EU-SILC survey employment incomes that in reality may be just partially assessed as contributory base for the compulsory SIC. In this line, table 4.8 shows that EUROMOD oversimulates the total amount of employee SIC by 27-28pp for 2013-2014. However, the total amount of employer SIC simulated in EUROMOD matches quite well with the external figure. Unfortunately, the lack of external data for credited SIC does not allow direct validation, so there is a doubt for a possible merging of employer SIC with credited SIC in this external figure (BGN 3.616 billion.).

Although self-employment income is underreported in EU-SILC (see Table 4.3 and Table 4.4) the number of self-employed liable to pay SICs is significantly oversimulated: the EUROMOD figure is 2.7 times higher than the external figure in 2013-2015. This could be due to mis- or underreporting of self-employment income to the tax authorities – a behaviour we do not model in EUROMOD. This is especially valid for the rural areas where thousands of self-employed in family farming (i.e. without any labour contract) are not registered at NSSI for social insurance purposes. This way, the total amount of self-employed SICs is hugely oversimulated in EUROMOD – 2.3 and 3 times higher in 2013 and 2014 than the reported NSSI figures.

According to the legislation, income tax is calculated after employees and self-employed SICs are subtracted from gross income. Thus, the quality of income tax simulation depends to a large extent on the accuracy of the SICs simulations. We could not find any official data on

the number of taxpayers in the period 2013-2016. However, the aggregate amount of income tax simulated in EUROMOD slightly overestimates (by 13pp for 2013 and 10pp for 2014) the total tax revenue reported by external sources (NSI, Government Finance Statistics). Nevertheless, given the issues with employment and self-employment incomes reported in EU-SILC and the simulations of SICs, the results on the income tax simulation should be treated with great caution.

### **4.2. Income distribution**

The distributional results in Table 4.9 and Table 4.10 are derived based on equivalised household disposable income. Household disposable income (HDI) is the sum of all income sources of all household members net of income tax and social insurance contributions. HDI in EUROMOD is the sum of market incomes, non-simulated pensions and benefits and simulated benefits minus the simulated income tax and social insurance contributions paid by employees and self-employed. HDI is equivalised by the “modified OECD” equivalence scale which assigns the following weights to the household members: 1 to the household head; 0.5 to any other household member aged 14+; 0.3 to any other household member aged below 14.

#### **4.2.1. Income inequality**

Table 4.9 shows results on several income distribution indicators estimated on the basis of HDI calculated by EUROMOD. The EUROMOD results are then compared with estimates calculated based on the reported incomes in EU-SILC data (in this case the external source). Apart from the first decile group, the shares of equivalised HDI of all other decile groups are fairly estimated in EUROMOD compared to data from the external source. The income share of the first decile group is notably overestimated in EUROMOD: in 2013 it equals 2.66 percent compared to 2.2 percent according to EU-SILC data. This is mainly driven by the oversimulation of social assistance in EUROMOD (the guaranteed minimum income and heating allowance, see Table 4.7 and Table 4.8). This also explains why the S80/S20 ratio based on EUROMOD HDI is notably lower than the ratio from the external source.

The median and mean equivalised HDI obtained from the EUROMOD simulations fairly deviate from the SILC figures (by 13pp and 11pp for 2013) which however diminishes in the next years. The results on the Gini coefficient are also satisfactory – the Gini based on EUROMOD is about 5pp lower in 2013-2014 (8pp in 2015) than the Gini according to the external figure.

#### **4.2.2. Poverty rates**

Table 4.10 shows the poverty rates based on different poverty thresholds. It includes results based on HDI calculated by EUROMOD and from the external source (Eurostat, EU-SILC). Because social assistance benefits are oversimulated in EUROMOD, HDI at the bottom of the distribution is higher according to EUROMOD than external data. As a result, the poverty rates calculated by EUROMOD are much lower than the poverty rates from the external source. This effect slightly diminishes when the poverty threshold is relocated at higher percentages (60-70%) of the median HDI.

### **4.3. Validation of minimum wage**

The minimum wage in Bulgaria (at 30<sup>th</sup> of June) is 310 BGN in 2013. In 2014 its amount was raised to 340 BGN per month. In 2015 the amount of the minimum wage was 360 BGN for the first half (January to June) and 380 BGN for the second half of the year. Since January 1<sup>st</sup> 2016 it was set to 420 BGN.



In this section we give a brief overview what is the impact of minimum wage policy, if switched on. In our baseline scenario the minimum wage policy is switched off. As we can see in Table 4.11 (Annex 2) the minimum wage adjustments are minor and have almost no effect on the aggregate household disposable income, income tax and social insurance contributions.

### 4.4. Summary of “health warnings”

This summary provides an overview of some of the main issues that should be taken into account when the Bulgarian component of EUROMOD is used for analysing the distributional effect of tax-benefit policies in the period 2013-2016:

- Information on investment income in EU-SILC is found to be unreliable.
- Children aged 0 are underrepresented in EU-SILC. We suspect that this is the main reason why some of the major benefits targeted at children aged 0 (e.g. the birth grant and the non-contributory benefit for raising a child under the age of 1) are undersimulated in EUROMOD.
- Although to a lesser extent, children aged 1-4 are also underrepresented in EU-SILC. We think that this is the main reason for the undersimulation of the contributory maternity benefit for bringing up a child up the age of 2.
- Social assistance benefits – the guaranteed minimum income and heating allowance – are oversimulated in EUROMOD. A potential explanation is benefit non take-up. Currently, EUROMOD assumes full benefit take-up.
- EUROMOD applies an adjustment for tax evasion. It should be noted that the aim of the adjustment is simply to calibrate the results. Due to lack of data the adjustment cannot reproduce the actual tax evasion behavior of individuals and households.
- Social insurance contributions by employers, employees and self-employed are significantly oversimulated in EUROMOD due to issues with employment and self-employment incomes reporting in EU-SILC and the presence of shadow economy. The results on the income tax simulation should be also treated with caution.

