# Replicability package for PRWP: Global Poverty Revisited Using 2021 PPPs and New Data on Consumption

2<sup>nd</sup> June 2025

# Overview

This package fully reproduces all the output of the *Policy Research Working Paper*, titled, "Global Poverty Revisited Using 2021 PPPs and New Data on Consumption" by Elizabeth Foster, Dean Jolliffe, Gabriel Lara Ibarra, Christoph Lakner, and Samuel Kofi Tetteh-Baah. The package includes this read\_me file, master dofile, and paper, as well as four different folders having programs, data, code, and output. See Figure 1; folders are marked with rectangular boxes filled with color.

To replicate the tables and figures in the paper and its appendix, only the user path in the "master" dofile needs to be adjusted, and the script should run.

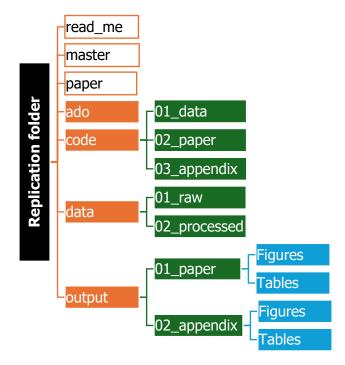


Figure 1: Folder structure

<u>read\_me</u>: This file documents the structure of the reproducibility package and describes the files and folders in the package.

<u>master</u>: This file contains the master dofile that runs all dofiles, preparing input data for the paper, and preparing the tables and figures reported in the paper and its accompanying appendix.

<u>ado</u>: This folder consists of all program files required to run the replication package. These programs are already installed and stored, so there is no need to install any programs. The programs installed are pip, estout, grstyle, ineqdeco, egenmore, \_gwtmean, and cache. cache is

a new command that stores output returned in Stata, to be simply recovered in the future without need for re-computation of the command (Castaneda and Clarke 2025).

The code, data, and output folders are explained in more detail below.

# Code

This folder has three sub-folders, sequentially arranged, to prepare input data, analyze them, and present results in tables and figures, in the paper and appendix.

**01\_data**: This sub-folder contains dofiles that organize input data and process them, to create data sets that will be used to make tables and figures in the paper and its accompanying appendix. These files are arranged sequentially, as resulting data sets might be needed in subsequent dofiles in this sub-folder.

- /01\_input\_data\_pip.do prepares poverty data in Platform and Inequality Platform (PIP), from the new June 2025 vintage and the old September 2024 vintage. These include poverty estimates at different poverty lines expressed in 2021 PPP dollars and 2017 PPP dollars. These data are available at survey, lined-up, and aggregate levels. Aggregate (regional/global) poverty estimates are based on estimates lined up to every year from country-level survey data that may not be available for every year. See the PIP Methodology Handbook (World Bank 2025) for more methodological details on survey, lined-up, and aggregate poverty estimates.
- /02 input data aux.do gathers auxiliary data used for measuring poverty, including consumer price indices (CPIs), purchasing power parities (PPPs), gross domestic product (GDP), population, and income classification of countries.
- <u>/03 ppp final.do</u> creates a final data set containing the 2011 PPPs, 2017 PPPs, and 2021 PPPs. This file includes PPPs published by the ICP and those used in PIP for global poverty monitoring, in cases where the ICP does not publish a PPP estimate or where special PPPs are used in PIP (more details are in Appendix A of the paper).
- /04\_cpi\_final.do creates a final data set containing yearly CPI values, using Datalibweb as the
  main data sources and supplementing it with CPI data from the World Development Indicators
  (January 2025). It includes yearly CPI series for China and India. It also includes special CPI
  series used for global poverty monitoring, affecting Bangladesh, Ghana, Lao, Malawi, and
  Tajikistan (Lakner et al. 2018).
- <u>/05 delta\_ratio\_final.do</u> combines CPI and PPP data to compute the factor that converts income (or consumption) data from 2017 PPP dollars to 2021 PPP dollars, known as the *delta ratio*. The delta ratio values are based on final CPI and PPP data used for global poverty monitoring.

- /06\_national\_poverty\_rates.do creates a database of national poverty rates sanctioned by governments. The database is created as follows. All observations in the World Bank's Poverty and Equity Briefs (PEBs) are first selected and are supplemented with observations in the Poverty and Inequality Platform (PIP) and the World Development Indicators (WDI). The series used from the World Development Indicators is "Poverty headcount ratio at national poverty lines (SI.POV.NAHC)". The same series is available in PIP, but in addition PIP has historical and non-comparable series (where comparability refers to comparability within countries across surveys, not between countries). Missing country-year observations are filled with Eurostat and OECD data, in that order. The series used from the EUROSTAT is "At risk of poverty rate (cut-off point: 60% of median equivalized income after social transfers)", while the series from the OECD is "60% of the national median disposable income". Additional national poverty rates for Taiwan, China are obtained from the Ministry of Health and Wealth, Taiwan. This final also collects metadata on the type of poverty line used in estimating national poverty rates, whether they are absolute or relative lines. Some of the metadata are in the data sources for the national poverty rates, while some of the missing data are obtained from the Poverty Measurement Database (PMD), version 3 (March 2025). PMD is a database that has poverty data and metadata and is prepared by some Bank staff in the Poverty and Equity Global Practice. It is internally available at the Bank.
- /07 harmonized npl.do creates a database of harmonized national poverty lines. It essentially
  derives from PIP distributions the percentile associated with the national poverty rates, which
  are based on variedly defined national poverty lines. All these lines are expressed in per capita
  2021 PPP dollars, hence called harmonized national poverty lines. Harmonized national
  poverty lines are available for only country-years with survey data in PIP.

