



Demographic Transition and Education Expenditure in South Asia: Opportunities and Challenges

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This review verifies the reproducibility of the exhibits included in the paper “*Demographic Transition and Education Expenditure in South Asia: Opportunities and Challenges*”.

Contents in this review:

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

Main findings

- **Every exhibit in the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Changing the path in the main.do file and 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 10 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by on January 5th.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 1 type of data: open data.
 - Open data is included in 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 acquire the open data can use this file to verify that the data has not been altered.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available and 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.
 - **Dependencies environment:** The reviewers reproduced an existing environment for dependencies using dependency files or an environment metadata file provided by the authors.

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

- **Table 1** Reproduced. Manually compiled by the authors, sources are included in the paper.
- **Table 2** Reproduced. Manually compiled by the authors, sources are included in the paper.
- **Table 3** Does not show analysis results.
- **Table 4** Does not show analysis results.
- **Table 5** Reproduced. Manually compiled by the authors, sources are included in the paper.
- **Table 6** Reproduced. Manually compiled by the authors, sources are included in the paper.
- **Table 7** Does not show analysis results.
- **Table 8** Reproduced.
- **Table 9** Reproduced.
- **Table 10** Reproduced.
- **Table 11** Does not show analysis results.
- **Table 12** Does not show analysis results.
- **Table 13** Reproduced.
- **Table 14** Does not show analysis results. Manually compiled by the authors, sources are included in the paper.
- **Table 15** Does not show analysis results.
- **Table 16** Reproduced.
- **Figure 1** Reproduced, includes manual steps. The code produces the data used to create this figure, and then the figure is created in Excel by selecting a line chart.
- **Figure 2** Reproduced. Verified against Figure_2_pre1.tif; Figure_2_pre2.tif; Figure_2_pri1.tif; Figure_2_pri2.tif; Figure_2_sec1.tif; Figure_2_sec2.tif; Figure_2_tot1.tif; Figure_2_tot2.tif; Figure_2_bas1.tif; Figure_2_bas2.tif.
- **Figure 3** Reproduced. Verified against Figure_3_1.tif; Figure_3_2.tif.
- **Figure 4** Reproduced. Verified against Figure_4_1.tif; Figure_4_2.tif.
- **Figure 5** Reproduced. Verified against Figure_5_1.tif; Figure_5_2.tif.
- **Figure 6** Reproduced. Verified against Figure_6_1.tif; Figure_6_2.tif.
- **Figure 7** Reproduced. Verified against Figure_7_1.tif; Figure_7_2.tif.
- **Figure 8** Reproduced. Verified against Figure_8_1.tif; Figure_8_2.tif.

- **Figure 9** Reproduced, includes manual steps. The code produces the data used to create this figure, and then the figure is created in Excel by selecting a stacked column chart.

Results in the Annex

- **Table A1** Reproduced.
- **Table A2** Does not show analysis results.
- **Table A3** Does not show analysis results.
- **Table B1** Reproduced.
- **Table B2** 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: 15.7 GB
- Software version: Stata 18.0 MP