



Command and Can't Control: Assessing Centralized Accountability in the Public Sector

Reproducibility package ID: RR_PAK_2023_61-v01

(Fifth submission)

Nihaa Sajid

Luis Eduardo San Martin

reproducibility@worldbank.org

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This review verifies the reproducibility of the exhibits included in the paper “*Command and Can't Control: Assessing Centralized Accountability in the Public Sector*”.

Contents in this review:

1. Main findings
2. Reproducibility assessment
3. List of exhibits and reproducibility status

Main findings

- The code was successfully executed on a new computer
- All code outputs were stable after running the code three times
- All outputs except Table B7 reproduced as shown in the paper. Code outputs for Table B7 presented small discrepancies that the reviewers attribute to rounding differences and do not break the reproducibility of the results

Reproducibility assessment

Paper exhibits were attempted to be reproduced in a computer with the following specifications:

- OS: Windows 10 Enterprise, version 21H2
- Processor: Intel(R) Xeon(R) Gold 6226R CPU @ 2.9GHz
- Memory available: 128 GB
- Software version: Stata 17.0 MP

The reviewers ran the code three times to check the stability of the outputs generated. Paper exhibits from the manuscript shared by the team via email on December 12, 2023 were compared to code outputs to verify their reproducibility. The code run time for each run was approximately seven hours.

The paper exhibits were reproducible with the code and data shared. All exhibits reproduced exactly as shown in the paper except for Table B7, which displayed small discrepancies with the table in the paper.

These discrepancies are listed in section List of exhibits and reproducibility status. The reviewers attribute the discrepancies to rounding differences and do not consider that they break the reproducibility of the results.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not apply: the exhibit does not show analysis results
- **Figure 2** Does not apply: the exhibit does not show analysis results
- **Table 1 - Panel A, top sub-panel** Reproduced
- **Table 1 - Panel A, Outcomes: Teacher presence** Reproduced
- **Table 1 - Panel A, Outcomes: Student attendance** Reproduced
- **Table 1 - Panel A, Outcomes: Functional facilities** Reproduced
- **Table 1 - Panel A, Outcomes: Math score** Reproduced
- **Table 1 - Panel A, Outcomes: English score** Reproduced
- **Table 1 - Panel A, Outcomes: Urdu score** Reproduced.
- **Table 1 - Panel B, top sub-panel** Reproduced
- **Table 1 - Panel B, Outcomes: Teacher presence** Reproduced
- **Table 1 - Panel B, Outcomes: Student attendance** Reproduced
- **Table 1 - Panel B, Outcomes: Functional facilities** Reproduced
- **Table 1 - Panel B, Outcomes: Math score** Reproduced
- **Table 1 - Panel B, Outcomes: English score** Reproduced
- **Table 1 - Panel B, Outcomes: Urdu score** Reproduced
- **Table 1 - Panel C, Overall score** Reproduced
- **Table 1 - Panel C, New position** Reproduced
- **Figure 3** Reproduced
- **Table 2 - Teacher presence** Reproduced
- **Table 2 - Student attendance** Reproduced
- **Table 2 - Functional facilities** Reproduced
- **Table 2 - Math score** Reproduced

- Table 2 - English score Reproduced
- Table 2 - Urdu score Reproduced
- Figure 4 - Panel A Reproduced
- Figure 4 - Panel B Reproduced
- Figure 4 - Panel C Reproduced
- Figure 4 - Panel D Reproduced
- Figure 4 - Panel E Reproduced
- Figure 4 - Panel F Reproduced
- Figure 5 - Panel A Reproduced
- Figure 5 - Panel B Reproduced
- Figure 5 - Panel C Reproduced
- Figure 5 - Panel D Reproduced
- Figure 5 - Panel E Reproduced
- Figure 5 - Panel F Reproduced
- Table 3 - Panel A Reproduced
- Table 3 - Panel B Reproduced
- Figure 6 - Panel A Reproduced
- Figure 6 - Panel B Reproduced
- Figure 6 - Panel C Reproduced
- Figure 6 - Panel D Reproduced
- Figure 6 - Panel E Reproduced
- Figure 6 - Panel F Reproduced
- Table 4 - Panel A Reproduced
- Table 4 - Panel B Reproduced
- Figure 7 - Panel A Reproduced
- Figure 7 - Panel B Reproduced
- Figure 7 - Panel C Reproduced
- Figure 7 - Panel D Reproduced

- **Figure 7 - Panel E** Reproduced
- **Figure 7 - Panel F** Reproduced

Results in Appendix A

- **Figure A1** Does not apply: the exhibit does not show analysis results
- **Figure A2** Reproduced
- **Figure A3** Does not apply: the exhibit does not show analysis results

