



Reproducible Research Repository

Learning at Scale Infrastructure, Aid Effectiveness, and World Bank Performance

First Submission: RR_WLD_2026_654

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May 19, 2026*

This review verifies the reproducibility of the exhibits included in the paper "*Learning at Scale Infrastructure, Aid Effectiveness, and World Bank Performance*".

Contents in this review:

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Main findings

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Updating the working directory in line 15 of "Replication_1-april_final.do"
 2. Updating the working directory in line 15 of "Replication_2_april_final.do"
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 5 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors on May 18, 2026.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on one type of data: restricted (available from the authors).
 - Reviewers used the restricted data provided directly by the authors to conduct the reproducibility verification, and this is not 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 restricted data can use this file to verify that the data has not been altered.
- **Reproducibility Summary:**
 - **Data:** All 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 (from cleaning to analysis) are included in the reproducibility package.
- **Outputs:** Some outputs are not generated by code (created manually in Excel) but instructions for producing these outputs are included in the do-files.
- **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 values were manually verified against the output displayed in the Stata results window when running do file "Replication_1-april._final.do".
- **Figure 1 Reproduced.**
- **Figure 2a Reproduced.**
- **Figure 2b Reproduced.**
- **Figure 3 Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april._final.do".
- **Figure 4 Reproduced.**
- **Figure 5 (Panel A) Reproduced.** Formatting differed from the code output but the underlying values match.
- **Figure 5 (Panel B) Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april._final.do".
- **Figure 6 Reproduced.** Minor differences in Formatting were found.
- **Figure 7 Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april._final.do".
- **Table 2 Reproduced.** The values were manually verified against the output displayed in the Stata results window when running do file "Replication_1-april._final.do".
- **Table 3 Reproduced.** The values were manually verified against the output displayed in the Stata results window when running do file "Replication_1-april._final.do".
- **Table 4 Reproduced.** The values were manually verified against the output displayed in the Stata results window when running do file "Replication_1-april._final.do".
- **Figure 8 Does not apply.**
- **Figure 9 Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april._final.do".
- **Figure 10a Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april._final.do".

- **Figure 10b Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april_final.do".
- **Figure 11 Reproduced.** Figure was manually produced in "Learning at large -Final figures.xlsx" using values exported by code "Replication_1-april_final.do".
- **Table 5 Reproduced.** Compared against myreg.doc.
- **Table 6 (IEG Outcome rating) Reproduced.** Compared against myreg1.doc.
- **Table 6 (ERR at completion) Reproduced.** Compared against myregiv.doc.
- **Table 7 Reproduced.** Compared against myreg2.doc.
- **Table 8 Reproduced.** Compared against myreg3.doc.
- **Figure 12 Reproduced.**
- **Table 9 Reproduced.** The values were manually verified against the output displayed in the Stata results window when running do file Replication_2_april_final.do
- **Table 10 Reproduced.** Compared against myreg6.doc.
- **Table 11 (all TTLs) Reproduced.** Compared against myreg7.doc.
- **Table 11 (First hired TTLs) Reproduced.** Compared against myreg8.doc.

Results in the Annex

- **Table 1 (Appendix) Reproduced.** Compared against the code output myreg4.doc.
- **Table 2a Reproduced.** Compared against code output myreg5a.doc.
- **Table 2b Reproduced.** Compared against code output myreg5b.doc.
- **Figure 1 (Appendix 4) Reproduced.** Verified against Figure1a.png
- **Table 3 Reproduced.** The values were manually verified against the output displayed in the Stata results window when running do file "Replication_2_april_final.do".
- **Table 4 (all TTL) Reproduced.** Compared against myreg9.doc.
- **Table 4 (First time TTL) Reproduced.** Compared against myreg10.doc.

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) (4 processors)
- Memory available: 32 GB
- Software version: Stata 19.0 MP