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National Revenue Agency (Ministry of Finance): [www.nap.bg](http://www.nap.bg)

Agency for Social Assistance (Ministry of Labour and Social Policy): [www.asp.government.bg](http://www.asp.government.bg)

Ministry of Labour and Social Policy: [www.mlsp.government.bg](http://www.mlsp.government.bg)

National Social Security Institute: [www.nssi.bg](http://www.nssi.bg)

National Statistical Institute: [www.nsi.bg](http://www.nsi.bg)



## Annex 1: Uprating factors

**Table 3.4: Uprating factors**

Index	Constant name	Values of the raw indices				Source	Income components uprated by the index
		2013	2014	2015	2016		
Harmonized consumer price index, annual average (2007=100)	\$HICP	125.61	123.60	122.28	121.30	National Statistical Institute ( <a href="http://www.nsi.bg/sites/default/files/files/data/timeseries/HICP_2.1.xls">http://www.nsi.bg/sites/default/files/files/data/timeseries/HICP_2.1.xls</a> ); For 2016 the HCPI is based on the forecasts to be used for the purposes of 2017 Budget procedure (Info - Ministry of Finance: <a href="http://www.minfin.bg/document/17897:2">http://www.minfin.bg/document/17897:2</a> )	
Consumer price index (2007=100)	\$f_cpi	128.02	126.20	126.07	125.06	National Statistical Institute ( <a href="http://www.nsi.bg/sites/default/files/files/data/timeseries/CPI_1.1.xls">http://www.nsi.bg/sites/default/files/files/data/timeseries/CPI_1.1.xls</a> ); For 2016 the CPI is based on the forecasts of the HICP to be used for the purposes of 2017 Budget procedure (Info - Ministry of Finance: <a href="http://www.minfin.bg/document/17897:2">http://www.minfin.bg/document/17897:2</a> )	ypp, bchprls, bchbals, bmaprnc, bchmt00, bho, bsa00, bsaht, afc, xhc, xhcmomi, xhcot, xhert, xpp, aoc, bchedyc, kfbc, kfb, bed, kivho, bfanmot, bsaot, bfamtot, bsacm, bfaot
Average salary (national level, BGN per month)	\$f_yem	775.08	821.67	893.67	925.58	National Statistical Institute ( <a href="http://www.nsi.bg/sites/default/files/files/data/timeseries/Labour_2.2.1_EN.xls">http://www.nsi.bg/sites/default/files/files/data/timeseries/Labour_2.2.1_EN.xls</a> - 2007-2014); National Statistical Institute - 2015 ( <a href="http://www.nsi.bg/en/content/6439/total-economic-activity-groupings-kind-ownership-gender">http://www.nsi.bg/en/content/6439/total-economic-activity-groupings-kind-ownership-gender</a> ). The figure for 2016 is a forecast.	yemtx, yemnr, yot, ypt, ysetx, ysenr, xmp, yivwg, yem01, yem02, ysebs, yem_a
Average pension per a retiree (BGN, per month)	\$f_pen_av	293.96	310.00	321.78	331.62	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/ndanalysis/statistics/pensii/Pension_2014.pdf">http://www.noi.bg/images/bg/about/statistics/ndanalysis/statistics/pensii/Pension_2014.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/ndanalysis/statistics/pensii/STATB42015.pdf">http://www.noi.bg/images/bg/about/statistics/ndanalysis/statistics/pensii/STATB42015.pdf</a> ). Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	pdi, poa, psu, pdi00, pdinc, poa00, poamt, psuor

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Average pregnancy and childbirth benefit (BGN, per day)	\$f_bmaprct	22.00	22.72	24.78	23.55	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/2014_Demography.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/2014_Demography.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	bmaprct
Average benefit for bringing-up a small child (BGN, per day)	\$f_bmaycct	12.08	15.28	15.29	16.19	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/2014_Demography.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/2014_Demography.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	bmaycct
GDP (BGN, mln. Current prices)	\$f_gdp	81,971.00	83,612.28	86,372.60	89,219.00	National Statistical Institute - 2007-15 ( <a href="http://www.nsi.bg/sites/default/files/files/data/timeseries/GDP_1.1.1_ESA_2010.xls">http://www.nsi.bg/sites/default/files/files/data/timeseries/GDP_1.1.1_ESA_2010.xls</a> ); For 2016 the GDP is based on the forecasts to be used for the purposes of 2017 Budget procedure (Info - Ministry of Finance: <a href="http://www.minfin.bg/document/17897:2">http://www.minfin.bg/document/17897:2</a> )	yy
Average unemployment benefit (BGN, per month)	\$f_bun	266.72	267.25	302.59	295.38	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/Yearbook_demogr_2013.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazатели/Yearbook_demogr_2013.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/bezrobotica/unempl_2015f.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/bezrobotica/unempl_2015f.pdf</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	bunct, bunot

