Reproducible Research Repository

Global Ripple Effects: *Knock-on effects of EU, US, and China Climate Policies on Developing Countries' Trade*

This review verifies the reproducibility of the exhibits included in the paper " *Global Ripple Effects: Knock-on effects of EU, US, and China Climate Policies on Developing Countries Trade*".

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Main findings

- The code was successfully executed on a new computer after:

  1. Change the path in the do file and recreate the tables.

- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.

- The code takes approximately 2 minutes to run.

- We conducted our reproducibility analysis based on the paper on the Authors' reproducibility package.

- Every exhibit has been reproduced accurately.

- **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 (from cleaning to analysis) are included in the reproducibility package.

  - **Outputs**: Some outputs are not generated by code (created manually in Excel, ArcGIS, etc) but instructions for producing these outputs are included in the README file.

  - **Reproducibility verification**: Reviewers used data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package. The reviewers did not verify if publicly available data matches the data provided by the authors.

  - **Dependencies environment**: The reproducibility package does not use external dependencies.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not show analysis results. Figure is drawn from Wang (2024) available here Figure 9, page 13.

- **Figure 2** Does not show analysis results.

- **Figure 3** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"ff"`. The numbers reproduced accurately.

- **Figure 4** Reproduced, but the figure was created manually in Excel. The figures were created in Excel, and the replicators verified that the figures in the paper and the Excel output matched the raw data (sheet:"GVCsector"). Note that the raw data is not available in the public package.

- **Figure 5** Reproduced, but the figure was created manually in Excel. The figure in the paper was verified against the sheet `fig5`. Additionally, the values in `fig5` were cross-checked with the calculation sheet, specifically column `AF Relative CBAM Exposure Index`. While there are minor differences in some values, all discrepancies are well below the 0.01 threshold and are therefore considered reproducible.

- **Figure 6** Reproduced, but the figure was created manually in Excel. The figures were created in Excel, and the replicators verified that the figures in the paper and the Excel output matched the raw data (sheet:"GVCsector"). Note that the raw data is not available in the public package.

- **Figure 7** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"eudr"`. The numbers reproduced accurately.

- **Figure 8** Reproduced, but the figure was created manually in Excel. The figures were created in Excel, and the replicators verified that the figures in the paper and the Excel output matched the raw data (sheet:"GVCsector"). Note that the raw data is not available in the public package.

- **Figure 9** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"cm"`. The numbers reproduced accurately.

- **Figure 10** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"ev comp"`. The numbers reproduced accurately.

- **Figure 11** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"battery"`. The numbers reproduced accurately.

- **Figure 12** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"ev"`. The numbers reproduced accurately.

- **Figure 13** Reproduced, but the table was created manually in Excel. The verification team confirmed that the numbers in the figure from the paper match the values in the raw data file `EG imports from China.xlsx`. Note that the raw data will not be included in the final package; only the data for the countries displayed in the graph will be shared.

- **Figure 14** Reproduced, but the figure was created manually in Excel. The data for the figure is generated by the Stata code and exported to `data for figures_v1.xlsx`, specifically using the sheet labeled `"renewable"`. The numbers reproduced accurately.

- **Table 1** Does not show analysis results.

- **Table 2** Does not show analysis results.

- **Table 3** Reproduced, but the table was created manually in Excel. The verification team confirmed that the table presented in the paper matches the values in the raw data file `CM reserve.xlsx`. Note that the raw data will not be included in the final package; only the final table will be shared.

Reproduction Environment

- Paper exhibits were reproduced in 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 version 18 MP