

Measuring Governance: Possibilities and Pitfalls

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www.govindicators.org

The World Bank

A Decade of Measuring Governance

- **Governance Matters V: Update on Worldwide Governance Indicators Project**
 - updated indicators for 2005
 - move to annual frequency
 - release of (almost) all underlying data sources
- **Examples of uses of the WGI indicators**
- **Important lessons for users of *all* types of governance indicators:**
 - measurement error is pervasive
 - different indicators serve different purposes
 - alternative indicators are complementary
 - links from policy actions to outcomes are complex

Worldwide Governance Indicators Project

Defining Governance Broadly

Governance consists of the traditions and institutions by which authority in a country is exercised. This includes

- the process by which governments are selected, monitored and replaced,***
- the capacity of the government to effectively formulate and implement sound policies, and***
- the respect of citizens and the state for the institutions that govern economic and social interactions among them.***

Worldwide Governance Indicators Project

- **Six aggregate governance indicators covering 213 countries over past decade**
 - **Voice and Accountability**
 - **Political Stability/Absence of Violence**
 - **Government Effectiveness**
 - **Regulatory Quality**
 - **Rule of Law**
 - **Control of Corruption**
- **Based on 31 data sources from 25 organizations, capturing views of thousands of informed stakeholders**
- **Widely used by policymakers and researchers to study causes and consequences of good governance**

2006 Update of Worldwide Governance Indicators: Key Features

- **Move to annual data**
 - complement biannual data 1996-2004 with annual data for 2003, 2005
 - continue reporting data annually in future
- **First-time access to data underlying aggregate indicators**
 - hundreds of individual indicators over past decade
 - one of the largest on-line governance data resources at www.govindicators.org

Sources of Governance Data

- **Cross-Country Surveys of Firms:** Global Competitiveness Survey, World Business Environment Survey, World Competitiveness Yearbook, BEEPS
- **Cross-Country Surveys of Individuals:** Gallup International Voice of the People, Latinobarometro, Afrobarometer
- **Expert Assessments from Commercial Risk Rating Agencies:** DRI, PRS, EIU, World Markets Online, Merchant International Group, IJET Travel Consultancy, PERC
- **Expert Assessments from NGOs, Think Tanks:** Reporters Without Borders, Heritage Foundation, Freedom House, Amnesty International, Bertelsmann Foundation, Columbia University, International Research and Exchanges Board
- **Expert Assessments from Governments, Multilaterals:** World Bank CPIA, EBRD, AFDB, ADB, State Dept. Human Rights Report, Trafficking in Persons Report

Examples of Governance Questions

1. Expert assessment polls

- Government interfere w/ private investment? (RQ)
- How transparent and fair is the legal system? (RL)
- Risk of coup, civil war, org. crime, terrorism? (PV)
- How severe is the bureaucratic red tape? (RQ)
- What is risk of loss of FDI due to corruption? (CC)
- Freedom of the press, expression, association (VA)

2. Survey Responses

- % bribery “to get things done”? (CC)
- Transparent info given by government? (GE)
- % Management Time spent on red tape? (RQ)
- Access & quality of government services? (GE)

Why Aggregate Indicators?

Basic Premise: *individual data sources provide a noisy “signal” of broader concept of governance, e.g.:*

- trust in police → RULE OF LAW
- freedom of press → VOICE & ACC'TBILITY
- policy consistency → GOV'T EFFECTIVENESS

Benefits of Aggregation

- aggregate indicators are more informative about broad concepts of governance – simple intuition of averaging...
- much broader country coverage than individual indicator
- generate explicit margins of error for country scores

Building Aggregate Governance Indicators

- Use Unobserved Components Model (UCM) to construct composite governance indicators, and margins of error for each country
- Estimate of governance: *weighted average* of observed scores for each country, re-scaled to common units
- Weights are proportional to *precision* of underlying data sources
- Precision depends on how strongly individual sources are correlated with each other
- Margins of error reflect (a) *number of sources* in which a country appears, and (b) the *precision of those sources*

