



Convergence or Reversal? The Evolution of the Gender Gap in Education in Sub-Saharan Africa

First Submission: RR_SSA_2026_693

Ankriti Singh

reproducibility@worldbank.org

July 15, 2026

This review verifies the reproducibility of the exhibits included in the paper “*Convergence or Reversal? The Evolution of the Gender Gap in Education in Sub-Saharan Africa*”.

Contents in this review:

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

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. Updating the working directory in line 39-40 of the do-file "Master.do", and running it.
 2. Opening the R project "GenderGapReplication.Rproj"
 3. Restoring the environment by running `renv::restore()` and following the prompts.
 4. Opening the Master.R and running the code.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The Stata execution takes approximately 49 minutes, while the R execution takes approximately 6 minutes.
- We conducted our reproducibility analysis based on the paper shared by the authors.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 4 types of data: open, accessible, limited-access, and restricted (available from data owners).
 - Open data are included in the public reproducibility package.
 - Reviewers used accessible, limited-access, and restricted data provided directly by the authors to conduct the reproducibility verification. These datasets are not redistributed as part of 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 obtain the required accessible and limited-access datasets can use this file to verify that their local copies match those used during the reproducibility verification.
- **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 required to reproduce the 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

- **Table 1** Reproduced.
- **Table 2** Reproduced.
- **Table 3** Reproduced.
- **Table 4** Reproduced.
- **Table 5** Reproduced.
- **Table 6** Reproduced.
- **Table 7** Reproduced.
- **Figure 1** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figure 6** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8** Reproduced.

Results in the Annex

For the Appendix, we did not review every exhibit. Instead, we randomly selected 10 exhibits from the remaining datasets 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 965106, the Stata version used was 19.5, and the exhibits selected were: Table A1, Table A5, Table A7, Table A9, Figure A2, Figure A5, Figure A6, Figure A9, Figure A10, Figure A11.

- **Table A1** Reproduced.
- **Table A5** Reproduced.
- **Table A7** Reproduced.
- **Table A9** Reproduced.
- **Figure A2** Reproduced.
- **Figure A5** Reproduced
- **Figure A6** Reproduced.
- **Figure A9** Reproduced.
- **Figure A10** Reproduced.
- **Figure A11** Reproduced.

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, 4 Core(s), 4 Logical Processor(s)
- Memory available: 16.0 GB
- Software version: Stata 19.5 MP, R 4.5.3