Reassessing Welfare Impacts of Bulgarian Fiscal Policy through a Child Poverty Perspective

Monica Robayo-Abril, Maynor Cabrera

1. ReadMe file

The enclosed data and code replicate all tables and graphs in *" Reassessing Welfare Impacts of Bulgarian Fiscal Policy through a Child Poverty Perspective "* by Monica Robayo-Abril and Maynor Cabrera. Please cite this paper if you use this code.

2. Data availability

All the results in the paper use confidential microdata from the Bulgaria National SILC 2020 and HBS data 2021 which is not included in the reproducibility package. The World Bank Bulgaria Poverty team has an existing agreement with the Bulgaria NSI with restricted data access to the members included in the research proposal who have signed confidentiality declarations.

Access to the national SILC and HBS data is based on an approval process, a detailed research proposal, confidentiality agreements signed by each team member, and some standard forms sent by the NSI. License terms are covered here: https://www.nsi.bg/en/content/14843/basic-page/license-use-statistical-information-produced-and-disseminated-national-statistical-institute. Access will be granted to all those with a valid research agreement and removed at the end of the agreement unless the user sends an extension or revised agreement. More details on microdata access can be found here:

- **https://www.nsi.bg/en/content/3168/households-income-expenditure-and-consumption**
- **https://www.nsi.bg/en/content/8252/social-inclusion-and-living-conditions**

Access to microdata can be requested from Desislava Mancheva or Svilen Skateliev.

3. Computational requirements

- Stata (code was last run with version 17)
- The reproducibility package makes use of the following Stata ado user-written commands.
    - ainequal
    - apoverty
    - ceq stata package
    - eurostatuse
    - labeldatasyntax
    - schemepack
    - tabstatmat
    - wbopendata

4. Memory and runtime requirements

- The code was last run on a 6-core Intel-based laptop with Windows 11. The code takes 10 to 15 minutes to run.

5. Description of programs

- **1_BGR20_MarketIncome.do** process Bulgaria SILC 2020 and estimates Market Income using CEQ methology
- **2_BGR20_MarketIncomePPensions.do** estimate pensions and contributions to pensions to generate Market Income plus Pensions.
- **3_BGR20_NetMarketIncome.do** estimate direct taxes.

- **4_BGR20_DispIncome.do,** collect information of social protection transfers
- **5_BGR20_IndTaxes.do** estimate indirect taxes payments using simulation.
- **6_BGR20_Subsidies.do** estimate direct and indirect effects of price subsidies.
- **7_BGR20_Education.do** impute education benefits.
- **8_BGR20_Health.do** assess health benefits.
- **9_BGR20_child_tables.do** produce child poverty indicators and poverty by household typologies.
- **10_BGR20_sim_table3_Nov07_2023.do** produce policy scenarios.
- **11_BGR20_FiguresTables_.do** updates charts & tables

Processed file *BGR20WBN_childp_Aug9_2023.dta* is the result of running files from 1 to 9.

6. Instructions to replicators

a) Users with access to the data should place all input data files in the corresponding dataset folder of "3.data\Original\raw"

b) To run the scripts, new users need to change the directory in line 22 of the do-file **0_BGR20_Master.do.**

c) Run program **0_BGR20_Master.do** to run all steps in sequence (running do files from 1 to 10).

d) Source of figures and tables other than HBS and SILC: Figure 1 World Bank and Eurostat; Figure 2 Eurostat; Figure 3 Vaughan & Cabrera (2022); Figure 4 Vaughan & Cabrera (2022) and Euromod; Figures A.1 and A.2 Commitment to Equity Institute Data Center.

e) Tables 2 and 3 are produced with do file **11_BGR20_FiguresTables.do**, and populate the Excel file **BGR20_figtables_dec2023r.xlsx**.

f) **Figures from 1 to 17** are produced with do file **11_BGR20_FiguresTables.do**, and populate the Excel file **BGR20_figtables_dec2023r.xlsx** with the chart format included in the paper.

g) **Panel b of Figure 4** was estimated using Euromod statistics to analyze the distribution and breakdown of disposable income across different European countries. The Gini coefficient change resulting from Direct Taxes and Transfers is equivalent to the difference between Disposable Income and Original Income, plus pensions. The CEQ data for Gini change shows the difference between Disposable Income and Market Income plus pensions (comparable to Euromod's Original Income plus pensions).

h) **Figures 18, 19, and 20** are created using the same do file (**11_BGR20_FiguresTables.do**). However, the data for those figures is produced by the other file (**10_BGR20_sim_table3_Nov07_2023.do**) that you have executed in step 6.b. Once you have run the simulation, these figures should be added to the Excel file (**BGR20_sim_Nov07_2023.xlsx**) using the chart format specified in the paper. Figures 18, 19, and 20 are generated using the do file **11_BGR20_FiguresTables.do.**

i) **Figures A1 panels "a" and "b"** were not generated by the code, except for those from Bulgaria, and were manually copied from the Standard Indicators found in the CEQ Institute Data Center repository. (https://tulane.app.box.com/folder/162300167474?s=w5frpk5lum6jimodad2wp0dz5fdupp7h).

7. References

- Lustig, Nora (2023), The Commitment to Equity Handbook: Estimating the Impact of Fiscal Policy on Inequality and Poverty (Brookings Institution Press and CEQ Institute-Tulane University, 2nd edition, 2022)
- Tosheva, E., Tasseva, I., Dimitrova, D., Draganov, D., Boshnakov, V., & Peshev, P. (2022). Euromod Country Report: Bulgaria 2019-2022 [Euromod Country Report version 15.0+].
- Eruopean Comission (2021), "METHODOLOGICAL GUIDELINES AND DESCRIPTION OF EU-SILC TARGET VARIABLES" , available from https://ec.europa.eu/eurostat/documents/203647/203704/DOC65.pdf/434b2180-33b3-0d8c-ed1e-2da912d6a685?t=1655461990699

- Vaughan, K. N., & Cabrera, M. V. (2022). The Distributional Impact of Taxes and Social Spending in Bulgaria with an Application to Green Fiscal Policies. http://hdl.handle.net/10986/38117