



External Finance in Emerging Markets and Developing Economies: A Tale of Differences in Vulnerabilities

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This review verifies the reproducibility of the exhibits included in the paper “*External Finance in Emerging Markets and Developing Economies: A Tale of Differences in Vulnerabilities*”.

Contents in this review:

1. Main findings
2. List of exhibits and reproducibility status
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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. Changing the path in the main do file and running the code.
 2. Changing the path in the python script and running the code.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 20 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by email on November 12th.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 2 types of data: open, and restricted data (available only from the authors).
 - 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

- **Figures 1a, 1b** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figures 6a, 6b** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8** Reproduced.
- **Figure 9** Reproduced.
- **Figure 10** Reproduced.
- **Figure 11** Reproduced.
- **Figure 12** Reproduced.
- **Figure 13** Reproduced.
- **Figure 14** Reproduced.
- **Figure 15** Reproduced.
- **Figure 16** Reproduced.
- **Figure 17** Reproduced.
- **Figure 18** Reproduced.
- **Figure 19** Reproduced.
- **Figure 20** Reproduced.

- **Figure 21** Reproduced.
- **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.
- **Table 6** Reproduced.
- **Table 7** Reproduced.
- **Table 8** Reproduced.
- **Table 9** Reproduced.
- **Table 10** 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 5689567, the Stata version used was 18, and the exhibits selected were: 2,3,4,6,7,8,9,10,11,14.

- **Figure B2** Reproduced.
- **Figures B3a, B3b, B3c, B3d** Reproduced.
- **Figures B4a, B4b, B4c, B4d** Reproduced.
- **Figures B6a, B6b** Reproduced.
- **Figure B7** Reproduced.
- **Figure B8** Reproduced.
- **Figure B9** Reproduced.
- **Table B2** Reproduced.
- **Table B3** Reproduced.
- **Table C1** Does not show analysis results.

Reproduction Environment

Paper exhibits were reproduced on 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 18.5 MP, Python 3.9.21