



“Bridging the Gap in Trade Reporting: Insights from the Discrepancy Index”

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This review verifies the reproducibility of the exhibits included in the paper *“Bridging the Gap in Trade Reporting: Insights from the Discrepancy Index”*.

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Main findings

- The code was successfully executed on a databricks environment.
- This paper relies on raw data that is constantly updated. Additionally, we did not have access to the exact snapshot of the raw data used to produce the exhibits in the paper. For these reasons, we utilized a snapshot of an intermediate dataset (an indicator dataset constructed by the authors) to verify the reproducibility of the exhibits.
- We also verified that the indicator dataset constructed from the most recent raw dataset is comparable to the intermediate dataset snapshot provided by the authors.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 1 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors on github in May.
- Every exhibit has been reproduced accurately.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available but not all are included in the package.
 - **Code:** All code files (from cleaning to analysis) are included in the package
 - **Outputs:** All outputs are generated by code included in the reproducibility package.
 - **Reproducibility verification:** Not all of the data used to conduct this verification is included in the public package.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not apply.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figure 6** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8** Reproduced.
- **Table 1** Does not apply.
- **Figure 9** Reproduced.
- **Table 2** Reproduced.
- **Figure 10** Reproduced.
- **Figure 11** Reproduced.
- **Figure 12** Reproduced.
- **Figure 13** Reproduced.
- **Figure 14** Reproduced.

Results in the Annex

- **Table 3** Reproduced.
- **Table 4** Reproduced.
- **Table 5** Reproduced.
- **Table 6** Reproduced.
- **Table 7** Reproduced.
- **Table 8** Reproduced.
- **Table 9** Reproduced.
- **Table 10** Reproduced.
- **Table 11** Reproduced.

- **Table 12** Reproduced.
- **Table 13** Reproduced.
- **Table 14** Reproduced.
- **Figure 15** Reproduced.
- **Figure 16** Reproduced.
- **Figure 17** Reproduced.
- **Figure 18** Reproduced.
- **Figure 19** Reproduced.
- **Figure 20** Reproduced.
- **Figure 21** Does not apply.
- **Figure 22** Reproduced.
- **Figure 23** Reproduced.
- **Figure 24** Reproduced.
- **Figure 25** Reproduced.
- **Figure 26** Reproduced.
- **Figure 27** Reproduced.
- **Figure 28** Reproduced.
- **Figure 29** Reproduced.
- **Figure 30** Reproduced.
- **Figure 31** Reproduced.
- **Figure 32** Reproduced.
- **Figure 33** Reproduced.
- **Table 15** Reproduced.
- **Table 16** Reproduced.
- **Table 17** Does not apply.
- **Table 18** Does not apply.
- **Table 19** Does not apply.
- **Table 20** Does not apply.

Reproduction Environment

- Paper exhibits were reproduced in a computer with the following specifications:
 - Databricks Runtime Version: 14.3 LTS (includes Apache Spark 3.5.0, Scala 2.12)
 - Worker Type: Standard_E4ds_v4 (32 GB Memory, 4 cores)
 - Python version: 3.10.12