



Reproducible Research Repository

Public Institutions Global Observatory: Annual Report 2025

Second Submission: FR_WLD_2025_359

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2025-05-30

This review verifies the reproducibility of the exhibits included in the paper " *Public Institutions Global Observatory: Annual Report 2025* ".

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Main findings

- **Every exhibit has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Open the Rproject.
 2. Restore the environment.
 3. Run the main script.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code twice consecutively yielded identical results. Minor differences were observed in some of the graphs, particularly in the placement of labels. These variations are due to the inherent randomness of the `geom_text_repel` function in R, which adjusts label positions to avoid overlap.
- This behavior does not affect the underlying data or plotted values and, therefore, the results are considered stable. However, for the dumbbell figures, it is important to note that if a country label appears above or below another, this does not necessarily indicate that the corresponding average value is higher or lower. This typically occurs when multiple countries have very similar values, resulting in a visual cluster. In such cases, the `ggrepel` algorithm may displace the labels slightly in each run to prevent overlap within the cluster.
- The code takes approximately 3 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors on May 30th.

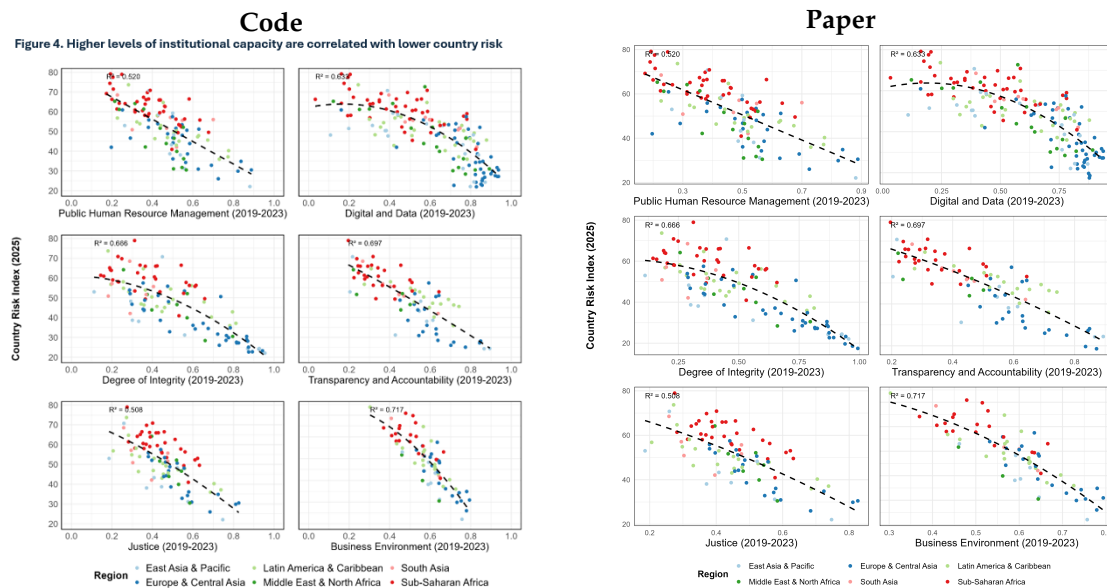
• Reproducibility Summary:

- **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.
- **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. The reviewers did not verify if publicly available data matches the data provided by the authors.
- **Dependencies environment:** The reviewers reproduced an existing environment for dependencies using dependency files or an environment metadata file provided by the authors.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Does not show analysis results.
- **Figure 2** Reproduced. Verified against GDPpercapitaPPPconstant2021international_main
- **Figure 3** Reproduced. Verified against Povertyheadcountratioat215aday2017PPPopofpopulation_main
- **Figure 4** Reproduced. Verified against CountryRisk_vs_CTF_main. The axes shown in the code-produced output and the manuscript are different (see screenshots below). However, the underlying data is and the pattern is the same, so this is considered reproducible.



- **Figure 5** Reproduced.

Verified against 05-poli-arena-regional-dumbbells.png and 05-social-arena-regional-dumbbells.png. The labels are slightly different because of the underlying function used in the plot to produce it, but the data is the same and the average value is the same so this is considered reproducible.



- **Figure 6 Reproduced.** Verified against 06-center-of-gov-digital-regional-dumbbells.png and 06-center-of-gov-hrm-regional-dumbbells.png. The labels are slightly different because of the underlying function used in the plot to produce it, but the data is the same and the average value is the same so this is considered reproducible.
- **Figure 7 Reproduced.** Verified against 07-integrity-regional-dumbbells.png and 07-transp-regional-dumbbells.png. The labels are slightly different because of the underlying function used in the plot to produce it, but the data is the same and the average value is the same so this is considered reproducible.
- **Figure 8 Reproduced.** Verified against 08-environment-regional-dumbbells.png and 08-justice-regional-dumbbells.png. The labels are slightly different because of the underlying function used in the plot to produce it, but the data is the same and the average value is the same so this is considered reproducible.
- **Figure 9 Reproduced.** Verified against 09-political-cluster-change.png.
- **Figure 10 Reproduced.** Verified against 10-social-cluster-change.png.
- **Figure 11 Reproduced.** Verified against 11-hrm-cluster-change.png.
- **Figure 12 Reproduced.** Verified against 12-integrity-cluster-change.png.
- **Figure 13** Does not show analysis results.
- **Figure 14 Reproduced.** The README includes instructions to reproduce the figure from the WVI, and it was successfully done. Link to consult the indicators is available here.
- **Figure 15** Does not show analysis results.
- **Figure 16 Reproduced.** Verified against 15-service-delivery-education-budget-execution.png and 15-service-delivery-health-budget-execution.png. The labels are slightly different because of the underlying function used in the plot to produce it, but the data is the same and the average value is the same so this is considered reproducible.
- **Figure 17** Does not show analysis results.

- **Figure 18** **Reproduced**. Verified against 17-coverage_information_systems.png.
- **Figure 19** Does not show analysis results.
- **Figure 20** **Reproduced**. Verified against 19_mgmt_target.png.
- **Table 1** Does not show analysis results.
- **Table 2** Does not show analysis results.
- **Table 3** Does not show analysis results.
- **Table 4** Does not show analysis results.
- **Table 5** Does not show analysis results.
- **Table 6** Does not show analysis results.
- **Table 7** Does not show analysis results.
- **Table 8** Does not show analysis results.

Results in the Annex

- **Annex 1: figure 1** **Reproduced**. Verified against GDPpercapitaPPPconstant2021international_annex
- **Annex 1: figure 2** **Reproduced**. Verified against GPovertyheadcountratioat215aday2017PPPopofpopulation_annex
- **Annex 1: figure 3** **Reproduced**. Verified against CountryRisk_vs_CTF_annex The axes shown in the code-produced output and the manuscript are different (see screenshots below). However, the underlying data is and the pattern is the same, so this is considered reproducible.
- **Annex 1: figure 4** **Reproduced**.
Verified against Povertyheadcountratioat215aday2017PPPopofpopulation_annex_nossa
- **Annex 2: figure 1** **Reproduced**. Verified against annex-a-justice-cluster-change.png
- **Annex 2: figure 2** **Reproduced**. Verified against annex-b-enviromental-cluster-change.png
- **Annex 3** Does not show analysis results.
- **Annex 4** Does not show analysis results.
- **Annex 5** Does not show analysis results.
- **Annex 5** **Reproduced**. Verifief against lm_risk_institutions.doc

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: R version 4.4.1