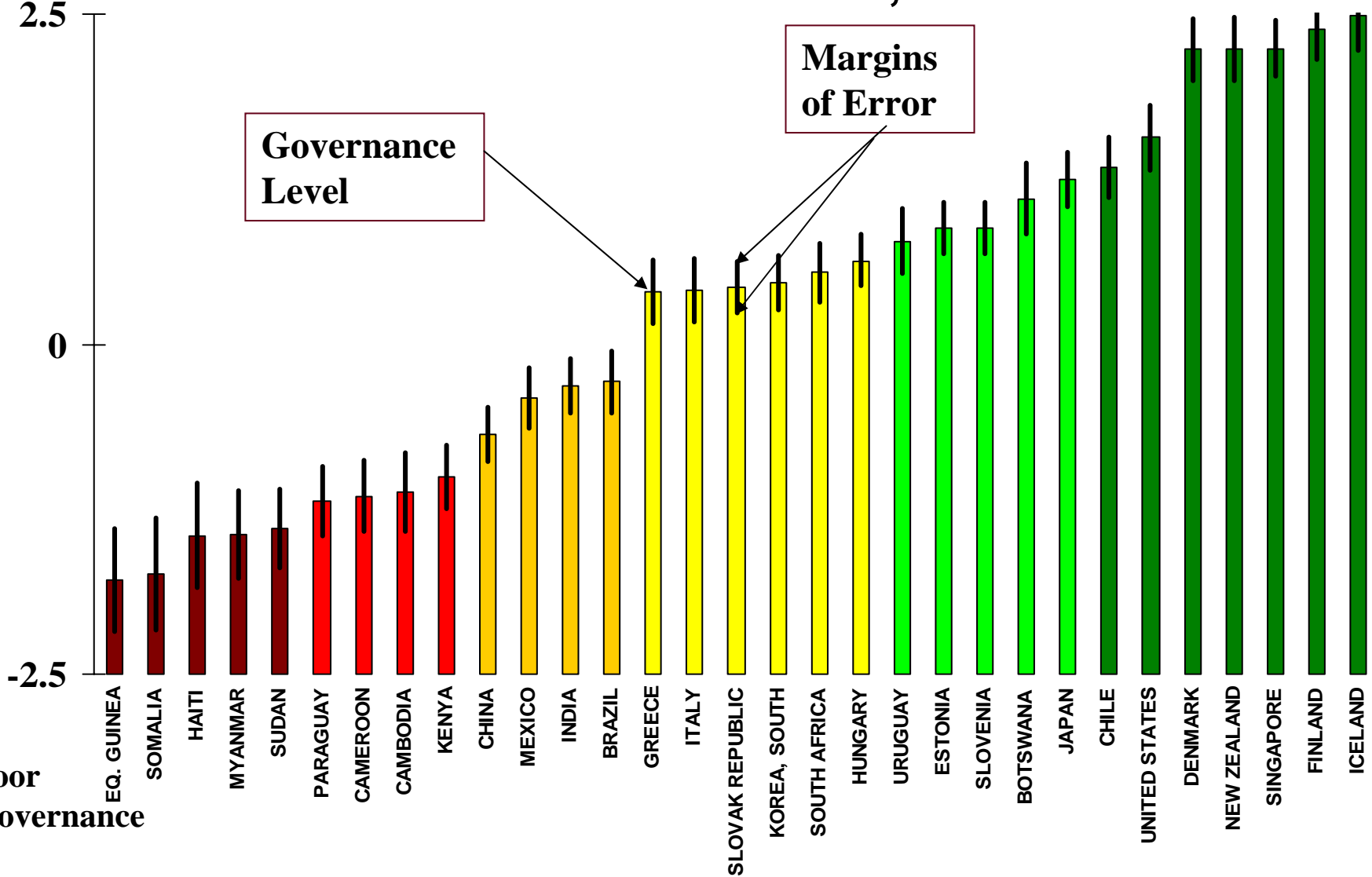
Levels of Governance Worldwide, 1996-2005

- Estimates of governance for 213 countries
- Standard errors to assess the *precision* of the estimates
 - Rule of thumb: cross-country differences in governance significant if 90% confidence regions don't overlap
 - Many small differences between countries not significant...
 - But many larger differences are statistically significant
 - 70% of all comparisons based on aggregate indicator...
 - but only 30% of all comparisons based on individual indicators
- Precision of governance indicators has improved over time with more, and better, data sources

