



Leveraging Sex-Disaggregated and Alternative Data in Credit Scoring for Women-Owned SMEs

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Eric Sabiti

reproducibility@worldbank.org

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This review verifies the reproducibility of the exhibits included in the paper "*Leveraging Sex-Disaggregated and Alternative Data in Credit Scoring for Women-Owned SMEs*".

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. Updating the global directories in the "o_main.do" file and running it
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 3 minutes
- We conducted our reproducibility analysis based on the paper shared by the authors .
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 1 type of data: Forthcoming Data.
 - Reviewers used forthcoming data provided directly by the authors to conduct the reproducibility verification, and this is not included in the public reproducibility package. The data is forthcoming on the World Bank Microdata Library.
 - *data_hash_report.csv* lists the SHA256 hashes of all files in the Data folder to support data integrity checks. Users who acquire the forthcoming/accessible/limited-access/restricted data can use this file to verify that the data has not been altered.
- **Reproducibility Summary:**
 - **Data:** All data is temporarily embargoed by the authors (expected to be made public in the future)
 - **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.

- **Outputs:** All outputs are generated using 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** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figure 6** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8**
 Reproduced. The figure was verified against the code-produced outputs Q20 and Q21. Both figures in the code output include “volume” in their titles. We verified that Q20 corresponds to the volume figure (left-hand side in the manuscript), while Q21 corresponds to the value figure (right-hand side in the manuscript).
- **Figure 9** Reproduced.
- **Figure 10** Reproduced.
- **Figure 11** Reproduced.
- **Figure 12** Results reproduced this figure was manually prepared using Excel
- **Figure 13** Reproduced.
- **Figure 14** Reproduced.
- **Figure 15** Reproduced.
- **Figure 16** Reproduced.
- **Figure 17** Reproduced.
- **Figure 18** Reproduced.
- **Figure 19** Reproduced.

Reproduction Environment

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

- OS: Windows 11 Enterprise
- Processor: Intel(R) Xeon(R) Gold 5218 CPU @ 2.30GHz (2.30 GHz) (2 processors)
- Memory available: 16 GB
- Software version: Stata 19.5 MP