Results in Appendix B

- **Figure B1 - Panel A** Reproduced
- **Figure B1 - Panel B** Reproduced
- **Figure B1 - Panel C** Reproduced
- **Figure B2 - Panel A** Reproduced
- **Figure B2 - Panel B** Reproduced
- **Figure B2 - Panel C** Reproduced
- **Figure B3 - Panel A** Reproduced
- **Figure B3 - Panel B** Reproduced
- **Figure B3 - Panel C** Reproduced
- **Figure B4 - Panel A** Reproduced
- **Figure B4 - Panel B** Reproduced
- **Figure B4 - Panel C** Reproduced
- **Figure B5 - Panel A** Reproduced
- **Figure B5 - Panel B** Reproduced
- **Figure B5 - Panel C** Reproduced
- **Figure B5 - Panel D** Reproduced
- **Figure B5 - Panel E** Reproduced
- **Figure B5 - Panel F** Reproduced
- **Figure B6 - Panel A** Reproduced
- **Figure B6 - Panel B** Reproduced
- **Figure B6 - Panel C** Reproduced

- Figure B6 - Panel D Reproduced
- Figure B6 - Panel E Reproduced
- Figure B6 - Panel F Reproduced
- Figure B7 - Panel A Reproduced
- Figure B7 - Panel B Reproduced
- Figure B7 - Panel C Reproduced
- Figure B7 - Panel D Reproduced
- Figure B7 - Panel E Reproduced
- Figure B7 - Panel F Reproduced
- Table B1 - Panel A Reproduced
- Table B1 - Panel B Reproduced
- Figure B8 - Panel A Reproduced
- Figure B8 - Panel B Reproduced
- Figure B8 - Panel C Reproduced
- Figure B8 - Panel D Reproduced
- Figure B8 - Panel E Reproduced
- Figure B8 - Panel F Reproduced
- Figure B9 - Panel A Reproduced
- Figure B9 - Panel B Reproduced
- Figure B9 - Panel C Reproduced
- Figure B9 - Panel D Reproduced
- Figure B9 - Panel E Reproduced
- Figure B9 - Panel F Reproduced
- Table B2 - Panel A Reproduced
- Table B2 - Panel B Reproduced
- Table B2 - Panel C Reproduced
- Table B3 - Panel A Reproduced
- Table B3 - Panel B Reproduced

- **Figure B10 - Panel A** Reproduced
- **Figure B10 - Panel B** Reproduced
- **Figure B10 - Panel C** Reproduced
- **Figure B10 - Panel D** Reproduced
- **Figure B10 - Panel E** Reproduced
- **Figure B10 - Panel F** Reproduced
- **Figure B11 - Panel A** Reproduced
- **Figure B11 - Panel B** Reproduced
- **Figure B11 - Panel C** Reproduced
- **Figure B11 - Panel D** Reproduced
- **Figure B11 - Panel E** Reproduced
- **Figure B11 - Panel F** Reproduced
- **Figure B12 - Panel A** Reproduced
- **Figure B12 - Panel B** Reproduced
- **Figure B12 - Panel C** Reproduced
- **Table B4 - Panel A** Reproduced
- **Table B4 - Panel B** Reproduced
- **Table B5 - Panel A** Reproduced
- **Table B5 - Panel B** Reproduced
- **Table B6 - Panel A** Reproduced
- **Table B6 - Panel B** Reproduced
- **Table B6 - Panel C** Reproduced
- **Table B7 - Panel A, teacher presence** Reproduced with small discrepancies in some coefficients that we attribute to rounding differences

Coefficient	Paper exhibit	Code Output
Total funds	-0.0057	-0.0054
Government funds	-0.0030	-0.0025
Non government funds	0.064	0.065

- **Table B7 - Panel A, student attendance** Reproduced with small discrepancies in some coefficients that we attribute to rounding differences
- **Table B7 - Panel A, functional facilities** Reproduced with small discrepancies in some coefficients that we attribute to rounding differences

Coefficient	Paper exhibit	Code Output
Government funds	0.071	0.069
Coefficient	Paper exhibit	Code Output
Total funds	-0.0095	-0.0094
Government funds	-0.012	-0.013

- **Table B7 - Panel B, teacher presence** Reproduced with small discrepancies in some coefficients that we attribute to rounding differences

Coefficient	Paper exhibit	Code Output
Non government funds	0.096	0.097

F-stat	Paper exhibit	Code Output
Total funds	136.0	136.2
Government funds	136.0	136.2
Non government funds	136.0	136.2
Total expenses	136.1	136.2

- **Table B7 - Panel B, student attendance** Reproduced with small discrepancies in some coefficients that we attribute to rounding differences

Coefficient	Paper exhibit	Code Output
Government funds	-0.46	-0.45
Non government funds	0.082	0.083
Total expenses	0.053	0.054

Standard errors	Paper exhibit	Code Output
Government funds	0.64	0.63

- **Table B7 - Panel B, functional facilities** Reproduced
- **Table B8 - Panel A** Reproduced
- **Table B8 - Panel B** Reproduced
- **Table B9** Reproduced
- **Table B10** Reproduced

F-stat	Paper exhibit	Code Output
Government funds	13.3	13.4
Total expenses	13.4	13.3