Control of Corruption

Selected Countries, 2005

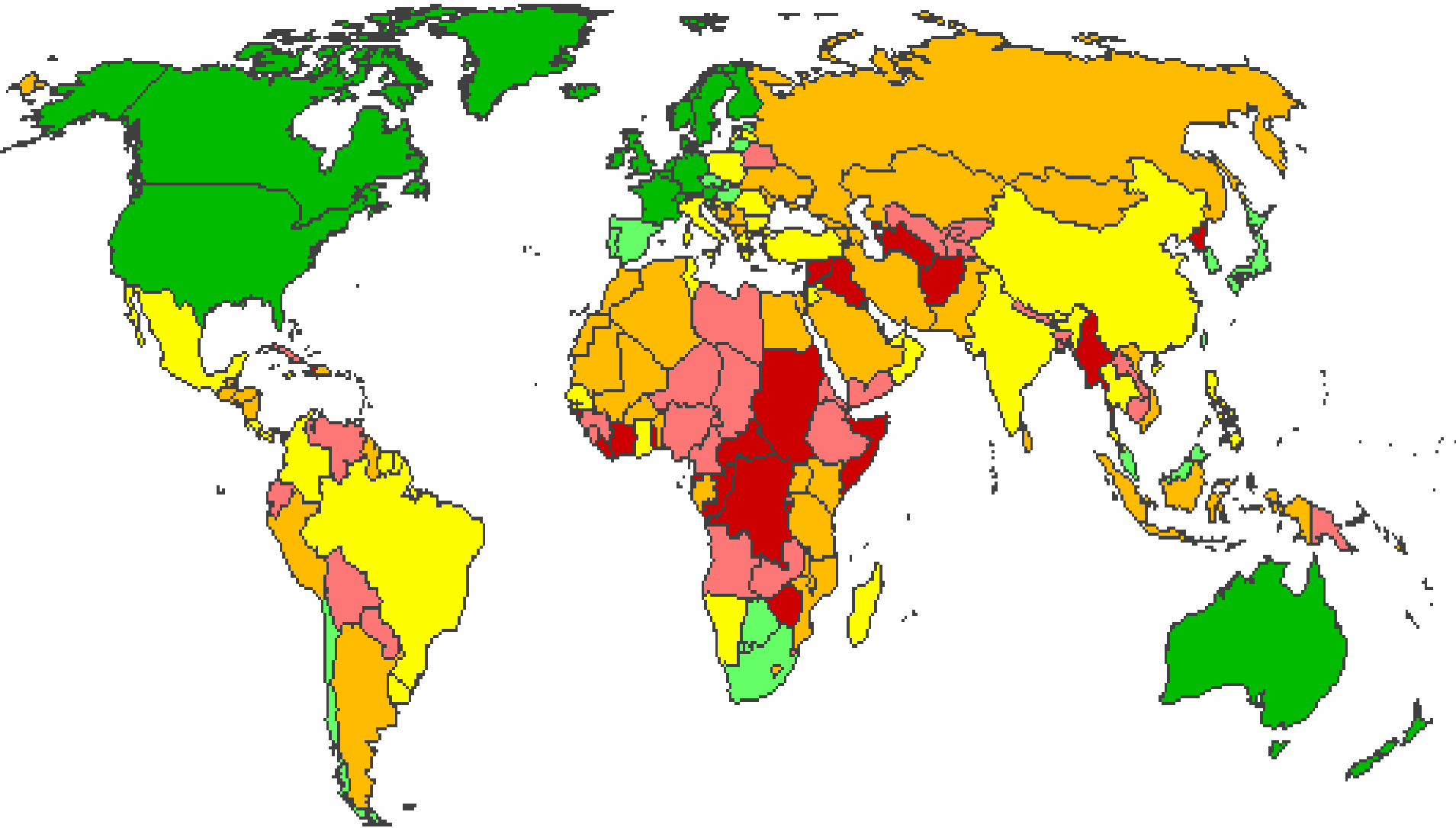
Good
Governance
2.5



Poor
Governance
-2.5

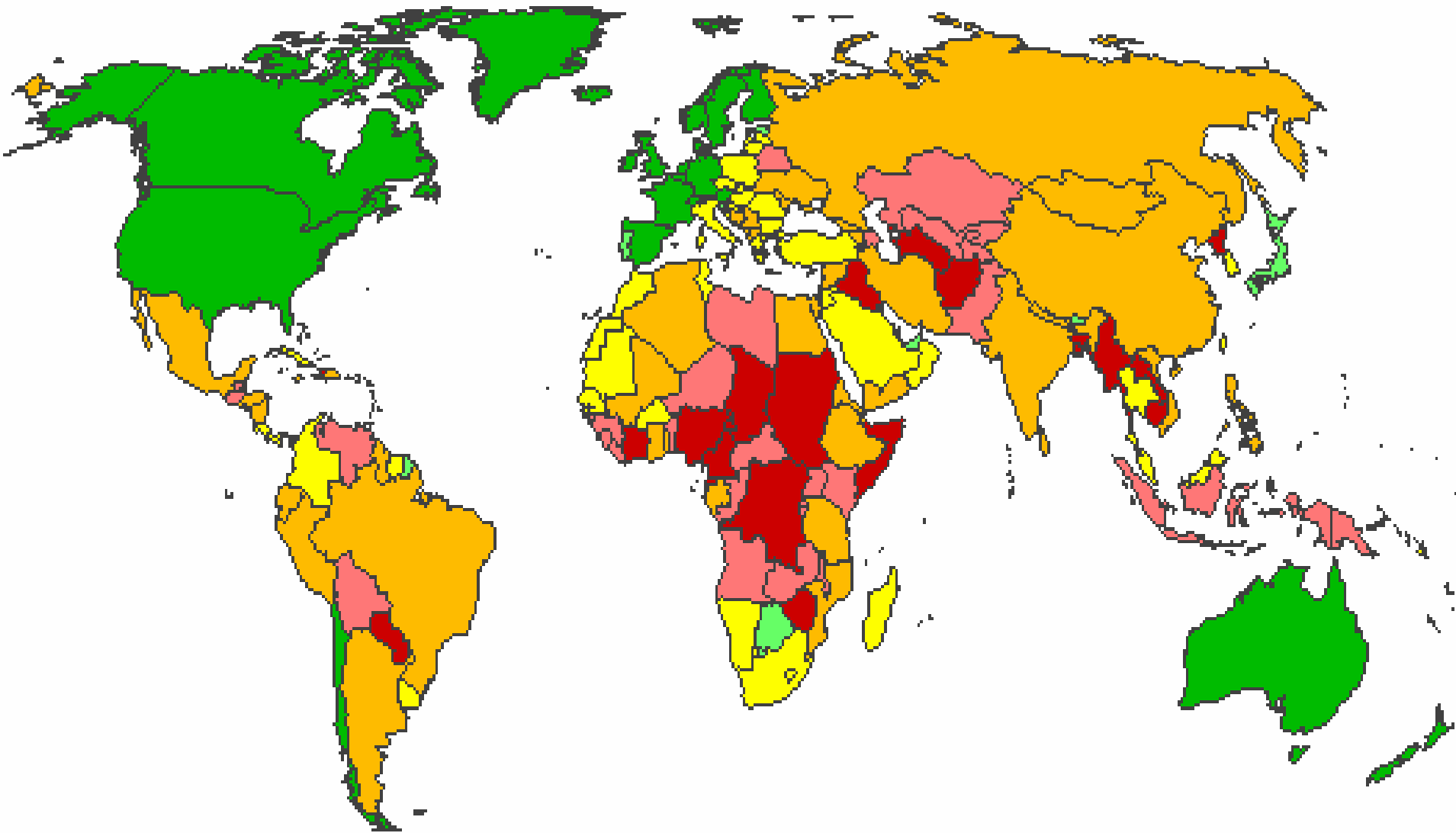
Source for data: 'Governance Matters V: Governance Indicators for 1996-2005', D. Kaufmann, A. Kraay and M. Mastruzzi, September 2006.
 Note: Colors are assigned according to the following criteria: Dark Red, below 10th percentile rank among all countries in the world; Light Red between 10th and 25th; Orange, between 25th and 50th; Yellow, between 50th and 75th; Light Green between 75th and 90th; Dark Green above 90th.