Azerbaijan has limited survey data in PIP, mostly historical data. To fill missing data, 18 observations of national poverty lines expressed in domestic currency (manat) and per capita terms obtained from the State Statistical Committee of Azerbaijan are converted into PPP dollars. More details can be found in the Data section of this read\_me file.

- <u>/08 poverty projections.do</u> prepares projected poverty data based on projected GDP growth rates. See Annex 1A of the *2024 Poverty, Prosperity, and Planet Report* (3PR) (World Bank 2024) for the methodological details.
- <u>/09 inequality data.do</u> creates different data sets on global inequality, including data sets that decompose global inequality into between-country and within-country components.
- /10 other input data.do makes a list of countries that participated in the International Comparison Program (ICP) in 2017 and 2021. Countries whose PPPs are based on actual price data collected are called *benchmark countries*, while the rest are called *non-benchmark* countries. The PPPs for non-benchmark countries are typically estimated from a regression using PPPs from the benchmark countries, and related economic variables, including GDP per

capita, export share, import share, among others (World Bank 2020). It also organizes data on age dependency ratio from the World Development Indicators (vintage: January 2025) and multi-dimensional poverty headcount ratio from the UNDP Human Development Report and Oxford Poverty and Human Development Initiative (OPHI) (vintage: October 2024).

**02\_paper**: This sub-folder contains dofiles that analyze data to make tables and figures in the paper. These files are arranged sequentially, as they appear in the paper.

- <u>/01 fig1 delta\_ratio.do</u> visualizes the distribution of delta ratio values across countries in Figure 1. The chart includes only benchmark countries in the ICP program in both 2017 and 2021. Benchmark countries are countries that participated in the ICP program, so price data could be collected in these countries to estimate PPPs. The 2017 PPPs used here are those published by the ICP and special 2017 PPPs used for a few exceptional countries where the 2017 PPPs from the ICP were deemed less reliable for global poverty monitoring. See Table A1 for the list of exceptional countries.
- <u>/02\_tab1\_poverty\_lines.do</u> generates the results in Table 1 on the global poverty lines.
- <u>/03 fig2 poverty lines.do</u> visualizes the new global poverty lines in Figure 2.
- <u>/04\_tab2\_decomposition.do</u> decomposes the changes in the global poverty lines into their different sources in Table 2. These include PPP updates, new harmonized national poverty lines, changes in countries' income status, and the inclusion of new countries.
- /05 tab3 parameters.do updates other poverty parameters with the delta ratio in Table 3.
- <u>/06 fig3 ipl poverty lines.do</u> compares the national poverty lines behind the international poverty lines of \$2.15 (2017 PPP) and \$3.00 (2021 PPP) in Figure 3.
- <u>/07 fig4 poverty trends.do</u> visualizes global poverty trends from 1990 to 2030 in Figure 4.
- <u>/08 tab4 poverty levels.do</u> summarizes the changes in regional and global estimates of extreme poverty in 2022 in Table 4. The total change in millions of poor is explained by the adoption of new survey data in PIP in the June 2025 PIP update (as well as changes in auxiliary data used for poverty measurement, such as CPI, national accounts data) and switching PPPs (i.e., the adoption of new global poverty lines denominated in 2021 PPPs to replace corresponding lines denominated in 2017 PPPs). The impact of *new PIP data* is captured by the difference in millions of poor when comparing the old and new PIP vintages at a common poverty line (i.e., \$3.65, or \$6.85 in 2017 PPP). The impact of *switching PPPs* is captured by the difference in millions of poor when comparing poverty at the 2017-PPP-based poverty lines and 2021-PPP-based poverty lines, using June 2025 PIP data vintage. The total impact is the summation of the two.

- /09 tab5 pov decomposition.do decomposes the changes in regional and global estimates
  of extreme poverty in 2022 when switching PPPs into the component explained by updates in
  PPPs and the component explained by updates in harmonized national poverty lines. Table 5
  has these results.
- <u>/10 fig5 poverty SSA.do</u> visualizes the share of the global extreme poor in Sub-Saharan Africa between 1990 and 2025 in Figure 5.

**03\_appendix**: This sub-folder contains dofiles that analyze data to make tables and figures in the appendix of the paper. These files are arranged sequentially, as they appear in the appendix. Data files resulting from one dofile might be needed in subsequent dofiles in this sub-folder.

- /01 fig a1 delta ratio.do visualizes the distribution of delta ratio values across countries in Figure A1 with two charts, to identify outlier countries by the delta ratio criterion (see Appendix A for more details). The first chart, Figure A1.a includes both benchmark and non-benchmark countries in the ICP program, while using 2017 PPPs used in PIP for global poverty monitoring. These 2017 PPPs include PPPs officially published by the ICP, special PPPs used for a few exceptional countries where the 2017 PPPs were deemed less reliable for global poverty monitoring, and extrapolated PPPs used for countries without a PPP estimate from the ICP. The second chart, Figure A1.b includes both benchmark and non-benchmark countries in the ICP program, while using 2017 PPPs published by the ICP only. The 2021 PPPs used in both charts are those published by the ICP. Benchmark countries are countries that participated in the ICP program, so price data could be collected in these countries to estimate PPPs. Non-benchmark countries did not participate in the ICP program, and whose PPPs are estimated from a regression that exploits the relationship between price levels and other economic data across benchmark countries. See Appendix A for more details.
- /02 fig a2 ppp residual.do visualizes the distribution of PPP residuals across countries in Figure A2, to identify outlier countries by the PPP residual criterion (see Appendix A for more details).
- <u>/03 tab a1 except countries.do</u> makes a list of countries whose PPPs might potentially be problematic in Table A1, by compiling outlier (i.e., exceptional) countries from the delta ratio criterion and PPP residual criterion. It also includes the countries whose poverty rates are estimated in the Poverty and Inequality Platform (PIP) with special 2017 PPPs. See Appendix A for more details.
- <u>/04 imputed\_ppp\_pc.do</u> imputes 2021 PPPs out of sample for exceptional countries, using the regression model the ICP regression model for estimating PPPs for non-benchmark countries. See Appendix A for more details.