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Average contributory income from previous year (national level, BGN per month)	\$f_yempv	618.06	648.73	683.34	726.40	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf</a> )	yempv, yempv_a
Average annual per hh income from property (BGN) (for 2015 we updated the 2014 amount by CPI)	\$f_ypr	124.00	93.00	65.00	64.48	National Statistical Institute - 2007-15 ( <a href="http://www.nsi.bg/sites/default/files/files/data/timeseries/HH_1.1.3.xls">http://www.nsi.bg/sites/default/files/files/data/timeseries/HH_1.1.3.xls</a> ); 2016 growth projected by HCPI	ypr, tpr, yprld, yprrt
Average contributory income all (national level, BGN per month)	\$f_sicee_base	648.73	683.34	726.40	755.40	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	tsctber
Average contributory income for self-employed (calculated as a weighted average on the basis of the data on the number of self-employed insured against all risk and against old-age, invalidity and decease only)	\$f_sicse_base	452.69	456.00	446.80	458.86	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/Yearbook_demogr_2013.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/Yearbook_demogr_2013.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/analysis/SOD_2015.pdf</a> ); for 2016, 2015 figure is multiplied by the forecasted growth in "compensation per employee" (=1.027) published by Ministry of Finance ( <a href="http://www.minfin.bg/document/17897:2">http://www.minfin.bg/document/17897:2</a> )	tsctbse
General sickness benefit	\$f_bhl	21.68	22.34	25.47	25.75	National Social Security Institute - 2007-14 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/pokazateli/2014_Demography.pdf</a> ); National Social Security Institute - 2015 ( <a href="http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf">http://www.noi.bg/images/bg/about/statistics/analysis/statistics/obz/SPRAVKA_bolnichni_2015.pdf</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	bhl

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Pension indexation	\$f_pen_ind	1.90	1.90	1.95	1.99	National Social Security Institute, Annex I of Statistical Yearbook "Pensions" for the respective years ( <a href="http://www.noi.bg/aboutbg/st/statistic/152-pensions">http://www.noi.bg/aboutbg/st/statistic/152-pensions</a> ); Data for 2016 is based on the Budget of the Public Social Insurance Act [Закон за бюджета на държавното обществено осигуряване]	psuor, poamt, poa00, pdinc, pdi00
A factor of 1	\$f_one	1.00	1.00	1.00	N/A		yds, tad, tis, tin, tscee, tscse, tscer, yag01, yag02, yag, poa, psu, pdi, ydses_o

## **Annex 2: Validation Tables**

**Table 4.2-Number of employed and unemployed**

	EUROMOD (1)		External (2)			Ratio (1/2)			
	2013	2013	2014	2015	2016	2013	2014	2015	2016
Number of employed	2,929,828	2,934,900	2,981,400	3,031,900	N/A	1.00	0.98	0.97	N/A
Number of unemployed	744,074	436,300	384,500	305,100	N/A	1.71	1.94	2.44	N/A

*Notes :* Number of employed and unemployed computed based on months in employment/unemployment. Numbers computed as averages of monthly data over the year.

*Source:* EU-SILC 2014 and EUROMOD; External: NSI, Labour Force Survey, Annual Data, <http://www.nsi.bg/en/content/6486/annual-data>

**Table 4.3-Market incomes - Number of recipients (in thousands)**

Income source	EUROMOD									
	var name	EU-SILC (1)	External (2)				Ratio (1/2)			
		2013	2013	2014	2015	2016	2013	2014	2015	2016
Employment income	yem	3,468	2,511	2,506	2,531	N/A	1.38	1.38	1.37	N/A
Self-employed income	yse	635	911	928	915	N/A	0.70	0.68	0.69	N/A
Investment income	yyi	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other income	yot	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Private pensions	ypp	8	1	1	1	N/A	6.32	6.71	6.21	N/A
Private transfers received from other households	ypt	338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Income from rent	ypr	522	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Private transfers paid to other households	xmp	110	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Notes:* In EUROMOD, the number of recipients equals the number of individuals (earnings, self-employment income, private pensions) or households (investment income, other income, private transfers received/paid, income from rent) who reported incomes in EU-SILC for at least one month throughout the income reference period.

*Sources:* EU-SILC 2014; External: yem/yse - NSI, Employment and hours worked, ESA-2010, <http://www.nsi.bg/en/content/12595/annual-data>; ypp - Financial Supervision Commission, <http://www.fsc.bg/en/markets/social-insurance-market/statistics/statistics-and-analysis/>



**Table 4.4-Market incomes - Annual amounts (in mil.)**

Income source	EUROMOD var name	EUROMOD											
		EU-SILC (1)				External (2)				Ratio (1/2)			
		2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Employment income	yem	25,646	27,187	29,569	30,625	27,765	29,276	30,012	N/A	0.92	0.93	0.99	N/A
Self-employed income	yse	3,540	3,752	4,081	4,227	5,028	N/A	N/A	N/A	0.70	N/A	N/A	N/A
Investment income	yi	122	125	129	133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other income	yot	64	68	74	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Private pensions	ypp	12	12	12	12	51.0	58.7	70.2	N/A	0.24	0.21	0.17	N/A
Private transfers received from other households	ypt	840	891	969	1,003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Income from rent	ypr	528	396	277	275	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Private transfers paid to other households	xmp	166	176	192	199	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average employment income		7,394	7,839	8,525	8,830	11,057	11,681	11,858	N/A	0.67	0.67	0.72	N/A

