



Multidimensional Poverty: Why not Make Up the Missing Joint Distribution Data?

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This review verifies the reproducibility of the exhibits included in the paper “*Multidimensional Poverty: Why not Make Up the Missing Joint Distribution Data?*”.

Contents in this review:

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2. List of exhibits and reproducibility status
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Main findings

- **Every exhibit in the main section of the paper and 10 randomly selected exhibits in the appendix were reproduced accurately**
- The code was successfully executed on a new computer after:
 1. Changing the path in the main do file.
 2. Running the code.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 6 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by email.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 2 types of data: open and accessible. Accessible data is included in the reproducibility package with the author’s authorization.
 - Open data is included in the public reproducibility package.
 - Reviewers used accessible data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package.
- **Reproducibility Summary:**
 - **Data:** All data is publicly accessible and included in the reproducibility package.

- **Code:** All code files are included in the reproducibility package but operate from intermediate data, not raw data.
- **Outputs:** All outputs generated by code are 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

- **Figure 1.A** Reproduced.
- **Figure 1.B** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3.a** Reproduced.
- **Figure 3.b** Reproduced.
- **Figure 3.c** Reproduced.
- **Figure 4a** Reproduced.
- **Figure 4b** Reproduced.
- **Figure 4c** Reproduced.
- **Figure 4d** Reproduced.
- **Figure 4e** Reproduced.
- **Figure 4f** Reproduced.
- **Figure 4g** Reproduced.
- **Figure 4h** Reproduced.
- **Figure 5a** Reproduced.
- **Figure 5b** Reproduced.
- **Figure 5c** Reproduced.
- **Figure 6a** Reproduced.
- **Figure 6b** Reproduced.
- **Figure 6c** Reproduced.
- **Figure 6d** Reproduced.
- **Figure 6e** Reproduced.

- **Figure 6f** Reproduced.
- **Figure 6g** Reproduced.

Results in the Annex For the 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 321805, the Stata version used was 19.5, and the exhibits selected were: 4, 8, 9, 11, 12, 14, 15, 17, 20, 21.

- **Figure A2** Reproduced.
- **Figure A4 panel a** Reproduced.
- **Figure A4 panel b** Reproduced.
- **Figure A4 panel d** Reproduced.
- **Figure A4 panel e** Reproduced.
- **Figure A4 panel g** Reproduced.
- **Figure A5 panel a** Reproduced.
- **Figure A5 panel c** Reproduced.
- **Figure A5 panel f** Reproduced.
- **Figure A5 panel g** Reproduced.

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: 31 GB
- Software version: Stata 19 MP