



## *When Aggregation Misleads: Bias In Unit-Level Small Area Estimates Of Poverty With Aggregate Data*

*First Submission: RR\_WLD\_2025\_364*

*Ankriti Singh*

*reproducibility@worldbank.org*

*May 30, 2025*

This review verifies the reproducibility of the exhibits included in the paper “*When Aggregation Misleads: Bias In Unit-Level Small Area Estimates Of Poverty With Aggregate Data*”.

### **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. Updating the working directory.
- The code takes approximately 48 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors.
- **Reproducibility Summary:**
  - **Data:** The package does not rely on external data, as the scripts generate the necessary data through simulations.
  - **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.
  - **Outputs:** Some outputs are not generated by code (created manually in Tableau) but instructions for producing these outputs are included in the README file.
  - **Reproducibility verification:** Reviewers had access to the same materials in the public 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**

- **Table 1** **Reproduced**. The exhibit was checked against the code output in the Stata console.
- **Table 2** **Reproduced**. The exhibit was checked against the code output in the Stata console.
- **Figure 1** **Reproduced**. The final figures were created in Tableau, and the underlying dataset matches the one provided by the author. To verify the figures, we exported the dataset from our Stata run and used it as the input in Tableau.
- **Figure 2** **Reproduced**. The final figures were created in Tableau, and the underlying dataset matches the one provided by the author. To verify the figures, we exported the dataset from our Stata run and used it as the input in Tableau.
- **Figure 3** **Reproduced**. The final figures were created in Tableau, and the underlying dataset matches the one provided by the author. To verify the figures, we exported the dataset from our Stata run and used it as the input in Tableau.
- **Figure 4** **Reproduced**. The final figures were created in Tableau, and the underlying dataset matches the one provided by the author. To verify the figures, we exported the dataset from our Stata run and used it as the input in Tableau.

*Reproduction Environment*

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

- OS: Windows 11 Enterprise
- Processor: Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz, 2900 Mhz, 8 Core(s), 8 Logical Processor(s)
- Memory available: 119 GB
- Software version: Stata 18.0 MP