- /05 tab a2 drop countries.do drops exceptional countries not requiring further investigation in Table A2. These countries are excluded from further investigation, because the proposed solution of using imputed PPPs for these countries might worsen the problem (i.e., delta ratio will be more extreme). Countries that became benchmark countries in the ICP 2021 cycle are also excluded, as price-data-based 2021 PPPs will likely deviate from regression-based 2017 PPPs.
- /06 tab a3 cpi indicators.do summarizes CPI metadata or quality indicators in Table A3 for selected, exceptional countries worthy of further investigation.
- <u>/07 fig a3 shr items priced.do</u> visualizes the share of items priced in the 2017 and 2021 ICP cycles. Figure A3 highlights these PPP metadata for selected, exceptional countries.
- <u>/08\_poverty\_query\_pc.do</u> estimates poverty using the official and imputed 2021 PPPs.
- /09 tab a4 age dep 300.do produces Table A4, which flags exceptional countries whose imputed 2021 PPPs yield a poverty rate that is more in line with the poverty rate predicted from a cross-country relationship between extreme poverty (\$3.00) and age dependency ratio. See Appendix A for more details.
- <u>/10\_tab\_a5\_age\_dep\_830.do</u> produces Table A5, which flags exceptional countries whose imputed 2021 PPPs yield a poverty rate that is more in line with the poverty rate predicted from a cross-country relationship between poverty at a higher poverty line (\$8.30) and age dependency ratio. See Appendix A for more details.
- /11 tab a6 mpi 300.do produces Table A6, which flags exceptional countries whose imputed 2021 PPPs yield a poverty rate that is more in line with the poverty rate predicted from a cross-country relationship between extreme poverty (\$3.00) and multi-dimensional poverty headcount. See Appendix A for more details.
- /12\_tab\_a7\_mpi\_830.do produces Table A7, which flags exceptional countries whose imputed 2021 PPPs yield a poverty rate that is more in line with the poverty rate predicted from a cross-country relationship between poverty at a higher poverty line (\$8.30) and age multidimensional poverty headcount. See Appendix A for more details.
- <u>/13 tab a8 flags.do</u> summarizes the results of additional assessments of exceptional countries in Table A8.
- <u>/14 tab a9 special ppp.do</u> makes a table that summarize special 2021 PPPs of a select number of countries; either the geometric averages of official and imputed PPPs and extrapolated PPPs. See Appendix A for more details.
- /15 tab a10 subnat ppp.do organizes sub-national PPPs for China in Table A10.

- <u>/16 tab b1 poverty lines.do</u> tabulates national poverty rates and lines matched into PIP in Table B1.
- <u>/17 fig c1 delta ratio pop.do</u> visualizes the distribution of the delta ratio across countries in Figure C1, while accounting for differences in population size. Final delta ratio values are used, including exceptions from official PPPs for a select number of countries described in Appendix A of the paper.
- <u>/18 tab c1 delta ratio pop.do</u> summarizes final delta ratio values by income group in Table C1.
- <u>/19 fig c2 harm npl cdf.do</u> indicates in Figure C2 the surveys from low-income countries underlying the international poverty lines of \$2.15 (2017 PPP) and \$3.00 (2021 PPP).
- <u>/20 tab c2 recent lines.do</u> re-estimates global poverty lines with 2017 PPPs using more recent database of global poverty lines. Table C2 compares the results with the global poverty lines originally derived in 2022 with the 2017 PPPs and the database of harmonized national poverty lines at the time.
- <u>/21 fig c3 hd median.do</u> visualizes Harrell-Davis quantiles in Figure C3 using harmonized poverty lines for low-income countries from the 2017 ICP cycle and 2021 ICP cycle.
- /22 hd median scenario1.do estimates simple median and Harrell-Davis median values using
  different samples of poverty lines. These include the main (or default) approach, using official
  2021 PPPs published by the ICP, and using only benchmark PPPs. In all these cases, one
  poverty line is selected for each, the line that is closest in time to 2021, the ICP reference
  year.
- <u>/23 hd median scenario2.do</u> estimates simple median and Harrell-Davis median values using different samples of poverty lines. These include restricting the sample to within 5, 10, or 20 years within the 2021 ICP reference year. In all these cases, one poverty line is selected for each, the line that is closest in time to 2021.
- <u>/24 hd median scenario3.do</u> estimates simple median and Harrell-Davis median values pooling all harmonized national poverty lines. Two types of weighting are implemented, both of which ensure that each country has a weight of 1. First, equal weighting scheme applies to each poverty line of a country, the weight of the inverse of the total number of available lines for the country in question. Second, triangular weighting scheme applies to each line a weight equal to the inverse of the relative distance from the 2021 ICP reference year.