Sources: EU-SILC 2014; External: yem - Eurostat, Main GDP Aggregates, Wages and Salaries, [nama\_10\_gdp]; yse - NSI (National Accounts, S14 Household sector, B2n); ypp - Financial Supervision Commission, <http://www.fsc.bg/en/markets/social-insurance-market/statistics/statistics-and-analysis/>

**Table 4.5-Benefits (not simulated in EUROMOD) - Number of recipients/ payers (in thousands)**

Benefit	EUROMOD var name	EU-SILC (1)					External (2)					Ratio (1/2)			
		2013	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016	
Education benefits	bed	37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Sickness benefits	bhl	1,123	1,628	1,728	1,805	N/A	0.69	0.65	0.62	N/A	N/A	N/A	N/A		
Family benefits	bfa	614	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Social assistance	bsa	157	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Housing benefits	bho		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Unemployment benefits	bun	377	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Old-age pensions	poa	1,948	1,637	1,630	1,627	N/A	1.19	1.20	1.20	N/A	N/A	N/A	N/A		
Disability pensions	pdi	514	428	435	440	N/A	1.20	1.18	1.17	N/A	N/A	N/A	N/A		
Survivor pensions	psu	505	122	116	111	N/A	4.15	4.37	4.54	N/A	N/A	N/A	N/A		
All pensions (counting individuals receiving any pension)	ils_pen	2,265	2,187	2,180	2,178	N/A	1.04	1.04	1.04	N/A	N/A	N/A	N/A		
All pensions (counting pensions)	ils_pen_p	2,967	2,670	2,669	2,645	N/A	1.11	1.11	1.12	N/A	N/A	N/A	N/A		

Sources: EU-SILC 2014; External: bhl - NSI (Statistics and analyses, General sickness and maternity, <http://www.noi.bg/aboutbg/st/statistic/155-ozm>); bho - Ministry of labour and social policy (Budget by social programmes, <http://www.mlsp.government.bg/index.php?section=CONTENT&l=385&lang=>); pdi, poa, psu, ils\_pen, ils\_pen\_p - NSI (Statistics and analyses, Pensions, <http://www.noi.bg/aboutbg/st/statistic/152-pensions>)

**Table 4.6-Benefits (not simulated in EUROMOD) - Annual amounts (in mil.)**

Benefit	EUROMOD variable label	EU-SILC (1)				External (2)				Ratio (1/2)			
		2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Education benefits	bed	55	54	54	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sickness benefits	bhl	566	583	665	672	320	358	398	N/A	1.77	1.63	1.67	N/A
Family benefits	bfa	855	869	884	875	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social assistance	bsa	66	65	65	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Housing benefits	bho	0.0	0.0	0.0	0.0	0.1	0.1	0.1	N/A	0.00	0.00	0.00	N/A
Unemployment benefits	bun	520	521	590	576	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Old-age pensions	poa	7,429	7,542	7,793	7,993	6,000	6,292	6,550	N/A	1.24	1.20	1.19	N/A
Disability pensions	pdi	1,352	1,370	1,420	1,460	1,470	1,545	1,582	N/A	0.92	0.89	0.90	N/A
Survivor pensions	psu	687	692	714	731	276.4	279.5	276.3	N/A	2.49	2.47	2.58	N/A
All pensions	ils_pen	9,469	9,604	9,928	10,185	7,746.1	8,116.5	8,408.9	N/A	1.22	1.18	1.18	N/A

Sources: EU-SILC 2014; External: bhl - NSI (Statistics and analyses, General sickness and maternity, <http://www.noi.bg/aboutbg/st/statistic/155-ozm>); bho - Ministry of labour and social policy (Budget by social programmes, <http://www.mlsp.government.bg/index.php?section=CONTENT&l=385&lang=>); pdi, poa, psu, ils\_pen, ils\_pen\_p - own estimates based on data from NSI (Statistics and analyses, Pensions, <http://www.noi.bg/aboutbg/st/statistic/152-pensions>)

**Table 4.7- Benefits, taxes and social insurance contributions simulated in EUROMOD - Number of recipients / payers (in thousands)**

