

# Unveiling Multidimensional Poverty: Insights from the EU

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The enclosed code replicates tables and figures in “*Unveiling Multidimensional Poverty: Insights from the EU*” by Monica Robayo-Abril and Lucia Echeverria. The authors prepare the research piece as a part of the task of Social Services in the European Union to inform poverty reduction policies in the EU. We thank Eurostat for providing us with the necessary data for this project. We also thank Reena Badiani-Magnusson and Ana Maria Muñoz for valuable comments and suggestions. Please cite this paper if you use this code.

## Data

The paper uses three different sources of data:

- The cross-sectional component of the EU statistics on income and living conditions (EU-SILC) for the EU-27 countries (2021-2022, excluding Germany).
- The longitudinal component of the EU-SILC for Bulgaria (2021).
- The cross-sectional Bulgarian National statistics on income and living conditions (Bulgaria-SILC) (2021).

## Data Privacy Statement

The authors do not have permission to share the data used in this paper. The data was used under strict data usage agreements and it is not included in the reproducibility package. However, interested researchers can request them and use them under strict data usage agreements. In the case of the EU-SILC, interested researchers can request the data from Eurostat. For more information on how to get access to the EU-SILC see this [link](#). In the case of the Bulgarian National SILC, access to the 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. For more information on how to get access to the Bulgarian National SILC see this [link](#).

## Folder Structure:

The repository consists of the following folders:

1. **01.Data** contains the data-sets. More specifically, it contains 2 sub-folders: “Raw” and “Created”. The folder “Raw” contains 3 sub-folders: “Bulgaria SILC”, “Cross-sectional EU-SILC” and “Longitudinal EU-SILC”. In order to replicate the results from the paper, .csv input data should be placed in these folders. Please note that .csv data in “Cross-sectional EU-SILC” should be organized by country (using Eurostat country acronyms, see Table A3.2 of the paper for the list of country acronyms) and, within each country, by year (2021 and 2022). For example, in the case of Romania 2021 the path folder should be

"...\01.Data\Raw\Cross-sectional EU-SILC\RO\2021" and in the case of Romania 2022 "... \01.Data\Raw\Cross-sectional EU-SILC\RO\2022". Further, the folder "Created" automatically stores all data-sets created when running the do-files.

2. **02.Dos** has the related codes. Researchers who wish to reproduce the work conducted must adjust the *global path* in the Master data (line 19) by introducing their own directory. This folder also contains 3 .dta files needed to execute some of the codes.
3. **03.Results** has all the related output. This folder is sub-divided in "Figures" and "Tables". Please note that Figure 3, 4 and 5 depict regression results and are not part of the output. In particular, Figure 3 corresponds to the last column (column 4) of Tables A4.1 to A4.4 (one graph per column 4 of each table), Figure 4 corresponds to Table A4.9 (one graph per column) and Figure 5 corresponds to the first two columns (column 1 and 2) of Table A4.10 (one graph per column).

### Description of the Do-Files:

**"1.TransformingData"**: transforms all EU-SILC cross-sectional data (.csv) into .dta files, and merges the different EU-SILC modules by country in order to have one data-set per country (2021-2022).

**"2.AnchoredAROPE-EU27"**: generates Table A3.1, Table A3.2, Figure 1 and Figure 2. Please note that results of the last row "EU - 27 (Excluding Germany)" of Table A3.2 are taken from Table A3.1. This do-file uses the external sources of information contained in "02.Dos": "externaldata-HICP\_Eurostat" (contains the HICP index from Eurostat), "externaldata-anchored\_povline" (contains the 2019 poverty lines by country), and "externaldata-anch-aro-pe-pop" (contains the population count for each country taken from WDI to compute the anchored AROPE by EU sub-regions).

**"3.AROPE-BG-HR-PL-RO"**: generates Tables 3, 4, 5 and 6, as well as Tables A3.3 and A3.4 and Tables A4.1 to A4.8. This do-file calls the auxiliary do-file "3.aux-mat\_dep" in order to compute the indicator of material and social deprivation. This do-file also saves an intermediate data-set. Please note that Table 6 and Table A3.3 are exported into different Excel files (one per country, and one with the ttest).

**"4.AROPE+-BG-HR-PL-RO"**: generates Tables 7, 8 and 9, as well as Table A3.5. This do-files calls the auxiliary do-file "4.aux-mat\_dep\_plus" in order to compute the indicator of material and social deprivation plus.

**"5.Bulgaria-Roma-AROPE"**: incorporates the ethnic identifier from Bulgarian National SILC (2021) and generates Tables 10, 11 and 12, as well as Table A3.6 and Table A4.9. Please note that the output of Table A3.6 is exported into two Excel files.

**"6.Bulgaria-Roma-Chronic"**: transforms Bulgarian EU-SILC longitudinal data (.csv) into .dta files and merges the different modules to create the panel data (2021). This do-file reproduces Table 13 and Table A4.10.

## **Feedback and Suggestions**

Thank you for exploring this project. For questions, comments, and suggestions please contact: Lucia Echeverria, Consultant, [lecheverria@worldbank.org](mailto:lecheverria@worldbank.org) and/or Monica Robayo-Abril, Senior Economist, [mrobayo@worldbank.org](mailto:mrobayo@worldbank.org) from the Poverty and Equity Global Practice at the World Bank.