- <u>/25 hd median scenario4.do</u> estimates simple median and Harrell-Davis median values pooling all harmonized national poverty lines, while restricting the sample to within 5, 10, or 20 years of the 2021 ICP reference years. Two types of weighting are implemented, both of which ensure that each country has a weight of 1. First, equal weighting scheme applies to each poverty line of a country, the weight of the inverse of the total number of available lines for the country in question. Second, triangular weighting scheme applies to each line a weight equal to the inverse of the relative distance from the 2021 ICP reference year.
- <u>/26 tab c3 pool hd results.do</u> pools all simple and Harrell-Davis median values under all scenarios in Table C3. As additional robustness checks, Table C3 includes other methods of updating the global poverty lines; namely, updating the lines with US inflation between 2017 and 2021, and updating with the mean delta ratio of income group.
- <u>/27 tab\_c4\_decomposition.do</u> decomposes the different sources of changes in the global poverty lines in Table C4. As an alternative approach to the decomposition in the main text, it uses a balanced sample of countries in each income group. The balanced sample includes countries with the same income group and welfare type in both 2017 and 2021 ICP cycles.
- <u>/28 tab c5 societal povline.do</u> estimates ordinary least squares (OLS) regressions of harmonized national poverty lines on the median and indicates the results in Table C5.
- <u>/29 fig c4 poverty trends.do</u> visualizes regional trends in poverty trends for the period 1990-2025 in Figure C4, in terms of poverty rate and millions of poor.
- /30 tab c6 countries poor1.do identifies the countries with the largest changes in millions of poor and shows them in Table C6. The total change in millions of poor is explained by the adoption of new survey data in PIP in the June 2025 PIP update (as well as changes in auxiliary data used for poverty measurement, such as CPI, national accounts data) and switching PPPs (i.e., the adoption of new global poverty lines denominated in 2021 PPPs to replace corresponding lines denominated in 2017 PPPs). The impact of new PIP data is captured by the difference in millions of poor when comparing the old and new PIP vintages at a common poverty line (i.e., \$3.65, or \$6.85 in 2017 PPP). The impact of switching PPPs is captured by the difference in millions of poor when comparing poverty at the 2017-PPP-based poverty lines and 2021-PPP-based poverty lines, using June 2025 PIP data vintage. The total impact is the summation of the two.
- <u>/31 tab c7 countries poor2.do</u> identifies the countries with the largest changes in millions of poor and shows them in Table C7. It further decomposes the total changes from switching PPPs into two components, namely the impact of new PPPs and the impact of new lines.

- <u>/32 tab c8 regions poor1.do</u> describes regional and global poverty levels at the higher poverty lines in Table C8. The changes in millions of poor are explained by the impact of new PIP data and the impact of switching PPPs. See description for dofile 30 above.
- <u>/33 tab c9 regions poor2.do</u> decomposes changes in regional and global poverty estimates at the higher lines from switching PPPs into two main components in Table C9. The changes in the global poverty lines are mainly explained by updates in PPPs and updates in harmonized national poverty lines.
- /34 tab c10 poverty rates.do makes Table C10 with poverty rates for selected regions and years in the period 1990 2030.
- /35 tab c11 millions poor.do makes Table C11 with the millions of poor for selected regions and years in the period 1990 2030.
- /36 fig c5 donut chart.do organizes data to make three donut charts visualizing the distribution of millions of poor across regions and countries in 2025, using the three global poverty lines of \$3.00, \$4.20, and \$8.30 in 2021 PPP dollars. These data are visualized in Excel sheets and are shown in Figure C5. The top 10 countries with the most poor people are labeled.
- <u>/37 fig c6 poor SSA FCV.do</u> visualizes the share of global extreme poor in Sub-Saharan Africa AND fragile and conflict settings in Figure C6.
- /38 fig c7 poor lmic.do visualizes the share of global extreme poor in low- and middle-income countries in Figure C7.
- /39\_fig\_c8\_societal\_poverty.do visualizes trends in societal poverty in the world in Figure C8.
- <u>/40\_fig\_c9\_gini.do</u> visualizes trends in global inequality using the Gini index in Figure C9.
- <u>/41 tab c12 ineq\_deco.do</u> decomposes global inequality in 2022 into between-country and within-country components in Table C12.
- /42 fig c10 prosperity gap.do visualizes trends in the Global Prosperity Gap in Figure C10.
- <u>/43 fig c11 gic.do</u> plots a growth incidence curve in Figure C11, indicating the change in income or consumption for the year 2022 when moving from the 2017 to 2021 PPPs, by global percentile.

#### Data

This folder has two sub-folders, one for raw data files and the other for processed ones.

**01\_raw**: It contains all raw data files obtained from different sources. Metadata on these data files are provided below.

# Multi-dimensional Poverty Headcount Ratio

- Description: It contains country-year data on multi-dimensional poverty.
- Source: UNDP and Oxford Poverty and Human Development Initiative (OPHI)
- Data vintage: October 2024Access year: 2011-2023
- Availability: publicly available
- Link: <a href="https://hdr.undp.org/sites/default/files/publications/additional-files/2024-10/2024\_gMPI\_Table1and2.xlsx">https://hdr.undp.org/sites/default/files/publications/additional-files/2024-10/2024\_gMPI\_Table1and2.xlsx</a>
- Filename: <u>2024\_gMPI\_Tables1and2.xlsx</u>

# Classification of Countries

Description: It contains country-year information on income status, FCV status, etc.

Source: World Bank
Data vintage: July 2024
Access year: 1987-2023
Availability: publicly available

• Link: https://github.com/GPID-WB/Class

• File name: CLASS.dta

#### **CPI** Metadata

- Description: It contains metadata on CPI data from the IMF, the standard data source for measuring global poverty. These include CPI expenditure weights coverage, CPI weights reference year, and the CPI classification system.
- Source: Berry et al. (2019), IMF Working Paper Series

Data vintage: 2019Access year: 2019

- Availability: Obtained from authors
- Link: <a href="https://www.imf.org/en/Publications/WP/Issues/2019/07/26/Price-Statistics-Compilation-in-196-Economies-The-Relevance-for-Policy-Analysis-48517">https://www.imf.org/en/Publications/WP/Issues/2019/07/26/Price-Statistics-Compilation-in-196-Economies-The-Relevance-for-Policy-Analysis-48517</a>
- File name: cpi quality indicators.dta

#### **Eurostat National Poverty Rates**

• Description: It contains national poverty rates from Eurostat, defined as: *At risk of poverty rate (cut-off point: 60% of median equivalised income after social transfers)*.