Benefits / Taxes / Social Insurance Contributions	EUROMOD var name	EUROMOD (1)				EU-SILC (2)				External (3)			Ratio (1/3)			
		2013	2014	2015	2016	2013	2013	2013	2014	2015	2016	2013	2014	2015	2016	
		<b>Benefits</b>														
Contributory unemployment benefit	bunct_s	197	197	197	197	201	0.98	117	101	90	N/A	1.69	1.96	2.19	N/A	
Contributory maternity benefit for pregnancy and childbirth	bmaprct_s	23	23	23	23	23	1.00	56	58	60	N/A	0.41	0.39	0.38	N/A	
Non-contributory benefit for raising a child under the age of 1	bmaprnc_s	16	16	14	14	10	1.61	21	21	19	N/A	0.76	0.76	0.77	N/A	
Contributory maternity benefit for bringing up a child up to the age of 2	bmaycct_s	28	28	28	28	28	1.00	41	41	43	N/A	0.68	0.68	0.64	N/A	
Means-tested child benefit	bchmt00_s	473	441	409	392	344	1.37	537	524	496	N/A	0.88	0.84	0.82	N/A	
Child benefit for education	bchedyc_s	38	34	33	33	33	1.14	49	47	45	N/A	0.77	0.72	0.73	N/A	
Birth grant	bchbals_s	41	41	41	41	37	1.10	68	69	68	N/A	0.60	0.59	0.60	N/A	
Non means-tested child benefit for mothers in tertiary education	bchnm01_s	2	2	2	2	N/A	N/A	5	7	4	N/A	0.45	0.28	0.48	N/A	
Non means-tested child benefit for twins	bchnm02_s	0	0	0	0	N/A	N/A	2	2	2	N/A	0.00	0.00	0.00	N/A	
Monthly social assistance allowance (guaranteed minimum income)	bsa00_s	130	117	115	111	18	7.28	50	52	52	N/A	2.60	2.24	2.20	N/A	
Targeted allowance for heating	bsaht_s	378	347	307	285	111	3.40	252	254	237	N/A	1.50	1.37	1.30	N/A	
Social old age pension	poamt_s	4	2	2	2	N/A	N/A	3	3	3	N/A	1.15	0.77	0.77	N/A	
<b>Taxes and Social Insurance Contributions</b>																
Income tax	tin_s	3,839	3,839	3,828	3,828	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employer SIC - accident	tscerac_s	2,594	2,594	2,594	2,594	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employer SIC - health	tscerhl_s	2,867	2,867	2,867	2,867	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employer SIC - old-age	tscerpi_s	2,595	2,595	2,595	2,595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employer SIC - sickness and maternity	tscersi_s	2,595	2,595	2,595	2,595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employer SIC - unemployment	tscerui_s	2,594	2,594	2,594	2,594	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Credited SIC - health	tsccthl_s	350	350	350	350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Credited SIC - old-age	tscctpi_s	282	282	282	282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Credited SIC - sickness and maternity	tscctsi_s	282	282	282	282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Credited SIC - unemployment	tscctui_s	282	282	282	282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Credited SIC - accident	tscctac_s	282	282	282	282	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employee SIC - health	tsceeh_s	2,867	2,867	2,867	2,867	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employee SIC - old age	tsceepi_s	2,595	2,595	2,595	2,595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employee SIC - sickness and maternity	tsceesi_s	2,594	2,594	2,595	2,595	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Employee SIC - unemployment	tsceei_s	2,593	2,593	2,593	2,593	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Self-employed SIC - health	tscehl_s	635	635	635	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Self-employed SIC - old-age	tscepi_s	635	635	635	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total employer SICs	ils_sicer	2,867	2,867	2,867	2,867	N/A	N/A	2,362	2,361	2,385	N/A	1.21	1.21	1.20	N/A	
Total credited SICs	ils_sicct	350	350	350	350	N/A	N/A	136	140	129	N/A	2.57	2.50	2.71	N/A	
Total employer and credited SICs	ils_sicct + ils_sicer	3,217	3,217	3,217	3,217	N/A	N/A	2,498	2,502	2,514	N/A	1.29	1.29	1.28	N/A	
Total employee SICs	ils_sicee	2,867	2,867	2,867	2,867	N/A	N/A	2,362	2,361	2,385	N/A	1.21	1.21	1.20	N/A	
Total self-employed SICs	ils_sicse	635	635	635	635	N/A	N/A	232	233	242	N/A	2.74	2.72	2.63	N/A	

Notes: In EUROMOD, the number of recipients equals the number of individuals (contributory benefits, income tax, SICs), families (means-tested child benefit, 2015 figure preliminary), families (birth grant, means-tested child allowance for children up to age 1, non-means tested child benefits for mothers in tertiary education and twins, targeted allowance for pupils 1st grade) or households (guaranteed minimum income and means-tested benefit for heating) with simulated benefit entitlements/liabilities. In SILC, the number of recipients equals the number of households. In the external sources, the number of recipients equals the monthly-average number of benefits (guaranteed minimum income, means-tested allowance for children up to age of 1, means-tested child benefit, unemployment benefit), number of benefits per month (heating benefit, birth grant, contributory maternity benefit for pregnancy and childbirth (number is divided by 12 months), contributory maternity benefit for children up to age 2 (number is divided by 12 months)), number of children (non-means tested child benefit for twins) and number of recipient parents (non-means tested child benefit for mothers in tertiary education).

Sources : EUROMOD simulations; EU-SILC 2014; External: bsa00, bsaht, bchbals, bmaprnc, bchmt00, bchnm01, bchnm02, bchdied, bchedyc - Ministry of labour and social policy (Budget by social programmes, <http://www.misp.government.bg/index.php?section=CONTENT&i=385&lang=>); bunct - NSI (Unemployment statistics, <http://www.noi.bg/aboutbg/st/statistic/157-unemployment>); bmaprct, bmaycct - NSI (General sickness and maternity, <http://www.noi.bg/aboutbg/st/statistic/155-ozm>); poamt - NSI (Statistics and analyses, Pensions, <http://www.noi.bg/aboutbg/st/statistic/152-pensions>); ils\_sicer, ils\_sicee, ils\_sicse, ils\_sicct - NSSI (State Soc.Ins.Reports 2014,2015)

