2: Measuring Institutions with the Worldwide Governance Indicators

2025-11-07

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1. Introduction

How do we measure something as abstract as "institutions"? This fundamental challenge has puzzled economists and political scientists for decades. While we can observe the outcomes of institutional

arrangements - economic growth, political stability, or corruption scandals - measuring the quality of institutions themselves is far more complex. Not only, but also because the definition of an institution differs across economic paradigms, as discussed in this lecture.

The Worldwide Governance Indicators (WGI), developed by the World Bank, represent one of the most influential attempts to quantify institutional quality. Since 1996, the WGI have provided standardized measures of governance across more than 200 countries, influencing everything from aid allocation to academic research on development.

Why Measuring Institutions Matters

Institutional measurement isn't merely an academic exercise. The WGI and similar indicators shape real-world decisions:

- **Development aid** allocation increasingly depends on governance scores
- **Foreign investment** flows are influenced by institutional quality rankings
- **Policy reforms** are often designed to improve specific governance indicators
- **Academic research** on institutions and development relies heavily on these measures

Understanding both the power and limitations of institutional indicators is crucial for anyone studying development economics.

What You'll Learn

This tutorial introduces you to the WGI framework while maintaining a critical perspective on institutional measurement. You'll learn how to access and analyze WGI data, understand what these indicators capture and miss, and connect them to broader debates in institutional economics.

Rather than treating the WGI as objective truth, we'll explore how these measures reflect particular theoretical assumptions about what constitutes "good governance" - assumptions that may not apply universally across different contexts and development models.

2. Understanding the WGI Framework

2.1 The Six Dimensions of Governance

The WGI measures institutional quality along six dimensions, each capturing different aspects of governance:

- **Voice and Accountability**: Political participation, freedom of expression, and media independence
- **Political Stability and Absence of Violence**: Likelihood of political instability and politically motivated violence
- **Government Effectiveness**: Quality of public services, bureaucracy, and policy implementation

- **Regulatory Quality**: Government's ability to formulate and implement sound private sector policies
- **Rule of Law**: Confidence in legal rules, property rights, police, and courts
- **Control of Corruption**: Extent to which public power is not exercised for private gain

The WGI are composite indicators built from hundreds of underlying data sources, including:

- **Expert surveys** from think tanks and NGOs
- **Business surveys** on regulatory environment and corruption
- **Citizen surveys** on government performance and services
- **Objective indicators** like press freedom indices

These diverse sources are aggregated using an "Unobserved Components Model" that assumes all sources measure the same underlying governance concept.

> **Note**
>
> For detailed definitions and methodology, see the official WGI documentation.

> **Key Methodological Issues**
>
> For detailed critiques and responses, see the World Bank's external assessment and project updates.

2.2 Connecting WGI to Institutional Theory

The WGI framework reflects particular theoretical commitments about what constitutes good governance. Let's examine how these dimensions align with different schools of institutional economics:

> **Exercise: WGI and Institutional Theory**
>
> Fill in the table below by matching WGI dimensions to institutional economics paradigms. Consider which aspects of institutions are emphasized and which might be missing.

WGI Dimension	NIE Focus (Property rights, contracts, transaction costs)	OIE Concerns (Power, social embeddedness, ceremonial institutions)	Missing Aspects
Rule of Law			
Regulatory Quality			

Government Effectiveness
Control of Corruption
Voice & Accountability
Political Stability

Possible Solution

WGI Dimension	NIE Focus	OIE Concerns	Missing Aspects
Rule of Law	Strong focus on property rights protection and contract enforcement	Limited attention to whose interests laws serve, power relations in legal system	Labor rights, collective bargaining institutions
Regulatory Quality	Emphasis on private sector-friendly policies, reducing business costs	Ignores distributional effects, assumes market solutions optimal	Industrial policy, state capacity for structural transformation
Government Effectiveness	Efficient service delivery, bureaucratic quality	Little consideration of democratic input, social priorities	Welfare state institutions, public participation
Control of Corruption	Reducing transaction costs from rent-seeking	Narrow focus on individual behavior vs. systemic corruption	Regulatory capture by powerful interests
Voice & Accountability	Limited - mainly procedural democracy	Some attention to participation	Economic democracy, worker voice, inequality
Political Stability	Predictable environment for investment	Potential bias toward status quo, ignores legitimate grievances	Social movements, transformative change

Key Insight: The WGI framework aligns closely with NIE concerns about transaction costs and property rights, but largely ignores OIE themes around power, social embeddedness, and institutional change. Important institutional dimensions like labor relations, welfare systems, and industrial policy are notably absent.
This critique mirrors the discussion of Acemoglu, Johnson & Robinson's work in the institutional economics lecture, where we saw how their focus on "Global Standard Institutions" reflects a narrow, Western-centric view of good governance that may not be universally applicable.