• Source: Eurostat

Data vintage: June 2024Access year: 2011-2022Availability: publicly available

- Link: https://ec.europa.eu/eurostat/databrowser/view/tps00184/default/table?lang=en
- File name: Eurostat\_poverty\_rates.xlsx
- Additional notes: The dataset may vary depending on the download date, as it is regularly updated. Years reported in the Eurostat dataset have data for the preceding year. For poverty measurement, we care about the actual year of the data and not the reporting year. For example, the latest reporting year in the data set is 2023, but those are data for 2022. The dofile <a href="code/01">code/01</a> data/06 national poverty rates.do implements this change in the year. See snippet of code under the heading "Organize Eurostat poverty rates".

# Poverty Estimates with 2017 PPPs (1990-2050)

- Description: It contains national poverty estimates using the 2017 PPPs, projected to 2050.
- Source: Poverty and Inequality Platform (PIP)
- Data vintage: September 2024 PIP update
- Access year: 1990-2050
- Availability: publicly available
- Link:

https://reproducibility.worldbank.org/index.php/catalog/189#project\_desc\_container167484 5066822

- Instructions needed to download the data: Go to the <u>link</u>. Scroll to the **Data** section. Under **Datasets**, select **Poverty Projections by Growth Scenarios**.
- File name: FGTcountry 1990 2050 3pr24.dta

#### Final CPI and PPP Data

Description: It contains CPI and PPP data used for global poverty monitoring.

Source: DatalibwebData vintage: Version 12Access year: 1963-2023

Availability: Internally available to Bank staff

File name: data/01\_raw/Final\_CPI\_PPP\_to\_be\_used.dta

Note: Data set is available to World Bank staff from the Datalibweb <u>platform</u> using the Stata package <u>datalibweb</u>. Users need to install the <u>datalibweb</u> ado package following the instructions in the About tab of the Datalibweb <u>website</u>. The Stata line of code that Bank staff can use to download the data is provided in <u>data/01 raw/02 input data aux.do</u>. The data set can be shared with the replication package and made available to external users.

# Binned Global Distribution in 2021 PPPs (June 2025 PIP vintage)

- Description: It contains welfare distributions for 218 countries in 1000 bins each.
- Source: Poverty and Inequality Platform (PIP)
- Data vintage: June 2025 PIP vintage
- Access year: 1990-2030
- Availability: publicly available
- Link: DDH Link [not yet available since PIP is not yet launched]
- File name: data/01\_raw/GlobalDist1000bins\_1990\_2030\_20250401\_2021\_01\_02\_PROD.dta

# Binned Global Distribution in 2017 PPPs (June 2025 PIP vintage)

- Description: It contains welfare distributions for 218 countries in 1000 bins each.
- Source: Poverty and Inequality Platform (PIP)
- Data vintage: June 2025 PIP vintage
- Access year: 1990-2030
- Availability: publicly available
- Link: DDH Link [not yet available since PIP is not yet launched]
- File name: data/01\_raw/ GlobalDist1000bins\_1990\_2030\_20250401\_2017\_01\_02\_PROD.dta

# Binned Global Distribution in 2017 PPPs (September 2024 PIP vintage)

- Description: It contains welfare distributions for 218 countries in 1000 bins each.
- Source: Poverty and Inequality Platform (PIP)
- Data vintage: September 2024 PIP vintage
- Access year: 1990-2024
- Availability: publicly available
- Link:
  - https://datacatalog.worldbank.org/search/dataset/0064304/1000 binned global distribution
- File name: data/01\_raw/GlobalDist1000bins\_1990\_2024\_3pr24.dta

# Harmonized national poverty lines in 2017 PPPs

- Description: It contains all harmonized national poverty lines underlying the global poverty lines denominated in the 2017 PPPs.
- Source: <u>Jolliffe</u> (r) al. (2024)
   Access year: 1987-2019
- Availability: Publicly available

Link:

https://datacatalog.worldbank.org/data/dataset/0066850/harmonized national poverty line s 2017 ppp dollars

File name: data/01\_raw/harm\_npl\_all\_2017ppp.dta

#### Share of ICP List of Items Priced

• Description: It contains the share of ICP list of items priced in the price data surveys.

• Source: International Comparison Program (ICP)

Data vintage: 2021 ICPAccess year: 2017, 2021

Availability: Obtained from the ICP team

File name: data/01\_raw/ICP 2021 Priced Items\_GCL\_2025-02-07.xlsx

Note: The paper relies heavily on purchasing power parities (PPPs), which are produced by the International Comparison Program (ICP). The ICP is hosted at the World Bank in the Development Data Group (DECDG). They provided the data, which we have analyzed. These data are not officially published by the ICP and are only available for internal review. They should not be shared publicly with the public. Contact person is Mizuki Yamanaka <myamanaka@worldbank.org>.

