



India: Trends in Poverty, 2011-12 to 2022-23

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Nihaa Sajid, Maria Reyes Retana

reproducibility@worldbank.org

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This review verifies the reproducibility of the exhibits included in the paper "*India: Trends in Poverty, 2011-12 to 2022-23*".

Contents in this review:

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

Main findings

- **Every exhibit has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Change the path in the main do file, and run the script.
 2. For the appendix: Open the Rproj, restore the environment using: `renv::restore()` and run the R script.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 4 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by mail on May 27th.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available but not all are included in the reproducibility package.
 - **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.
 - **Reproducibility verification:** Reviewers used data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package. The reviewers did not verify if publicly available data matches the data provided by the authors.
 - **Dependencies environment:** The reviewers created a new environment for dependencies using the latest versions available for each dependency at the moment of the review.

*List of exhibits and reproducibility status***Results in the Main Section of the Paper**

- **Table 1** Does not show analysis results.
- **Table 2** Does not show analysis results.
- **Figure 1** Does not show analysis results.
- **Table 3** Does not show analysis results.
- **Table 4** Does not show analysis results.
- **Table 5** Does not show analysis results.
- **Table 6** Reproduced.
- **Figure 2 Panel A** Reproduced.
- **Figure 2 Panel B** Reproduced.
- **Table 7** Does not show analysis results.
- **Figure 3 Panel A** Reproduced.
- **Figure 3 Panel B** Reproduced.
- **Table 8** Does not Apply. This is not a reproducible output. The data originally shared by the Ministry was in PDF. The team converted Table 8 from the report to excel.
- **Figure 4** Reproduced.
- **Table 9** Does not show analysis results.
- **Table 10** Reproduced.
- **Figure 5 Panel A** Reproduced.
- **Figure 5 Panel B** Reproduced.
- **Figure 6 Panel A** Reproduced.
- **Figure 6 Panel B** Reproduced.
- **Figure 6 Panel C** Reproduced.
- **Table 11** Reproduced.
- **Table 12** Reproduced.
- **Table 13** Reproduced.
- **Table 14** Reproduced.
- **Table 15** Reproduced.

- **Table 16 Reproduced with manual changes.** The "Change in p.p." columns are missing in the reproduced output but were verified by manually subtracting the 3SD and 4SD values from the baseline. Most values match exactly; minor differences in the Gini Index component fall below the 0.01 threshold. Therefore, the table is considered reproducible.
- **Table 17 Reproduced with manual changes.** The "Change in p.p." columns are missing in the reproduced output but were verified by manually subtracting the UV₁ and UV₂ values from the baseline. Most values match exactly; minor differences in the Gini Index component fall below the 0.01 threshold. Therefore, the table is considered reproducible.
- **Table 18 Reproduced with manual changes.** The "Change in p.p." columns are missing in the reproduced output but were verified by manually subtracting the CSQ and DQG values from FDQ. The table is considered reproducible.

Results in the Annex

For Appendix, we did not review every exhibit. Instead, we randomly selected 10 exhibits to assess the appendix. Our review was based on those 10 exhibits. Since they were chosen randomly, we are operating under the assumption that if all randomly selected exhibits are reproducible, then the rest should be as well. The seed used to generate the random selection was 592579, and the exhibits selected were: 2,3,5,6,7,8,10,11,13,14. These correspond to the following exhibits in the paper.

- **Table A.2.1 Reproduced.**
- **Figure A.6.1 Reproduced.**
- **Figure A.6.2 Reproduced.**
- **Figure A.6.3 Reproduced.**
- **Figure A.6.4 Reproduced.**
- **Figure A.7.1 Panel A Reproduced.**
- **Figure A.7.1 Panel B Reproduced.**
- **Figure A.7.1 Panel C Reproduced.**
- **Figure A.7.1 Panel D Reproduced.**
- **Figure A.7.3 Panel A Reproduced.**
- **Figure A.7.3 Panel B Reproduced.**
- **Table A.7.1 Reproduced.**
- **Table A.7.3 Reproduced.**
- **Table A.7.4 Reproduced.**

Reproduction Environment

- Paper exhibits were reproduced in 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: Stata version 18 MP