2.3 Theory-Ladenness of Institutional Measurement

The previous exercise shows that the WGI framework is far from neutral but rather embeds particular assumptions about good governance:

- **Market-friendly bias**: Regulatory Quality heavily emphasizes policies that facilitate private business, potentially overlooking the value of regulations that protect workers, consumers, or the environment.
- **Liberal democratic model**: Voice & Accountability measures primarily capture Western-style democratic procedures, potentially missing other forms of legitimate political participation.
- **Stability bias**: Political Stability may inadvertently favor authoritarian regimes that maintain order at the expense of necessary social change.
- **Individual vs. systemic focus**: Control of Corruption emphasizes petty corruption while potentially missing "legal corruption" through campaign finance, lobbying, or regulatory capture.

Correspondingly, there are several important institutional dimensions that receive little attention in the WGI framework, such as:

- **Labor institutions**: Union rights, collective bargaining, worker protection
- **Welfare institutions**: Social insurance, redistribution mechanisms
- **Industrial policy institutions**: State capacity for economic transformation
- **Environmental governance**: Institutions for ecological sustainability
- **Gender institutions**: Formal and informal rules affecting women's participation

These omissions reflect the WGI's origins in the "good governance" agenda of the 1990s and the newer 'Global Standard Institutions', which prioritized market-friendly reforms over broader institutional development.

3. Accessing and Using WGI Data

3.1 Data Access

The WGI data can be accessed through multiple channels:

- **Interactive visualization**: WGI Interactive Data Access

- **Full dataset downloads**: Available in Excel and Stata formats from the same portal
- **World Bank API**: For programmatic access (though we'll use downloaded files here)

For systematic analysis, we recommend downloading the complete dataset in Stata format, which provides the most comprehensive data structure.

3.2 Reading WGI Data in R

The basic WGI data looks like this:

Table 3: Raw WGI data structure (2020 data for selected countries)

codeindyr	code	countryname	year	indicator	estimate	stddev	nsource	pctrank	pctranklowe
AFGcc1996	AFG	Afghanistan	1996	cc	-1.29	0.34	2	4.30	0.0
ALBcc1996	ALB	Albania	1996	cc	-0.89	0.32	3	19.35	2.6
DZAcc1996	DZA	Algeria	1996	cc	-0.57	0.26	4	33.33	16.6
ASMcc1996	ASM	American Samoa	1996	cc	NA	NA	NA	NA	NA
ADOcc1996	ADO	Andorra	1996	cc	1.32	0.48	1	87.10	72.0
AGOcc1996	AGO	Angola	1996	cc	-1.17	0.26	4	9.68	0.5

So you have the following variables:

- `codeindyr`: An identifier for the particular observation that you are most like not use.
- `code` and `countryname`: The `iso3c` country code and its full name
- `year`: The year for the observation
- `indicator`: The name of the indicator in its abbreviated form; `cc`, for instance, stands for 'Control of Corruption'
- `nsource`: The number of data sources used to compute the indicator value
- `estimate`: The observation value in its original unit, i.e. the aggregation of the `nsource` sources
- `stddev`: The standard variation of the aggregation of the sources; this is a measure of the confidence you can have in the `estimate`: the smaller the value, the more the different sources agree
- `pctrank`: An alternative way to look at the indicators; instead of looking at the actual units as in `estimate`, here you look at the percentile ranks of the observation (i.e. in a relative fashion); thus, it goes from 0 to 100.
- `pctranklower` and `pctrankupper`: the lower and upper limit of of the 90% confidence interval associated with the `pctrank` (just as `stddev`, it is a measure of the uncertainty involved in the data aggregation)

In the following, we will take the most basic approach and only look at the estimates directly. For actual research, you should take into account the uncertainty measures as well:

Table 4: Sample WGI data structure for the reduced version (2020 data fo

Country	Year	Voice & Accountability	Political Stability	Government Effectiveness	Regulatory