World Map: Government Effectiveness, 2005



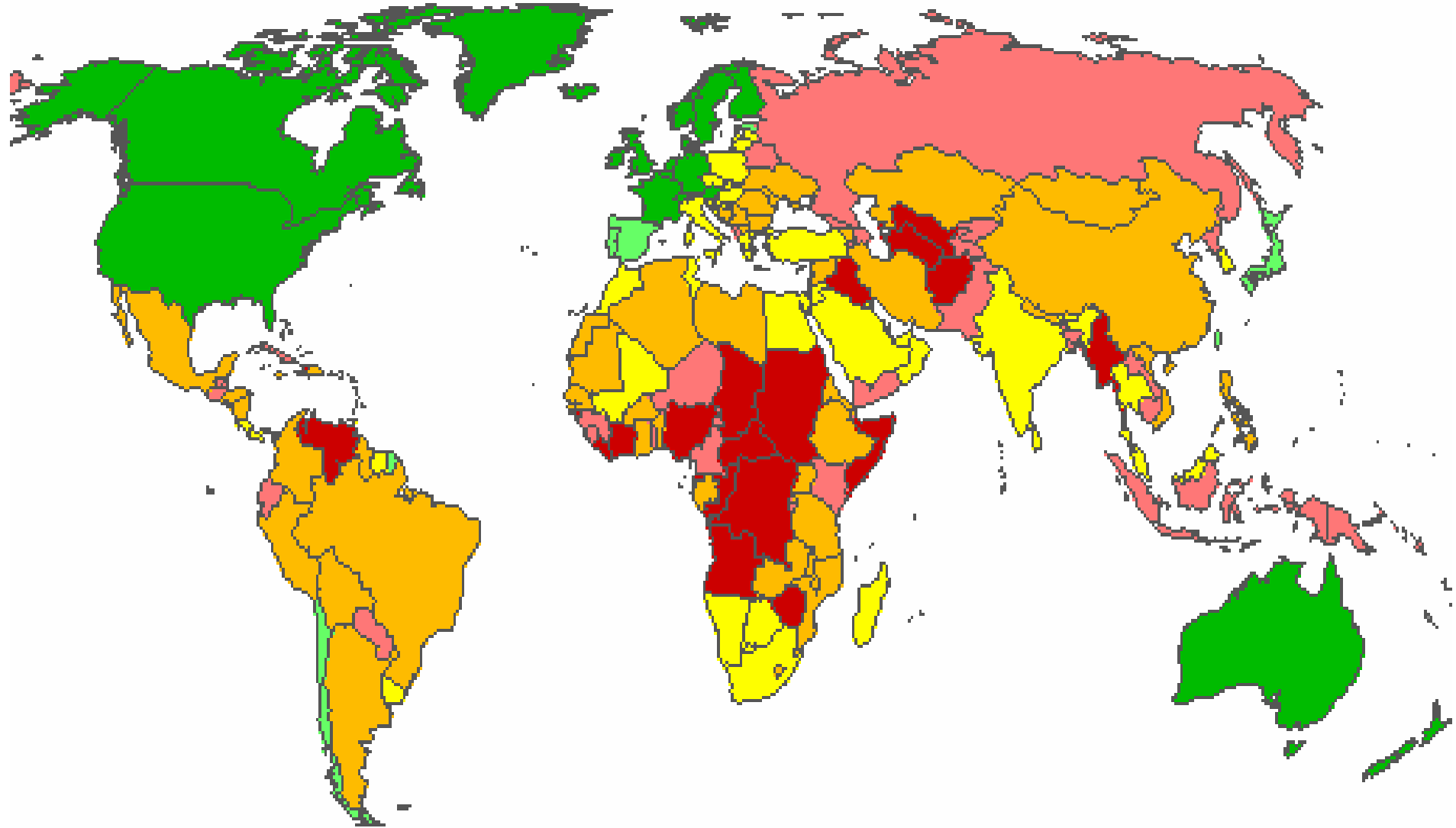
Source for map: 'Governance Matters V: Governance Indicators for 1996-2005', by D. Kaufmann, A.Kraay and M. Mastruzzi, September 2006 - www.govindicators.org. Colors assigned according to the following criteria: Dark Red: country in bottom 10th percentile rank ('governance crisis'); Light Red: between 10th and 25th percentile rank; Orange: between 25th and 50th percentile rank; Yellow, between 50th and 75th; Light Green between 75th and 90th percentile rank; and Dark Green: between 90th and 100th percentile (exemplary governance). Estimates subject to margins of error.