#### Input Data for Estimating Non-benchmark PPPs

- Description: It contains the input data used by the ICP team to estimate PPPs for nonbenchmark countries.
- Source: International Comparison Program (ICP)

Data vintage: 2021 ICP

Access year: 2021

- Availability: Obtained from the ICP, which is housed at the World Bank. These are data compiled by the ICP from different official sources and supplemented with unofficial estimates for gap-filling. These data are not officially published by the ICP. However, they can be published in this reproducibility package.
- File name: data/01\_raw/ icp2021-nbm-ppp-data-2021.xlsx

# Missing National Poverty Rates

- Description: It includes additional national poverty rates pre-processed for publication in the Poverty and Equity Briefs in April 2025.
- Source: World Bank, Poverty and Equity Global Practice
- Data vintage: April 2025

Access year: 2023

- Availability: Obtained from the World Bank Poverty and Equity Global Practice.
- File name: data/01\_raw/Missing national poverty rates.xlsx
- Note: These are pre-processed data ahead of the April 2025 release of poverty data on the Poverty and Equity Briefs (<a href="https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs">https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs</a>). Poverty Economists (i.e., experts specialized in the measurement of poverty in countries) at the World Bank Poverty and Equity Global Practice provided the data. The data set has been compiled by the authors of this paper. These data can be shared with this reproducibility package.

## National Poverty Rates from Poverty Economists

- Description: It includes additional national poverty rates for selected middle-income countries pre-processed for publication in the Poverty and Equity Briefs in April 2025.
- Source: World Bank, Poverty and Equity Global Practice

• Data vintage: April 2025

Access year: 2023

- Availability: Obtained from selected Poverty Economists at the World Bank
- File name: data/01\_raw/National Poverty Rates Poverty Economists.xlsx
- Note: These are pre-processed data ahead of the April 2025 release of poverty data on the Poverty and Equity Briefs (<a href="https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs">https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs</a>). Poverty Economists (i.e., experts specialized in the measurement of poverty in countries) at the World Bank Poverty and Equity Practice provided the data. The data set has been compiled by the authors. These data can be shared with this reproducibility package.

# National Poverty Rates in World Development Indicators, July 2024

• Description: It contains poverty headcount ratio at national poverty lines (% of population).

• Source: World Development Indicators (WDI)

Data vintage: July 2024

• Access year: 2023

Availability: Publicly available

• Link: <a href="https://databank.worldbank.org/source/wdi-database-archives">https://databank.worldbank.org/source/wdi-database-archives</a>

File name: data/01\_raw/National Poverty Rates WDI 202407.xlsx

# National Poverty Rates in the Poverty and Inequality Platform, July 2024

- Description: It contains poverty headcount ratio at national poverty lines (% of population), including non-comparable data.
- Source: World Bank Poverty and Equity Global Practice (GP) and Poverty and Inequality Platform (PIP)

Data vintage: September 2024

Access year: 2023

Availability: These are publicly available.

• Link:

https://datacatalog.worldbank.org/data/dataset/0066852/national\_poverty\_rates\_including\_noncomparable\_series

• File name: data/01\_raw/npl.dta

#### National Poverty Rates in Poverty and Equity Briefs, October 2024

Description: It contains poverty headcount ratio at national poverty lines.

• Source: World Bank, Poverty and Equity Global Practice

Data vintage: October 2024

Access year: 2024

Availability: Publicly available

• Link: https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs

File name: data/01\_raw/npl-AM24.xlsx

• Note: This data set can be shared with the reproducibility package. This data set was provided by the Poverty and Equity Global Practice (GP). The data set was shared directly with us. The GP published key poverty data for a wide range of countries in the *Poverty and Equity Briefs* (*PEBs*). These were the published data at the time of writing (October 2024). The current version of the data can be gathered from the website (see link above). For convenience, the Poverty and Equity Global Practice can be contacted, who can provide the data. This was how we got the October 2024 version of the data. Contact person is Gabriel Lara Ibarra <glaraibarra@worldbank.org>.

#### **OECD National Poverty Rates**

 Description: It contains national poverty rates from the OECD, defined as: 60% of the national median disposable income.

Source: OECD

Data vintage: July 2024Access year: 2010-2023Availability: Publicly available

Link: https://stats.oecd.org/Index.aspx?DataSetCode=IDD

File name: data/01\_raw/OECD poverty data.xlsx

#### Data on Age Dependency Ratio

- Description: It has data on age dependency ratio [series name: Age dependency ratio, young (% of working-age population).
- Source: World Development Indicators (WDI)

 Data vintage: January 2025 Access year: 1960-2023

Availability: Publicly available

Link: <a href="https://databank.worldbank.org/source/wdi-database-archives">https://databank.worldbank.org/source/wdi-database-archives</a>

File name: data/01 raw/P Data Extract WDI Age Dependency Ratio 202501.xlsx

### Consumer Price Indices (CPIs), World Development Indicators

Description: It contains yearly CPI data for 192 countries.

Source: World Development Indicators (WDI)

 Data vintage: January 2025 Access year: 1960-2023 Availability: Publicly available

Link: https://databank.worldbank.org/source/wdi-database-archives

File name: data/01\_raw/P\_Data\_Extract\_World\_Development\_Indicators\_CPI\_202501.xlsx

# Consumer Price Indices (CPIs), Datalibweb

Description: It contains yearly CPI data for 198 countries.

Source: Datalibweb Data vintage: Version 12 Access year: 1960-2024

Availability: Internally available to World Bank staff

• Link: https://datalibweb2.worldbank.org/home

File name: data/01 raw/Yearly CPI Final.dta

 Note: Data set is available to World Bank staff from the Datalibweb platform using the Stata package datalibweb. Users need to install the datalibweb ado package following the instructions in the About tab of the Datalibweb website. The Stata line of code that Bank staff can use to download the data is provided in data/01 raw/02 input data aux.do. The data set can be shared with the replication package and made available to external users.

# Poverty Measurement Database (PMD)

Description: It contains poverty data and metadata for 138 countries.

