



Equality of Opportunity for Sexual and Gender Minorities 2024

Second Submission: FR_WLD_2024_185

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This review verifies the reproducibility of the exhibits included in the paper "*Equality of Opportunity for Sexual and Gender Minorities 2024*".

Contents in this review:

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Main findings

- The code was successfully executed on a new computer after:
 1. Changing the path on the f1 do file.
- 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 report and outputs on the reproducibility package sent by the authors.
- All exhibits have been reproduced accurately.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available and included in the reproducibility package.
 - **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 had access to the same materials in the public reproducibility package.
 - **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

- **Map 1.1** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch1_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 1.1** *Results reproduced, but the figure includes manual adjustments from the code output.* The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Figure 1.2** *Results reproduced, but the figure includes manual adjustments from the code output.* The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Figure 1.3** *Results reproduced, but the table includes manual adjustments from the code output.* The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Figure 1.4** *Results reproduced, but the figure includes manual adjustments from the code output.* The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Figure 1.5** *Results reproduced, but the figure includes manual adjustments from the code output.* The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Map 2.2** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.1** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.2** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.3** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.

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- **Figure 2.5** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.6** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.7** *Reproduced, but the figure was created manually.* The table in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper when filtering the values "1" in the different columns. Although the format and order of the countries in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.8** *Reproduced, but the figure was created manually.* The table in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper when filtering the values "1" in the different columns. Although the format and order of the countries in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.9** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.10** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.11** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.12** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure 2.13** *Reproduced, but the figure was created manually.* The figure shown in the Excel file EQOSOGI_ch2_outputs matches the figure in the paper. Although the format in the report differs slightly due to the design process, this does not affect reproducibility.
- **Figure B3.1.1** Does not show analysis results.
- **Figure 3.1** Does not show analysis results.
- **Table 1.1** Does not show analysis results.

- **Table 1.2** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata result window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Table 1.3** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata results window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.
- **Table 2.1** Does not show analysis results.
- **Table 2.2** Does not show analysis results.
- **Table 2.3** Does not show analysis results.
- **Table 3.1** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata results window into the Excel file referenced in the code. Additionally, the final format in the report differs from the Excel file, but this does not jeopardize reproducibility.

Results in the Online Appendix

In this section, we compared the code-produced outputs to the Excel file EQOSOGI_online_appendix_outputs.xlsx provided by the authors.

- **Figure 1** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata result window into the Excel file referenced in the code.
- **Table 1** Does not show analysis results.
- **Table 2** Results reproduced, but the table includes manual adjustments from the code output. Added in the code provided by the authors the variables i_q^* , because they were missing from the instructions provided. After this everything reproduced but the ordering of some columns differ, specifically eqosogi variables after eqosogi_lgb_om.
- **Table 3** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata result window into the Excel file referenced in the code.
- **Table 4** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata result window into the Excel file referenced in the code.
- **Table 5** Results reproduced, but the table includes manual adjustments from the code output. The output was copy-pasted from the Stata result window into the Excel file referenced in the code.

Results in the Appendix

- **Figure B1** Does not show analysis results.
- **Figure B2** Does not show analysis results.
- **Table B1** Does not show analysis results.

- **Table B2** Does not show analysis results.

Databases

In this section, we compared the code-produced output to the data files in the outputs folder provided by the authors.

- **EQOSOGI_final_database.dta** **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 MP