



Poverty and Fragility Report: Fragility at the Core of Global Poverty

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This review verifies the reproducibility of the exhibits included in the paper “*Poverty and Fragility Report: Fragility at the Core of Global Poverty*”.

Contents in this review:

1. Main findings
2. List of exhibits and reproducibility status
3. Reproduction Environment

Main findings

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Running the code in Stata and R for all 4 chapters
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 2 hour to run.
- We conducted our reproducibility analysis based on the paper shared by the authors in the reproducibility package.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 3 types of data: open, limited-access, and restricted data (available only from the authors).
 - Open data is included in the public reproducibility package.
 - Reviewers used accessible and restricted data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package.
 - *data_hash_report.csv* lists the SHA256 hashes of all files in the Data folder to support data integrity checks. Users who acquire the limited-access/restricted data can use this file to verify that the data has not been altered.
- **Reproducibility Summary:**
 - **Data:** Some data is restricted and has not been included in the reproducibility package. For more details, please refer to the README file.

- **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.
- **Outputs:** All outputs are generated by code included in the reproducibility package.
- **Dependencies environment:** The reviewers created a new environment using the latest versions of dependencies available at the moment of the review.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

Chapter 1

- **Figure 1.1a Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure 1.1b Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure 1.1c Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure 1.1d Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure B1.1a Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure B1.1b Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure B1.1c Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure B1.2 Reproduced.** Verified against filename "Figure B.1.2.html".
- **Figure 2.4a Reproduced.** Verified against filename "all_plots_chapter_1.xlsx" sheet "Figure 1.2A".
- **Figure 2.4b Reproduced.** Verified against filename "all_plots_chapter_1.xlsx" sheet "Figure 1.2B".
- **Figure 1.3 Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Table 1.1** Does not show analysis results.
- **Figure 1.4a Reproduced.** Verified against filename "Figure1_4_Part1.svg".
- **Figure 1.4b Reproduced.** Verified against filename "Figure1_4_Part2.svg".
- **Figure 1.5a Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure 1.5b Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".
- **Figure 1.5c Reproduced.** Verified against filename "all_plots_chapter_1.xlsx".

Chapter 2

- **Figure 2.1a Reproduced.** Verified against filename *"Figure2_1a_povrate_2023.pdf"*.
- **Figure 2.1b Reproduced.** Verified against filename *"Figure2_1b_totpoor_2023.png"*.
- **Figure 2.2 Reproduced.** Verified against filename *"Figure2_2_persistent_poverty.pdf"*.
- **Figure 2.3 Reproduced.** Verified against filename *"Figure2_3_fragility_2019-23.pdf"*.
- **Figure 2.4 Reproduced.** Verified against filename *"Figure2_4_poverty_fragility_stacked.pdf"*.
- **Figure 2.5a Reproduced.** Verified against filename *"Figure2_5_conflict_poverty_combined.pdf"*.
- **Figure 2.5b Reproduced.** Some discrepancies can be seen because the authors did not set a seed with *"geom_jitter"*. Since the differences are within the expected threshold, the results are considered reproduced. Verified against filename *"Figure2_5_conflict_poverty_combined.pdf"*.
- **Figure 2.6a Reproduced.** Verified against filename *"Figure2_6a_NGA_povrate_2023.pdf"*.
- **Figure 2.6b Reproduced.** Verified against filename *"Figure2_6b_NGA_fragility_2019-23.pdf"*.
- **Figure 2.7a Reproduced.** Verified against filename *"Figure2_7a_NGA_statebased_conflict.pdf"*.
- **Figure 2.7b Reproduced.** Verified against filename *"Figure2_7b_NGA_communal_conflict.pdf"*.
- **Figure 2.8 Reproduced.** Verified against filename *"Figure2_8_MOZ_fragility_poverty.pdf"*.

Chapter 3

- **Figure 3.1 Reproduced.** Verified against filename *"Figure 1.pdf"*
- **Figure 3.2 Reproduced.** Verified against filename *"Figure 2.pdf"*
- **Figure 3.3 Reproduced.** Verified against filename *"Figure 3.pdf"*
- **Figure 3.4 Reproduced.** Verified against filename *"Figure 4.pdf"*
- **Figure 3.5 Reproduced.** Verified against filename *"Figure 5.pdf"*
- **Figure 3.6 Reproduced.** Verified against filename *"Figure 6.pdf"*
- **Figure 3.7 Reproduced.** Verified against filename *"Figure 7.pdf"*
- **Figure 3.8 Reproduced.** Verified against filename *"Figure 8.pdf"*
- **Figure 3.9 Reproduced.** Verified against filename *"Figure 9.pdf"*

Chapter 4

- **Figure 4.1a Reproduced.** Verified against filename *"all_plots_chapter_1.xlsx"*.
- **Figure 4.1b Reproduced.** Verified against filename *"all_plots_chapter_1.xlsx"*.

Reproduction Environment

Paper exhibits were reproduced on a computer with the following specifications:

- OS: Windows 11 Enterprise
- Processor: Intel(R) Core(TM) i5-1145G7 CPU @ 2.60GHz
- Memory available: 15.7 GB
- Software version: R 4.5.2, Stata 19.5 MP