**Table 4.8-Benefits, taxes and social insurance contributions simulated in EUROMOD - Annual amounts (Million BGN)**

Benefits / Taxes / Social Insurance Contributions	EUROMOD var name	EUROMOD																			
		EUROMOD (1)				EU-SILC (2)				Ratio (1/2)				External (3)				Ratio (1/3)			
		2013	2014	2015	2016	2013	2013	2013	2014	2015	2016	2013	2014	2015	2016						
<b>Benefits</b>																					
Contributory unemployment benefit	bunct_s	360	378	399	424	363	0.99	351	340	338	N/A	1.03	1.11	1.18	N/A						
Contributory maternity benefit for pregnancy and childbirth	bmaprct_s	307	322	339	361	164	1.87	264	293	325	N/A	1.16	1.10	1.04	N/A						
Non-contributory benefit for raising a child under the age of 1	bmaprnc_s	20	19	17	17	8	2.52	26	25	22	N/A	0.75	0.76	0.77	N/A						
Contributory maternity benefit for bringing up a child up to the age of 2	bmaycct_s	80	113	113	113	65	1.22	116	144	153	N/A	0.69	0.78	0.74	N/A						
Means-tested child benefit	bchmt00_s	437	533	500	493	236	1.85	352	396	384	N/A	1.24	1.35	1.30	N/A						
Child benefit for education	bchedyc_s	9	9	8	8	5	1.89	12	12	11	N/A	0.77	0.72	0.74	N/A						
Birth grant	bchbals_s	10	10	10	10	14	0.74	26	26	26	N/A	0.40	0.39	0.39	N/A						
Non means-tested child benefit for mothers in tertiary education	bchnm01_s	6	6	6	6	N/A	N/A	13	21	12	N/A	0.45	0.28	0.49	N/A						
Non means-tested child benefit for twins	bchnm02_s	0	0	0	0	N/A	N/A	2	3	2	N/A	0.00	0.00	0.00	N/A						
Monthly social assistance allowance (guaranteed minimum income)	bsa00_s	127	104	102	101	23	5.48	54	55	53	N/A	2.36	1.90	1.92	N/A						
Targeted allowance for heating	bsaht_s	124	125	111	103	35	3.58	75	94	102	N/A	1.66	1.33	1.09	N/A						
Social old age pension	poamt_s	5	3	3	3	N/A	N/A	4	4	4	N/A	1.14	0.76	0.77	N/A						
<b>Taxes and Social Insurance Contributions</b>																					
Income tax	tin_s	2,461	2,583	2,788	2,888	N/A	N/A	2,174	2,355	N/A	N/A	1.13	1.10	N/A	N/A						
Employer SIC - accident	tscerac_s	136	144	157	162	N/A	N/A	138	148	N/A	N/A	0.98	0.98	N/A	N/A						
Employer SIC - health	tsцерhl_s	1,004	1,066	1,160	1,199	N/A	N/A	1,027	1,098	N/A	N/A	0.98	0.97	N/A	N/A						
Employer SIC - old-age	tsцерpi_s	1,919	2,037	2,215	2,290	N/A	N/A	1,867	1,977	N/A	N/A	1.03	1.03	N/A	N/A						
Employer SIC - sickness and maternity	tsцерsi_s	407	432	470	486	N/A	N/A	455	483	N/A	N/A	0.89	0.89	N/A	N/A						
Employer SIC - unemployment	tsцерui_s	116	123	134	139	N/A	N/A	130	138	N/A	N/A	0.90	0.90	N/A	N/A						
Credited SIC - health	tsцcthl_s	239	254	276	286	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Credited SIC - old-age	tsцctpi_s	455	483	525	543	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Credited SIC - sickness and maternity	tsцctsi_s	89	95	103	107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Credited SIC - unemployment	tsцctui_s	26	27	29	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Credited SIC - accident	tsцctac_s	18	19	21	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Employee SIC - health	tsceehl_s	670	711	773	799	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Employee SIC - old age	tsceepi_s	1,531	1,625	1,768	1,827	N/A	N/A	1,102	1,173	N/A	N/A	1.39	1.39	N/A	N/A						
Employee SIC - sickness and maternity	tsceesi_s	271	288	313	324	N/A	N/A	240	256	N/A	N/A	1.13	1.13	N/A	N/A						
Employee SIC - unemployment	tsceei_s	78	82	89	93	N/A	N/A	68	73	N/A	N/A	1.13	1.13	N/A	N/A						
Self-employed SIC - health	tscsehl_s	266	283	307	317	N/A	N/A	190	122	N/A	N/A	1.40	2.31	N/A	N/A						
Self-employed SIC - old-age	tscsepi_s	592	629	684	706	N/A	N/A	176	184	N/A	N/A	3.36	3.42	N/A	N/A						
Total employer SICs	ils_sicer	3,582	3,803	4,135	4,275	N/A	N/A	3,616	3,844	N/A	N/A	0.99	0.99	N/A	N/A						
Total credited SICs	ils_sicct	827	878	955	987	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
	ils_sicer +																				
Total employer and credited SICs	ils_sicct	4,409	4,681	5,090	5,262	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Total employee SICs	ils_sicee	2,549	2,707	2,943	3,043	N/A	N/A	1,997	2,132	N/A	N/A	1.28	1.27	N/A	N/A						
Total self-employed SICs	ils_sicse	858	911	991	1,024	N/A	N/A	366	306	N/A	N/A	2.34	2.98	N/A	N/A						

Sources : EUROMOD simulations; EU-SILC 2014; External: EU-SILC 2014; External: bsa00, bsaht, bchbals, bmaprnc, bchmt00, bchnm01, bchnm02, bchdied, bchedyc - Ministry of labour and social policy (Budget by social programmes, <http://www.mlsp.government.bg/index.php?section=CONTENT&l=385&lang=>); bunct - NSI (Unemployment statistics, <http://www.noi.bg/aboutbg/st/statistic/157-unemployment>); bmaprct, bmaycct - NSI (General sickness and maternity, <http://www.noi.bg/aboutbg/st/statistic/155-ozm>); poamt - NSI (Statistics and analyses, Pensions, <http://www.noi.bg/aboutbg/st/statistic/152-pensions>); tin - NSI (GFS 1.3); tsceesi, tsceei, tsцерac, tsцерpi, tsцерsi, tsцерui, tsцsepi, ils\_sicer, ils\_sicee, ils\_sicse, ils\_sicct - NSSI (State Soc.Ins.Reports 2014,2015); tsceehl, tsceepi, tsцерhl, tsцsehl - National Health Care - <http://www.nhif.bg/web/guest/74>

