VAT Cashback Programs in Practice
The Case of Devolve-ICMS in Rio Grande do Sul, Brazil

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This review verifies the reproducibility of the exhibits included in the paper *"VAT Cashback Programs in Practice - The Case of Devolve-ICMS in Rio Grande do Sul, Brazil"*.

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Main findings

- **Every exhibit has been reproduced accurately.**

- The code was successfully executed on a new computer after:

  1. Adjusting the file path in *0_Master.R*

- 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 via SharePoint on May 22, 2025.

- **Reproducibility Summary**:

  - **Data**: All 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.
  - **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.
  - **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 - Panel A** Reproduced.

- **Figure 2 - Panel B** Reproduced.

- **Figure 3** Reproduced. The exhibit was verified against *rebate_avg_byincome.png*.

- **Table 1** Reproduced. We found a minor discrepancy in the R-squared of column 3: 0.03 in the paper versus 0.02 in the code results. We attribute this to rounding differences in computers and do not consider it to prevent reproducibility.

- **Figure 4** Reproduced.

- **Table 2** Reproduced.

Results in the Annex

- **Figure 5** Reproduced.

Reproduction Environment

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

- OS: Windows 10 Enterprise, version 22H2

- Intel(R) Xeon(R) Platinum 8562Y+ 2.81 GHz (2 processors)

- Memory available: 32 GB

- Software version: Stata - StataNow 18.5 MP-Parallel Edition