# README for the Reproducibility Package for

# Public Institutions Global Observatory: Annual Review 2025

## Overview

This reproducibility package recreates all analyses featured in the Public Institutions Global Observatory (PIGO) Annual Review 2025, produced by the EGVPI. It bundles every data transformation, customed functions and plotting scripts needed to replicate the report’s findings. Chapter 1 workflows examine global and regional patterns in institutional capacity, while Chapter 2 delivers a more granular, cluster-level analysis of operational engagements and evidence on institutional capacity.

## Data Availability

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | Dataset | Link | Year | Access |
| CLIAR Dashboard | cliar\db\_variables.xlsx | https://w0lxdrconn01.worldbank.org/CLIAR/ This is a codebook, team's curation of data sources | May 2025 | Accessible |
| CLIAR Dashboard | cliar\dynamic\_ctf\_032525.dta | https://w0lxdrconn01.worldbank.org/CLIAR/ | March 2025 | Limited |
| - | - | - | - | Limited |

## Statement about Rights

I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.

I certify that the author(s) of the manuscript have documented permission to redistribute/publish the data contained within this replication package. Appropriate permissions are documented in the LICENSE.txt file.

## Instructions for Replicators

As stated in the README.Rmd of the project, there are two stages to reproduce the results of this workflow. Following ones: This package’s workflow is organized into two sequential phases:

1. Restoring Dependencies

Before you run any scripts, make sure you’re using the exact package versions recorded in renv.lock. In RStudio, open pigographs.Rproj and execute renv::restore().

2. Running the Full Workflow

To run it, just run the chink section mentioned in the README.Rmd. The package’s workflow is organized into two sequential phases:

Data Transformation

Confirm that you have the input/ folder provided by the EGVPI team.

Source every raw-data preprocessing script in data-raw/source/.

Data Analysis & Visualization

Source all analysis and plotting scripts in analysis/. Verify that each plot in the figures folder reproduces exactly as in the PIGO Annual Review.

## Software Requirements

R: Version 4.3 or higher

Dependency Management: renv for managing package dependencies

Development Tools: devtools for package loading

## Memory, Runtime, and Storage Requirements

Memory: No minimum required, but 16 GB is recommended for optimal performance.

Run Time: ~3 minutes on recommended hardware.

## Folder Structure

The repository is organized as follows:

├── data-raw

│ ├── source # Scripts for transforming raw data

│ ├── input # Raw data files (provided by the EGVPI Team)

│ └── output # Transformed data for ad-hoc analysis

├── analysis # Scripts for data analysis and plotting

├── R # Package functions

├── documentation # Documentation for reproducibility (e.g., DAS)

├── data # Transformed data frames available for lazy-loading

├── figures # Final outputs (e.g., plots) for verification

├── renv # Dependency management directory

├── README.Rmd # This file (knit to reproduce the analysis)

└── pigographs.Rproj # RStudio project file

## List of Exhibits

|  |  |  |  |
| --- | --- | --- | --- |
| **Exhibit name** | **Output filename** | **Script** | **Note** |
| Figure 1. Country-Level Institutional Assessment and Review (CLIAR) Framework | NA | NA | Image. Source: CLIAR Methodology note (https://w0lxdrconn01.worldbank.org/CLIAR/) |
| Figure 2. Quality of institutions and levels of economic development are positively correlated | GDPpercapitaPPPconstant2021international\_main |  |  |
| Figure 3. Higher levels of institutional capacity are associated with lower levels of poverty | Povertyheadcountratioat215aday2017PPPofpopulation\_main |  |  |
| Figure 4. Higher levels of institutional capacity are correlated with lower country risk | CountryRisk\_vs\_CTF\_main |  |  |
| Figure 5. Regional variation in the policy arena (political and social) | 05-poli-arena-regional-dumbbells.png |  |  |
| Figure 5. Regional variation in the policy arena (political and social) | 05-social-arena-regional-dumbbells.png |  |  |
| Figure 6. Regional variation in institutions at the center of government | 06-center-of-gov-digital-regional-dumbbells.png |  |  |
| Figure 6. Regional variation in institutions at the center of government | 06-center-of-gov-hrm-regional-dumbbells.png |  |  |
| Figure 7. Regional Variation in Degree of Integrity and Transparency and Accountability | 07-integrity-regional-dumbbells.png |  |  |
| Figure 7. Regional Variation in Degree of Integrity and Transparency and Accountability | 07-transp-regional-dumbbells.png |  |  |
| Figure 8. Regional variation in specific thematic areas: Justice and Energy and Environment | 08-enviroment-regional-dumbbells.png |  |  |
| Figure 8. Regional variation in specific thematic areas: Justice and Energy and Environment | 08-justice-regional-dumbbells.png |  |  |
| Figure 9. Change in political institutions over time (2018 vs 2022) | 09-political-cluster-change.png |  |  |
| Figure 10. Change in social institutions over time (2018 vs 2022) | 10-social-cluster-change.png |  |  |
| Figure 11. Change in public human resource management institutions over time (2018-2022) | 11-hrm-cluster-change.png |  |  |
| Figure 12. Change in degree of integrity over time (2018-2022) | 12-integrity-cluster-change.png |  |  |
| Figure 13. Regional variation in the share of workers with tertiary education in the public and private sectors | NA | NA | Image. Source: Worldwide Bureaucracy Indicators |
| Figure 14. Global datasets on public financial management | NA | NA | Hyperlinks references, not applicable |
| Figure 15. Regional variation in capital budget execution rate in service delivery (2019) | 15-service-delivery-education-budget-execution.png |  |  |
| Figure 15. Regional variation in capital budget execution rate in service delivery (2019) | 15-service-delivery-health-budget-execution.png |  |  |
| Figure 16. Global datasets on government technologies | NA | NA | Hyperlinks references, not applicable |
| Figure 17. Share of countries with operational management information systems, by region |  |  |  |
| Figure 18. Global datasets on management practices | NA | NA | Hyperlinks references, not applicable |
| Figure 19. Institutional-level variation in institutional target-setting (Guatemala and Ghana) | 19\_mgmt\_target.png |  |  |
| Annex 1. Additional Correlations between Institutional Dimensions and Prosperity Indicators (a) | GDPpercapitaPPPconstant2021international\_annex |  |  |
| Annex 1. Additional Correlations between Institutional Dimensions and Prosperity Indicators (b) | Povertyheadcountratioat215aday2017PPPofpopulation\_annex |  |  |
| Annex 1. Additional Correlations between Institutional Dimensions and Prosperity Indicators (c) | CountryRisk\_vs\_CTF\_annex |  |  |
| Annex 1. Additional Correlations between Institutional Dimensions and Prosperity Indicators (d) | Povertyheadcountratioat215aday2017PPPofpopulation\_annex\_nossa | |  |
| Annex 2. Change in Sector-specific Institutions (a) - justice | annex-a-justice-cluster-change.png |  |  |
| Annex 2. Change in Sector-specific Institutions (b) - enviromental | annex-b-enviromental-cluster-change.png |  |  |