Afghanistan	2020	-1.08	-2.70	-1.61
Albania	2020	0.09	0.09	-0.16
Algeria	2020	-1.09	-0.85	-0.57
American Samoa	2020	0.97	1.09	0.63
Andorra	2020	1.09	1.59	1.75
Angola	2020	-0.82	-0.60	-1.26

Table 5: Countries with highest and lowest governance scores

Category	Country	Average WGI Score
Highest Governance Scores		
Highest Governance	Finland	1.81
Highest Governance	Denmark	1.77
Highest Governance	New Zealand	1.76
Highest Governance	Switzerland	1.73
Highest Governance	Norway	1.71
Lowest Governance Scores		
Lowest Governance	Somalia	-2.12
Lowest Governance	South Sudan	-1.82
Lowest Governance	Afghanistan	-1.66
Lowest Governance	Congo, Dem. Rep.	-1.65
Lowest Governance	Iraq	-1.56

3.3 Visualizing WGI Trends

Figure 1 shows how the governance indicators have evolved over time for some selected countries.

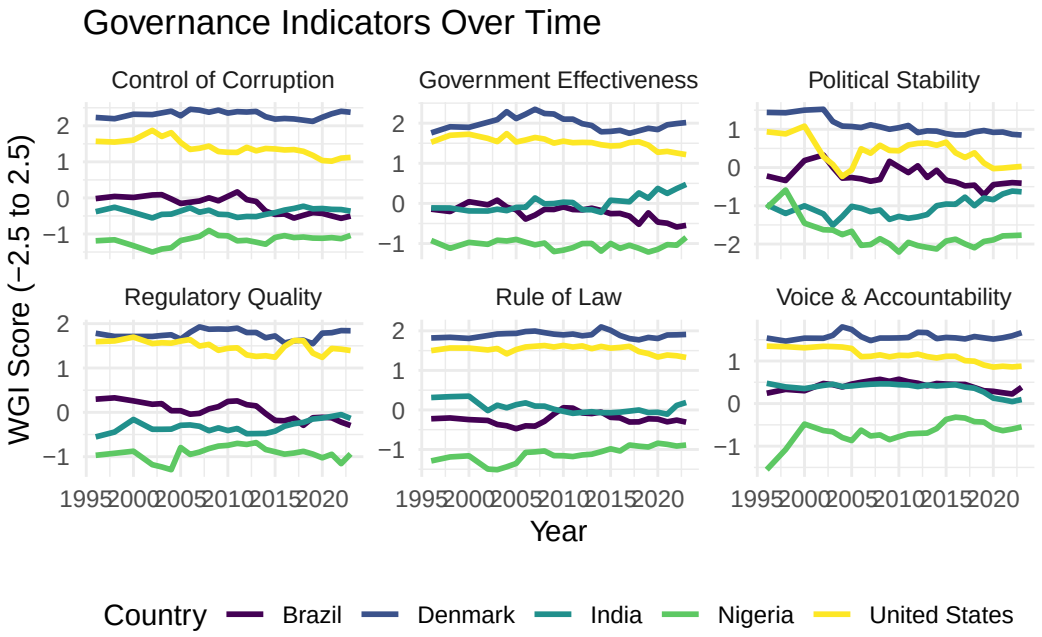
3.4 Correlation Among WGI Dimensions

But how do the different governance dimensions relate to each other? We'll first look at correlations across the entire sample, then examine whether these relationships differ across specific countries.

Table 6: Correlation matrix among WGI dimensions (overall sample, 2000-2022 averages)

Indicator	VA	PS	GE	RQ	RL	CC
Voice & Accountability	1.000	0.801	0.847	0.745	0.784	0.804
Regulatory Quality	0.801	1.000	0.918	0.697	0.952	0.890
Rule of Law	0.847	0.918	1.000	0.824	0.946	0.958
Political Stability	0.745	0.697	0.824	1.000	0.757	0.802
Government Effectiveness	0.784	0.952	0.946	0.757	1.000	0.941
Control of Corruption	0.804	0.890	0.958	0.802	0.941	1.000

Figure 1: WGI trends for selected countries (2000-2022). Note the different trajectories across countries and dimensions.



The correlation matrix in Table 6 shows high correlations among most WGI dimensions, suggesting they may not capture truly independent aspects of governance.

Now let's examine whether these correlation patterns differ across countries with different development levels and institutional characteristics. Here, Table 7 reveals interesting patterns: correlations among governance dimensions may vary significantly across countries, suggesting that the relationship between different aspects of governance is context-dependent.