**Table 4.9-Distribution of equivalised household disposable income**

	EUROMOD (1)				External (2)				Ratio (1/2)			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
D1	2.66	2.71	2.63	2.61	2.2	2.1	2.2	N/A	1.21	1.29	1.19	N/A
D2	4.37	4.34	4.30	4.29	4.2	4.1	4.0	N/A	1.04	1.06	1.07	N/A
D3	5.63	5.63	5.58	5.55	5.5	5.5	5.3	N/A	1.02	1.02	1.05	N/A
D4	6.81	6.82	6.73	6.74	6.6	6.7	6.4	N/A	1.03	1.02	1.05	N/A
D5	8.01	7.98	7.97	7.96	7.8	7.8	7.6	N/A	1.03	1.02	1.05	N/A
D5	9.11	9.13	9.08	9.08	9.0	9.2	8.8	N/A	1.01	0.99	1.03	N/A
D7	10.43	10.42	10.48	10.43	10.4	10.4	10.2	N/A	1.00	1.00	1.03	N/A
D8	12.29	12.27	12.25	12.32	12.1	12.2	12.1	N/A	1.02	1.01	1.01	N/A
D9	15.00	15.01	15.26	15.12	15.2	15.1	15.2	N/A	0.99	0.99	1.00	N/A
D10	25.68	25.68	25.73	25.90	27.0	26.9	28.4	N/A	0.95	0.95	0.91	N/A
Median	6,483	6,801	7,246	7,470	5718.0	6476.0	6516.0	N/A	1.13	1.05	1.11	N/A
Mean	7,590	7,944	8,485	8,754	6863.0	7642.0	8005.0	N/A	1.11	1.04	1.06	N/A
Gini	33.5	33.5	33.9	34.0	35.4	35.4	37.0	N/A	0.95	0.95	0.92	N/A
S80/S20	5.8	5.8	5.9	5.9	6.6	6.8	7.1	N/A	0.88	0.85	0.83	N/A

*Notes:* Share of national equivalised disposable income. Mean and median values are in BGN. Based on household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social

*Sources:* EUROMOD simulations; External: Eurostat

**Table 4.10-Poverty rates by gender and age**

	EUROMOD (1)				External (2)				Ratio (1/2)			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
<b>40% median HDI</b>												
Total	8.46	8.30	8.40	8.88	10.10	9.60	10.80	N/A	0.84	0.87	0.78	N/A
Males	8.73	8.52	8.62	9.18	9.60	9.20	10.80	N/A	0.91	0.93	0.80	N/A
Females	8.20	8.10	8.19	8.59	10.50	10.10	10.80	N/A	0.78	0.80	0.76	N/A
<b>50% median HDI</b>												
Total	14.49	14.52	14.98	15.08	15.10	15.90	15.50	N/A	0.96	0.91	0.97	N/A
Males	14.22	14.08	14.50	14.60	14.00	15.40	14.20	N/A	1.02	0.91	1.02	N/A
Females	14.74	14.93	15.43	15.54	16.10	16.40	16.70	N/A	0.92	0.91	0.92	N/A
<b>60% median HDI</b>												
Total	20.55	20.87	21.15	21.18	21.00	21.80	22.00	N/A	0.98	0.96	0.96	N/A
Males	19.66	19.76	19.82	19.83	19.70	20.90	20.00	N/A	1.00	0.95	0.99	N/A
Sources: EURO	21.39	21.92	22.42	22.46	22.20	22.60	23.80	N/A	0.96	0.97	0.94	N/A
<b>70% median HDI</b>												
Total	27.96	28.36	28.69	28.63	27.60	28.00	28.80	N/A	1.01	1.01	1.00	N/A
Males	26.81	27.15	27.35	27.24	26.10	26.80	26.60	N/A	1.03	1.01	1.03	N/A
Females	29.04	29.50	29.95	29.95	28.90	29.20	30.80	N/A	1.00	1.01	0.97	N/A
<b>60% median HDI</b>												
0-15 years	28.53	28.22	27.96	27.89	28.30	31.50	25.00	N/A	1.01	0.90	1.12	N/A
16-24 years	25.13	24.79	24.35	24.40	21.10	26.60	25.70	N/A	1.19	0.93	0.95	N/A
25-49 years	18.20	18.05	17.89	17.83	16.90	19.40	16.70	N/A	1.08	0.93	1.07	N/A
50-64 years	15.07	15.09	15.30	15.33	16.50	15.90	17.80	N/A	0.91	0.95	0.86	N/A
65+ years	22.49	24.77	26.70	26.94	27.90	22.60	31.70	N/A	0.81	1.10	0.84	N/A

Notes: Computed for individuals according to their household disposable income (HDI) equivalised by the “modified OECD” equivalence scale. HDI are calculated as the sum of all income sources of all household members net of income tax and social insurance contributions.