 Source: World Bank Data vintage: Version 3 Access year: 1998-2022

Availability: Internally available to World Bank staff

Link:

https://worldbankgroup.sharepoint.com/sites/WBPoverty/SitePages/PublishingPages/Poverty %20Measurement%20-1727802814368.aspx?CT=1742224342260&OR=OWA-NT-Mail&CID=5ca9a552-1879-c466-a06d-29a087a77416

- File name: data/01\_raw/PMD v3.xlsx
- Note: The World Bank staff responsible for the data set plan on making the PMD public, although they do not have a specific timeline. Contact person is Elizabeth Mary Foster <efoster1@worldbank.org>. This file can be shared with the reproducibility package.

#### Poverty Metadata

- Description: It compiles the type of poverty line used to estimate national poverty rates.
- Source: Poverty and Equity Briefs (PEBs), World Bank
- Data vintage: October 2024Access year: 2011-2023
- Availability: Publicly available
- Link: <a href="https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs">https://www.worldbank.org/en/topic/poverty/publication/poverty-and-equity-briefs</a>
- File name: data/01 raw/Poverty line type missing.xlsx
- Note: The data set has been compiled by the authors of this paper, extracting the metadata from several Poverty and Equity Briefs (PEBs). All the source links are provided in the Excel file. These data can be shared with this reproducibility package.

#### Price Indices for Global Poverty Monitoring

- Description: It contains PPP data and the list of benchmark and non-benchmark countries.
- Source: Several sources; indicated in the Excel file
- Data vintage: See Excel file
- Access year: See Excel file
- File name: data/01\_raw/Price indices for global poverty monitoring.xlsx
- Link: <a href="https://datacatalog.worldbank.org/int/data/dataset/0066851/Price-indices-used-for-global-poverty-monitoring">https://datacatalog.worldbank.org/int/data/dataset/0066851/Price-indices-used-for-global-poverty-monitoring</a>
- Availability: The data can be shared in the replication package.

#### Summary Calculations Rural Urban PPPs and CPIs

- Description: It has calculations of urban and rural PPPs for China.
- Methodological source: Jolliffe (r) al. (2024)
- Source: Poverty and Inequality Platform (PIP); multiple sources indicated in the Excel sheets
- Data vintage: June 2025 PIP vintage

- Access year: 2021
- Availability: These data are internally available in PIP. They can be shared with the replication package.
- File name: data/01\_raw/Summary calculations Rural Urban PPPs and CPIs.xlsx
- Note: Sheet(Calculations) has all the formulas and sources of data. There are multiple sources of data, all of which are indicated in the Excel sheets. For example: sheet(China sources) <a href="https://www.stats.gov.cn/sj/ndsj/2023/indexeh.htm">https://www.stats.gov.cn/sj/ndsj/2023/indexeh.htm</a>. There are also steps in the Excel files on how to retrieve the data from the different sources. Please see sheet(India sources), for example.

| Sheet name                  | <u>Source</u>  |
|-----------------------------|--|
| India AL                    | Columns A:M  https://labourbureau.gov.in/all-india-general-index.  Cell P6:  https://labourbureau.gov.in/cpi-al-rl (Linking factor for general index)  |
| <u>India IW</u>             | Columns A:M; Rows 5:54:  https://labourbureau.gov.in/all-india-general-index-1 Coumns A:M; Rows 56:60:  https://labourbureau.gov.in/centre-index Cell P8:  https://labour.gov.in/sites/default/files/Chapter%20-%2017.pdf Cell P9:  https://labour.gov.in/sites/default/files/Chapter%20-%2017.pdf Cell P10:  https://labourbureau.gov.in/sites/default/files/Chapter%20-%2017.pdf Cell P10: |
| ICP 2017 outlet information | Contact person: Marko Olavi Rissanen <mrissanen@worldbank.org> (Can be republished)</mrissanen@worldbank.org>  |
| ICP 2021 outlet information | ICP team.  Contact person: Marko Olavi Rissanen <mrissanen@worldbank.org>  (Can be republished)</mrissanen@worldbank.org>  |

Cell R5; T5

https://www.stats.gov.cn/sj/ndsj/2023/indexeh.htm

Cell R5:R7; T5:T7

http://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm

Cell R8:R10; T8:T15

2021 China Statistical Yearbook

<u>Table 5.1</u>

China Sources

Cell R22:R32; T22:T32

2017 China Statistical Yearbook, Table 5.1

Cell R33:R37; T33:T37

2011 China Statistical Yearbook, Table 9.1

Cell R38; T38

2006 CSY, Table 9.1

Cell R39:R46; T39:T46

2001 China Statistical Yearbook, Table 9.1 (from 1981-1984 using the r etail price index)

The All India Consumer Price Index for Industrial Workers (CPI-

IW) dataset was sourced from the Labour Bureau, Government of India.

The raw series can be accessed directly at
labourbureaunew.gov.in/showdetail.aspx?pr\_id=wAuUJUC4dxc%3d. If the
direct link does not work, the data can be located by visiting the Labour

Bureau website, then navigating to Index Numbers - Archived → CPI (IW)

Base 2001=100 Previous  $\rightarrow$  All India General Index - Prev. Please note that

the website is occasionally inaccessible, or links may break.

India Sources

The All India Consumer Price Index Number for Agricultural

Labourers (CPI-AL) dataset was sourced from the Labour Bureau,

Government of India. The raw series can be accessed directly at <a href="labourbureaunew.gov.in/showdetail.aspx?pr">labourbureaunew.gov.in/showdetail.aspx?pr</a> id=XUfg01%2f%2b%2fIk%3d.

