Reproducible Research Repository

Expanding pension coverage to the informal sector: the case of Viet Nam

Second Submission: RR_VNM_2024_237
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This review verifies the reproducibility of the exhibits included in the paper " *Expanding pension coverage to the informal sector: the case of Viet Nam*".

Contents in this review:

1. Main findings
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Main findings

- **Every exhibit of the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
  1. Change the path in the main 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 on September 10th 2026.
- **Verification Process and Data Handling**:
  - The reproducibility package relies on 2 types of data: 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**: 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 reviewers created a new environment for dependencies using the latest versions available for each dependency at the moment of the review.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Reproduced, manually created. This figure was created manually using restricted information provided by the Vietnam Social Security. The axes differ from those in the published version, but the underlying values match exactly; therefore, the figure is considered reproducible.
- **Figure 2** Reproduced, manually created. This figure was created manually using restricted information provided by the Vietnam Social Security.
- **Figure 3** Reproduced, manually created. This figure was created manually using restricted information provided by the Vietnam Social Security.
- **Figure 4** Does not show analysis results.
- **Figure 5** Reproduced, manually created. This figure was created manually using restricted information by the Ministry of Human Resources and Social Security. Details on the figure creation are in the README file.
- **Figure 6** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8** Reproduced.
- **Figure 9** Reproduced, manually created.
- **Table 1** Does not show analysis results.
- **Table 2** Does not show analysis results.
- **Table 3** Does not show analysis results.
- **Table 4** Reproduced.
- **Table 5** Reproduced.

Results in the Annex

- **Table 6** Reproduced.

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 18.5 MP