Table 7: Summary of WGI correlations by country

Country	Mean Correlation	Min Correlation	Max Correlation	Std Dev
Denmark	0.250	-0.219	0.802	0.321
United States	0.501	0.118	0.922	0.232
Brazil	0.473	0.183	0.908	0.248
Nigeria	-0.016	-0.583	0.719	0.386

5. Governance and Development Outcomes

5.1 WGI and Economic Development

Let's examine how governance indicators correlate with development outcomes. We'll use World Bank data to look at the relationship between governance quality and key development indicators. For the sake of simplicity we look at the averages of the indicators for the years 2018 to 2022 (see Table 8).

Table 8: Sample of World Bank development indicators (2018-2022 averages)

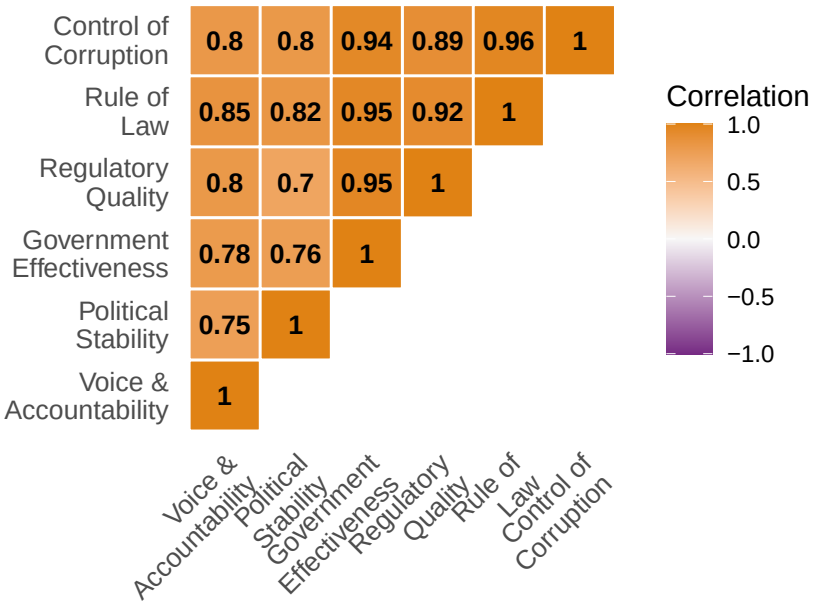


Figure 2: Visual correlation matrix among WGI dimensions (overall sample). High correlations suggest dimensions may not be truly independent.

5.2 Governance Dimensions Analysis

Let's examine which governance dimensions tend to cluster together:

On average, there appears to be a clear relationship between the governance performance and GDP as well as life expectancy. The relationship with inequality is, surprisingly, much less clear and tends to be even negative.

But even the positive correlation with GDP does not answer the corresponding questions:

- **Do good institutions cause development?** This is the core claim of New Institutional Economics, supported by studies like Acemoglu, Johnson, and Robinson's colonial origins work.
- **Does development enable better institutions?** Alternative explanations suggest that economic growth provides resources for institutional improvements.
- **Do both reflect common factors?** Historical, cultural, or geographic factors might simultaneously influence both institutional quality and development outcomes.
- **Reverse causation concerns**: Successful development may make countries appear to have better governance simply because they can afford better public services and less corruption.

All these intricacies make institutional analysis a very challenging but also very exciting subject.

Figure 3: Correlation matrices for selected countries. Different patterns suggest governance dimensions relate differently across institutional contexts.

