



Stress-Testing Survey-to-Survey Imputation: Understanding When Poverty Predictions Can Fail

First Submission: RR_WLD_2025_408

Ankriti Singh

reproducibility@worldbank.org

October 23, 2025

This review verifies the reproducibility of the exhibits included in the paper “*Stress-Testing Survey-to-Survey Imputation: Understanding When Poverty Predictions Can Fail*”.

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 a month to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by email.
- **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:** 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

- **Figure 1** **Reproduced.** Compared against the output `why_errors`.
- **Figure 2** **Reproduced.** Compared against the output `mi_ebp_fgto`.

- **Figure 3 Reproduced.** Compared against the outputs `method_comp_fgto_rf_t` and `method_comp_fgto_t`.
- **Figure 4 Reproduced.** Compared against the output `method_comp_fgto_het`.
- **Figure 5 Reproduced.** Compared against the output `mi_ebp_fgto_cluster`. See below:
- **Figure 6 Reproduced.** Compared against the output `method_comp_PMMpp1`.
- **Figure 7 Reproduced.** Compared against the output `method_comp_PMMpp`.
- **Figure 8 Reproduced.** Compared against the output `method_comp_MSE`.
- **Figure 9 Reproduced.** Compared against the output `weights_std_bb_fgto`.
- **Figure 10 Reproduced.** Compared against the output `weights_std_tbb_fgto`.
- **Figure 11 Reproduced.** Compared against the output `weights_std_bb_gini`.
- **Figure 12 Reproduced.** Compared against the output `weights_std_tbb_gini`.
- **Figure 13 Reproduced.** Compared against the output `sigma_change_fgto`.
- **Figure 14 Reproduced.** Compared against the output `constant_change_fgto`.
- **Figure 15 Reproduced.** Compared against the output `obv_pred_orig`.
- **Figure 16 Reproduced.** Compared against the output `bd5_ed7`.
- **Table 1 Reproduced.** Compared against the output `ovb_model.xls`.

Results in the Annex

- **Table 2 Reproduced.** Compared against the output `trans_matrix.xlsx`
- **Table 3 Reproduced.** Compared against the output `trans_matrix.xlsx`
- **Table 4 Reproduced.** Compared against the output `trans_matrix.xlsx`
- **Table 5 Reproduced.** Compared against the output `trans_matrix.xlsx`

Reproduction Environment

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

- OS: Windows 11 Enterprise
- Processor: INTEL(R) XEON(R) PLATINUM 8562Y+ 2.80 GHz (2 processors)
- Memory available: 32 GB
- Software version: Stata 18.0 MP