



Urban Heat, Mortality, and Economic Costs: Evidence from Bangkok, Thailand

First Submission: RR_THA_2026_594

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This review verifies the reproducibility of the exhibits included in the paper “*Urban Heat, Mortality, and Economic Costs: Evidence from Bangkok, Thailand*”.

Contents in this review:

1. Main findings
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Main findings

- **Every exhibit in the main section of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Opening the R project "(EAP_THA_BKK_Heat_Package.Rproj)"
 2. Restoring the environment by running `renv::restore()` and following the prompts.
 3. Opening the "eap_tha_bkk_heat_temperature.R" script and running the code.
 4. Updating the working directory in the Stata code "eap_tha_bkk_heat_analysis.do" and running the do-file.
- 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
- **Verification Process and Data Handling:**
 - The reproducibility package relies on open and restricted data
 - Open data is included in the public reproducibility package.
 - Reviewers used 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:** 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:** 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** Does not apply.
- **Table 2** Does not apply.
- **Figure 1 Results reproduced.** The figure was manually prepared in excel using Stata raw data in "o5eap_tha_bkk_rr_raw.dta"
- **Figure 2 Results reproduced.** The figure was manually prepared in the Excel file "EAP_THA_BKK_Heat_Figures" using the data from the Stata output eap_tha_bkk_heat_figure2.dta.
- **Figure 3 Results reproduced** The figure was manually prepared in the Excel file "EAP_THA_BKK_Heat_Figures" using the data from the Stata output "eap_tha_bkk_heat_figure3abc.dta" and "eap_tha_bkk_heat_figure3d.dta"
- **Figures 4a, 4c and 4d Results reproduced** The figure was verified using data from the Stata output "eap_tha_bkk_heat_figure4a.dta", "eap_tha_bkk_heat_figure4c.dta" and "eap_tha_bkk_heat_figure4d.dta", respectively and matches the data provided by the authors
- **Figure 4b** Does not apply.
- **Figure 5 Results reproduced** The figure was manually prepared in the Excel file "EAP_THA_BKK_Heat_Figures" using the data from the Stata output "eap_tha_bkk_heat_figure5.dta" and raw data "o4eap_tha_bkk_vsl.xlsx"

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; R version 4.5.2; Excel Version 2512