If the link does not work, the data can be located by visiting

http://labourbureaunew.gov.in and navigating to Index Numbers – Archived

 $\rightarrow$  CPI (AL/RL)  $\rightarrow$  All India General Index. For the 2017 monthly series specifically, use the same navigation path under the Index Numbers section.

|              | Please note that the website may occasionally be inaccessible, or links may break.  |
|--------------|---|
| Calculations | Calculations done using data from other sheets. The sources for non-calculated values are:  C12:  Source: (Ferreira et al. 2016, p.157)  E8:  From Chiyu Niu's email on 30th March: 3335 yuan per person per year, nominal 2017. The best citable source is supposed to be Rural Poverty Monitoring Report, which is our book locked in office.  I8:I9; J8:J9; K8:K9:  Source: Government of India: Press Note on Poverty Estimates, 2011–12. Planning Commission, New Delhi (2013) |

# Survey-to-Survey CPI Imputation

- Description: It has calculations for special CPI series imputed from surveys for Bangladesh, Lao, Ghana, Malawi, and Tajikistan.
- Methodological source: Lakner et al. (2018)
- Source: Poverty and Inequality Platform (PIP)
- Data vintage: June PIP vintage
- Access year: 2021
- Availability: These data are internally available in PIP. They can be shared in the replication package.
- File name: data/01\_raw/Survey to survey CPI imputation.xlsx

 Note: Please see sheet(read\_me) for information on the methodological notes on how CPI series are imputed from survey to survey. Sheet(Excel calculations) has the calculations based on input data from Datalibweb. The data sources and calculation formulas are indicated in the Excel sheets.

# Taiwan Official Poverty Rates

• Description: It contains national poverty rates for Taiwan, China.

• Source: Taiwan health and welfare reports (mainly from Tables 10-1 and Figures 2-11)

Data vintage: 2024-09-02Access year: 2013-2023Availability: Publicly available

• Link: https://www.mohw.gov.tw/lp-137-2.html

• File name: data/01\_raw/Taiwan's official poverty.xlsx

# Azerbaijan Official Poverty Lines

• Description: This folder contains national poverty rates and lines for Azerbaijan.

• Source 1: State Statistical Committee, Azerbaijan

Source 2: SDG Data Monitoring Portal

Data vintage: 2024-07Access year: 2001-2023Availability: Publicly available

• Folder name: data/01 raw/Azerbaijan

- File name 1: Azerbaijan\_poverty.xlsx contains the poverty lines and rates, as well as source.
- File name 2: Azerbaijan\_data\_source.jpg is a screenshot of the website of the data source.
- File name 3: Azerbaijan\_Statistical\_Year\_Book\_2024.pdf.
- File name 4: SDG 1.2.1 Azerbaijan Proportion of population living below the national poverty line, by sex and age.pdf.

**02\_processed**: It contains 80 processed data files, using the input data in data/01\_raw described above. These are used to make the tables and figures in the paper and appendix. No further details are provided on these processed data files, to avoid repetition.

# **Output**

This folder has two sub-folders, one containing the tables and figures in the paper, and the other containing the tables and figures in the appendix.

All tables in the paper are available in output/01\_paper/Tables.xlsx. The sheets are labeled according to the table numbers in the paper. All tables in the appendix are available in output/02\_appendix/Appendix Tables.xlsx. The sheets are labeled according to the table numbers in the appendix.

All figures in the paper are available in output/01\_paper/Figures, as EPS and PNG files, one folder for each. The figures are labeled according to the figure numbers in the paper. All figures in the appendix are available in output/02\_appendix/Figures, as EPS and PNG files, one folder for each. The figures are labeled according to the figure numbers in the appendix.

# Statement about Rights

- I certify that the authors of the manuscript have legitimate access to and permission to use the data used in this manuscript.
- I certify that the authors of the manuscript have documented permission to redistribute/publish the data contained within this replication package.

# References

- Berry, Francien, Brian Graf, Michael Stanger, and Mari Ylä-Jarkko. 2019. "Price Statistics Compilation in 196 Economies: The Relevance for Policy Analysis." https://www.imf.org/en/Publications/WP/Issues/2019/07/26/Price-Statistics-Compilation-in-196-Economies-The-Relevance-for-Policy-Analysis-48517.
- Castaneda, R. Andres Aguilar, and Damian Clarke. 2025. "Cache: Stata Module to Cache All Other Stata Commands (Version 0.0.1)." https://github.com/randrescastaneda/cache/.
- Ferreira, Francisco HG, Shaohua Chen, Andrew Dabalen, Yuri Dikhanov, Nada Hamadeh, Dean Jolliffe, Ambar Narayan, Espen Beer Prydz, Ana Revenga, and Prem Sangraula. 2016. "A Global Count of the Extreme Poor in 2012: Data Issues, Methodology and Initial Results." *The Journal of Economic Inequality* 14 (2): 141–72.
- Jolliffe ©, Dean, Daniel Gerszon Mahler ©, Christoph Lakner ©, Aziz Atamanov ©, and Samuel Kofi Tetteh-Baah. 2024. "Poverty and Prices: Assessing the Impact of the 2017 PPPs on the International Poverty Line and Global Poverty." *The World Bank Economic Review*, September, lhae035. https://doi.org/10.1093/wber/lhae035.
- Lakner, Christoph, Daniel Gerszon Mahler, Minh C. Nguyen, Joao Pedro Azevedo, Shaohua Chen, Dean M. Jolliffe, Espen Beer Prydz, and Prem Sangraula. 2018. "Consumer Price Indices Used in Global Poverty Measurement." World Bank Group Global Poverty Monitoring Technical Note. Washington, DC: World Bank.
- World Bank. 2020. "Purchasing Power Parities and the Size of World Economies." Washington, D.C.: World Bank. https://openknowledge.worldbank.org/server/api/core/bitstreams/d508f4dd-1075-579f-
- ——. 2025. *Poverty and Inequality Platform Methodology Handbook.* https://datanalytics.worldbank.org/PIP-Methodology/.