



## *Pollution Intensity Of Consumption: Exploring The Environmental Engel Curve Based On Micro-Data From 109 Countries*

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This review verifies the reproducibility of the exhibits included in the paper “*Pollution Intensity Of Consumption: Exploring The Environmental Engel Curve Based On Micro-Data From 109 Countries*”.

### **Contents in this review:**

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

### *Main findings*

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
  1. Opening the .Rproj, recovering the environment and running the script.
  2. Changing the path in the main do file and running the script.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 4 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors on October 29th.
- **Verification Process and Data Handling:**
  - The reproducibility package relies on 1 type of data: limited-access.
  - Reviewers used 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:** All 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**

- **Figure 1** Does not show analysis results.
- **Figure 2** Does not show analysis results.
- **Figure 3** Reproduced includes manual changes .The figures in panels a, b, and c are shown in the R plot window.
- **Figure 4** Reproduced. DirtyFuel.png and Electricity.png.
- **Figure 5** Reproduced. DirtyFuel\_urban and DirtyFuel\_rural.png.
- **Figure 6** Reproduced. Electricity\_rural.png Electricity\_urban.png.
- **Figure 6** Reproduced. car.png Motorcycle.png.

### *Reproduction Environment*

Paper exhibits were reproduced on a computer with the following specifications:

- OS: macOS Sequoia
- Processor: Apple M4 Pro
- Memory available: 24 GB
- Software version: Stata 18.0 MP; R: 4.5