Sources: EUROMOD simulations; External: Eurostat



**Table 4.11-Minimum wage validation**

	Baseline (1)				Min Wage Incl. (2)				Ratio (2/1)			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Equivalised household												
disposable income	36,672	38,329	40,917	42,207	36,814	38,491	41,085	42,428	1.004	1.004	1.004	1.005
Employment income	24,919	26,417	28,731	29,757	25,107	26,627	28,950	30,044	1.008	1.008	1.008	1.010
Income tax	2,461	2,583	2,788	2,888	2,477	2,601	2,807	2,913	1.007	1.007	1.007	1.009
Total employee SICs	2,549	2,707	2,943	3,043	2,570	2,730	2,967	3,074	1.008	1.009	1.008	1.010
Total employer SICs	3,582	3,803	4,135	4,275	3,611	3,836	4,169	4,319	1.008	1.009	1.008	1.010
Total self-employed SICs	858	911	991	1,024	858	911	991	1,024	1.000	1.000	1.000	1.000

Sources: EUROMOD calculations with and without minimum wage

## Annex 3: Policy effects in 2015-16

### *Preliminary: Indexation based on projected HICP for 2016<sup>1</sup>*

In this section we analyse the direct tax-benefit policy effect on household disposable income in Bulgaria between 2015 and 2016. We try to understand how changes (or non-changes) to tax-benefit policies have affected household incomes in the two periods, abstracting from changes in the population characteristics (e.g. increased unemployment) and the distribution of market/original gross incomes (e.g. reduction in wages). It should be noted that tax-benefit policies in a given year are taken as of 30<sup>th</sup> of June.

Table A3.1 and Figure A3.1 show the policy effect measured in real terms by income component and income decile group. The effect is estimated as the difference between simulated household net income under the 2016 tax-benefit policies (deflating the tax-benefit monetary parameters by Eurostat's Harmonized Index of Consumer Prices, HICP) and net incomes simulated under 2015 policies, as a percentage of mean equivalised household disposable income in 2015. Households are ranked based on their equivalised household disposable income. The total policy effect on household incomes is decomposed into the different components: public pensions, means-tested benefits, non-means-tested benefits, employee and self-employed social insurance contributions (SIC) and direct taxes. We isolate the policy effect from changes in market/original income, i.e. changes to market/original incomes are not considered as part of the policy effect and so, they have no effect on disposable income.

In 2015-16, household disposable income increased on average by 0.8 % in real terms. The increase effected all decile groups, but in the bottom three decile group the effect was most considerable – 1.5% increase for the first, 2.1% for the second and 2% for the third decile group.

Public pensions were indexed between 2015 and 2016 and their nominal value increased by about 2 percentage points. Additionally, a lump-sum supplement was given for the pensioners with lowest pensions in April 2016. This increase affected all decile groups, but contributed mostly in the bottom of the income distribution. The increase in household disposable income due to the indexation of the pension is 0.76% on average, and between 1.3% and 2.2%% in the first three groups. The indexation had minor income-increasing effect in the richest 9<sup>th</sup> and 10<sup>th</sup> deciles – less than 0.5%.

There is very slight pro-poor policy effect in the first (0.2%) and third decile group (0.32%) due to means-tested benefits. It was mostly driven by the small increase in the means-tested child benefit for families with one and three children. However, there was no change in the benefit for two-child families and a decrease in the child benefit for families with four and more children.

There was negligible increase in the household disposable income due to non means-tested benefits. The lack of new policies in the employee and self –employed SIC, and in the direct taxes reflected in no changes in the disposable income due to these sources. The upper contributory limit for the calculation of SICs was kept nominally constant. As a result, in real terms (due to deflation) there was a small increase in SIC liabilities which contributed to in a tiny income loss for the top decile group. Although tax allowances were also kept nominally the same between 2015 and 2016, we do not find any effect on household incomes in real terms.

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<sup>1</sup> Results based on the final HICP will appear in the annual EUROMOD report Effects of tax-benefit policy changes across the income distributions of the EU-28 countries: 2015-16 (updated).

Table A3.1: Policy effect in 2015-16, using CPI-indexation, %

Decile	Original income	Public pensions	Means-tested benefits	Non means-tested benefits	Employee SIC	Self-employed SIC	Direct taxes	Disposable income
1	0.00	1.28	0.20	0.02	0.00	0.00	0.00	1.50
2	0.00	2.18	-0.12	0.01	0.00	0.00	0.00	2.07
3	0.00	1.67	0.32	0.00	0.00	0.00	0.00	1.99
4	0.00	1.29	0.06	0.01	0.00	0.00	0.00	1.35
5	0.00	0.99	0.04	0.04	0.00	0.00	0.00	1.07
6	0.00	0.82	-0.08	0.04	0.00	0.00	0.00	0.77
7	0.00	0.67	0.01	0.03	0.00	0.00	0.00	0.71
8	0.00	0.69	0.00	0.06	0.00	0.00	0.00	0.75
9	0.00	0.49	0.00	0.04	0.00	0.00	0.00	0.53
10	0.00	0.26	0.00	0.03	-0.01	-0.01	0.00	0.27
<b>Total</b>	<b>0.00</b>	<b>0.76</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.80</b>

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 2015, using the modified OECD equivalence scale. Each policy system has been applied to the same input data, deflating tax-benefit monetary parameters of 2016 policies by Eurostat's Harmonized Index of Consumer Prices (HICP), i.e. 0.99.

Figure A3.1: Policy effect in 2015-16, using CPI-indexation, %