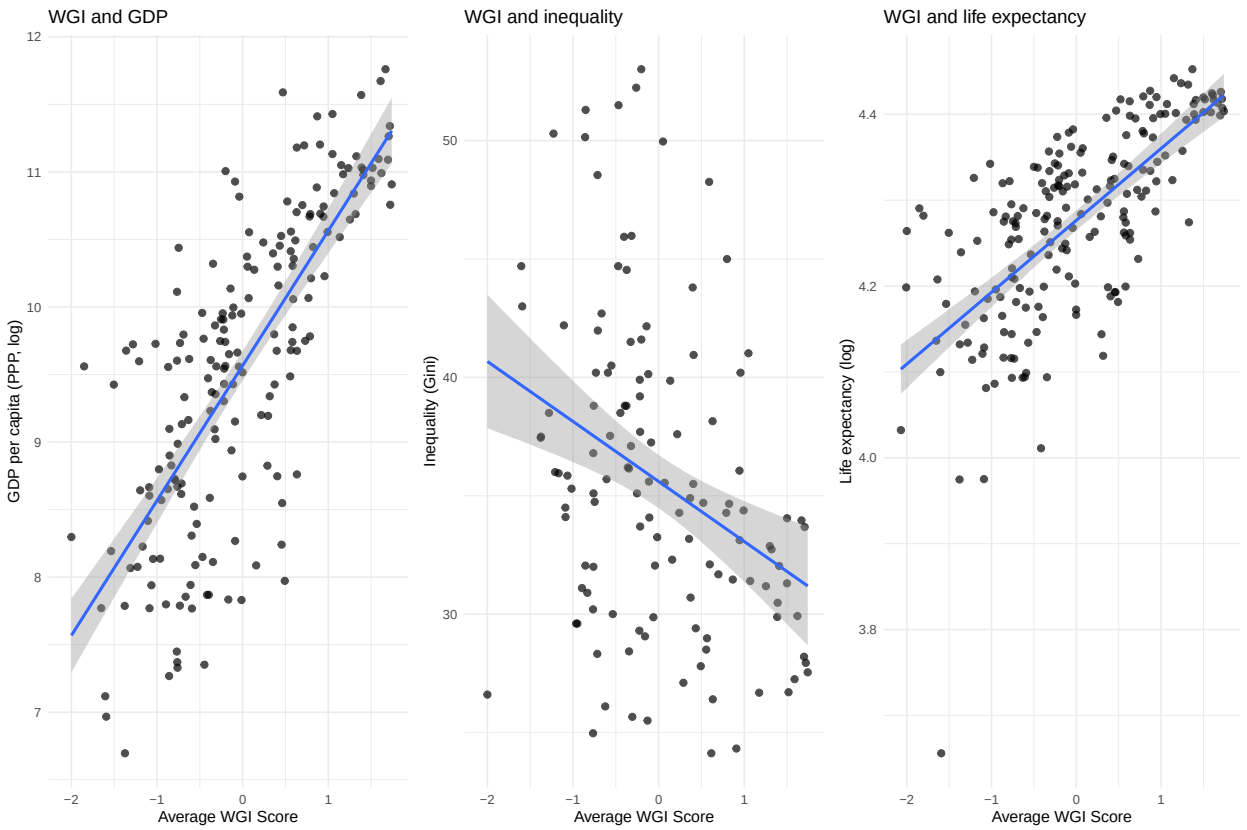


Figure 4: Relationship between different governance dimensions. High correlations suggest these may measure similar underlying concepts.

6. Applications and Scholarly Uses

The WGI have been used extensively in academic research and policy analysis. Here are some key applications:

- TBA

7. Summary and Critical Reflections

Key Takeaways

Institutions clearly matter for development, but measuring them objectively is extraordinarily difficult. The WGI represent an ambitious attempt to quantify governance quality, but they embed particular theoretical assumptions about what constitutes good institutions.

The WGI framework aligns closely with New Institutional Economics concerns about property rights, transaction costs, and market-friendly policies. However, it largely overlooks Original Institutional Economics themes around power relations, social embeddedness, and institutional change.

High correlations among WGI dimensions on the aggregate suggest they may measure a single underlying "governance quality" factor rather than truly distinct institutional aspects.

Heterogeneous correlations on the country level, on the other hand, suggest that it is very important to look at single countries more closely to understand the specific relationship between the measured dimensions.

Strong correlations between governance and development don't establish causal relationships. The direction of causation remains hotly debated in the literature.

Critical Questions that follow

1. **Whose definition of good governance?** The WGI framework reflects particular (Western, liberal) views about optimal institutions. Are these universally applicable?
2. **What's missing?** Important institutional dimensions like labor relations, welfare systems, and industrial policy receive little attention in governance indicators.
3. **Static vs. dynamic institutions**: The WGI provide snapshots of institutional quality but tell us little about processes of institutional change and development.
4. **Context specificity**: Do the same institutional arrangements work equally well across different development stages, cultural contexts, and economic structures?

Moving Forward

As you encounter governance indicators in academic research and policy discussions, remember that these measures are tools with particular purposes and limitations. They can provide useful information about certain aspects of institutional quality, but they should not be treated as comprehensive or objective measures of institutional development.

The goal is to use these indicators critically and thoughtfully, understanding both what they reveal and what they obscure about the complex relationship between institutions and development.

References for Further Reading

- TBA

- Back to the tutorials overview