Reproducible Research Repository

Climate change and polarization: Some inconvenient evidence from sub-Saharan Africa

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This review verifies the reproducibility of the exhibits included in the paper *"Climate change and polarization: Some inconvenient evidence from sub-Saharan Africa"*.

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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. Setting the global directory in line 38 of main.do, and running it.
- The code takes approximately 36.5 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors.
- **Verification Process and Data Handling**:
  - The reproducibility package relies on two types of data: open and limited-access (available to World Bank staff through datalibweb).
  - Open data is not included in the package; it can be downloaded from the Climate Change Knowledge Portal (see the README).
  - Reviewers used limited-access 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 limited-access data can use this file to verify that the data has not been altered.
- **Reproducibility Summary**:
  - **Data**: Some data is limited-access 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**: 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.
- **Figure 1** Reproduced. Different layout but that does not affect reproducibility.
- **Table 2** Reproduced.
- **Table 3** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Table 4** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** 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 709703, the Stata version used was 19.5 MP, and the exhibits selected were: Table A1, Table A2, Figure A1, Figure A3, Table B1, Table B2, Table C1, Table C2, Figure C1 and Figure C4.

- **Table A1** Reproduced.

- **Table A2** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Figure A1** Reproduced.
- **Figure A3** Reproduced.
- **Table B1** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Table B2** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Table C1** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Table C2** Reproduced. The point estimates reproduce exactly. All differences are confined to the standard errors and the percentile confidence intervals. We consider these differences to be expected when bootstrap resampling is run on a different machine.
- **Figure C1** Reproduced.
- **Figure C4** Reproduced.

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: 32.0 GB
- Software version: Stata 19.5 MP