World Map: Control of Corruption, 2005



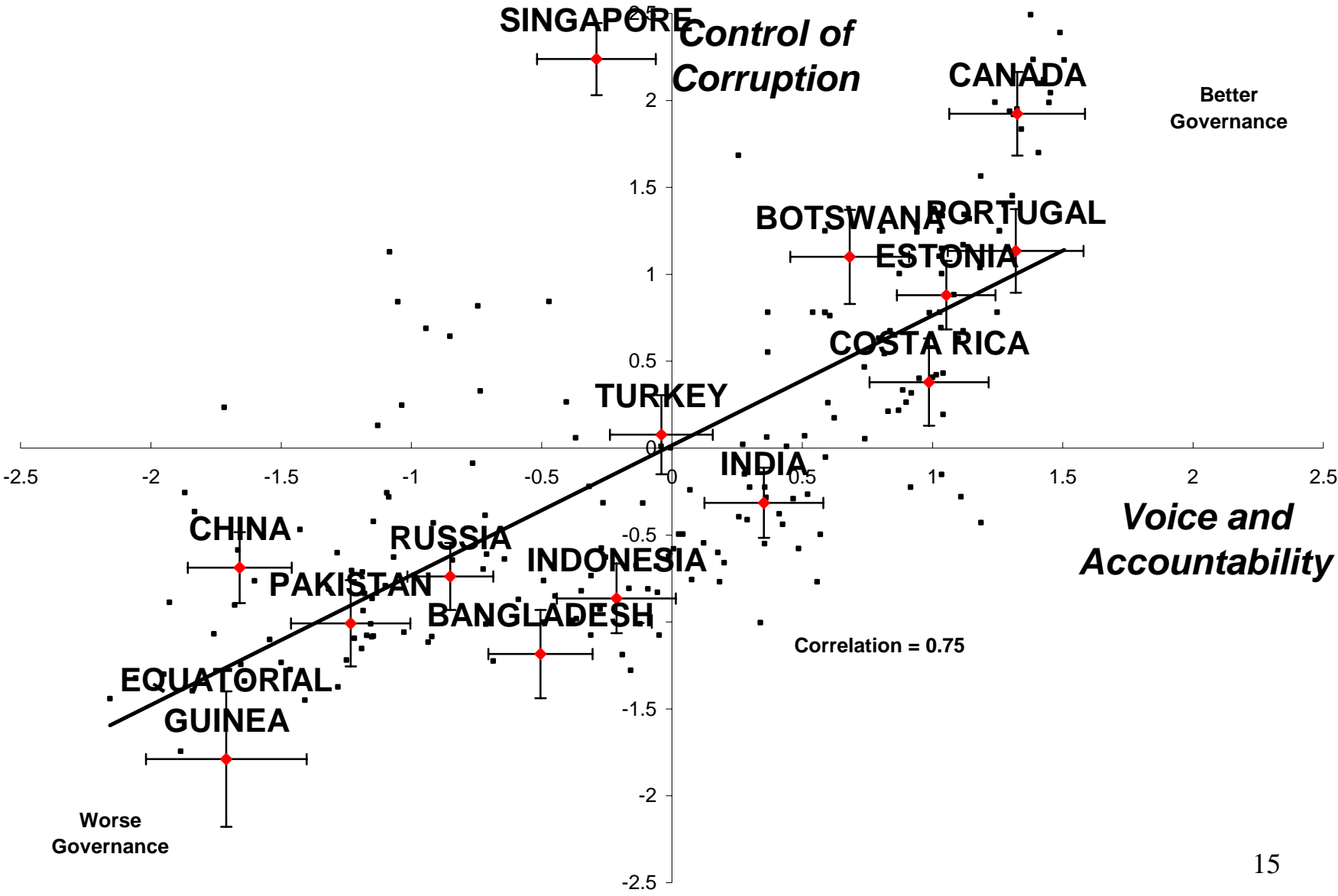
Source for map: 'Governance Matters V: Governance Indicators for 1996-2005', by D. Kaufmann, A. Kraay and M. Mastruzzi, September 2006 - www.govindicators.org. Colors are assigned according to the following criteria: Dark Red: country is in the bottom 10th percentile rank ('governance crisis'); Light Red: between 10th and 25th percentile rank; Orange: between 25th and 50th percentile rank; Yellow, between 50th and 75th; Light Green between 75th and 90th percentile rank; and Dark Green: between 90th and 100th percentile (exemplary governance). Estimates subject to margins of error.

World Map: Rule of Law, 2005



Source for map: 'Governance Matters V: Governance Indicators for 1996-2005', by D. Kaufmann, A.Kraay and M. Mastruzzi, September 2006 - www.govindicators.org. Colors are assigned according to the following criteria: Dark Red: country is in the bottom 10th percentile rank (governance crisis'); Light Red: between 10th and 25th percentile rank; Orange: between 25th and 50th percentile rank; Yellow, between 50th and 75th; Light Green between 75th and 90th percentile rank; and Dark Green: between 90th and 100th percentile (exemplary governance). Estimates subject to margins of

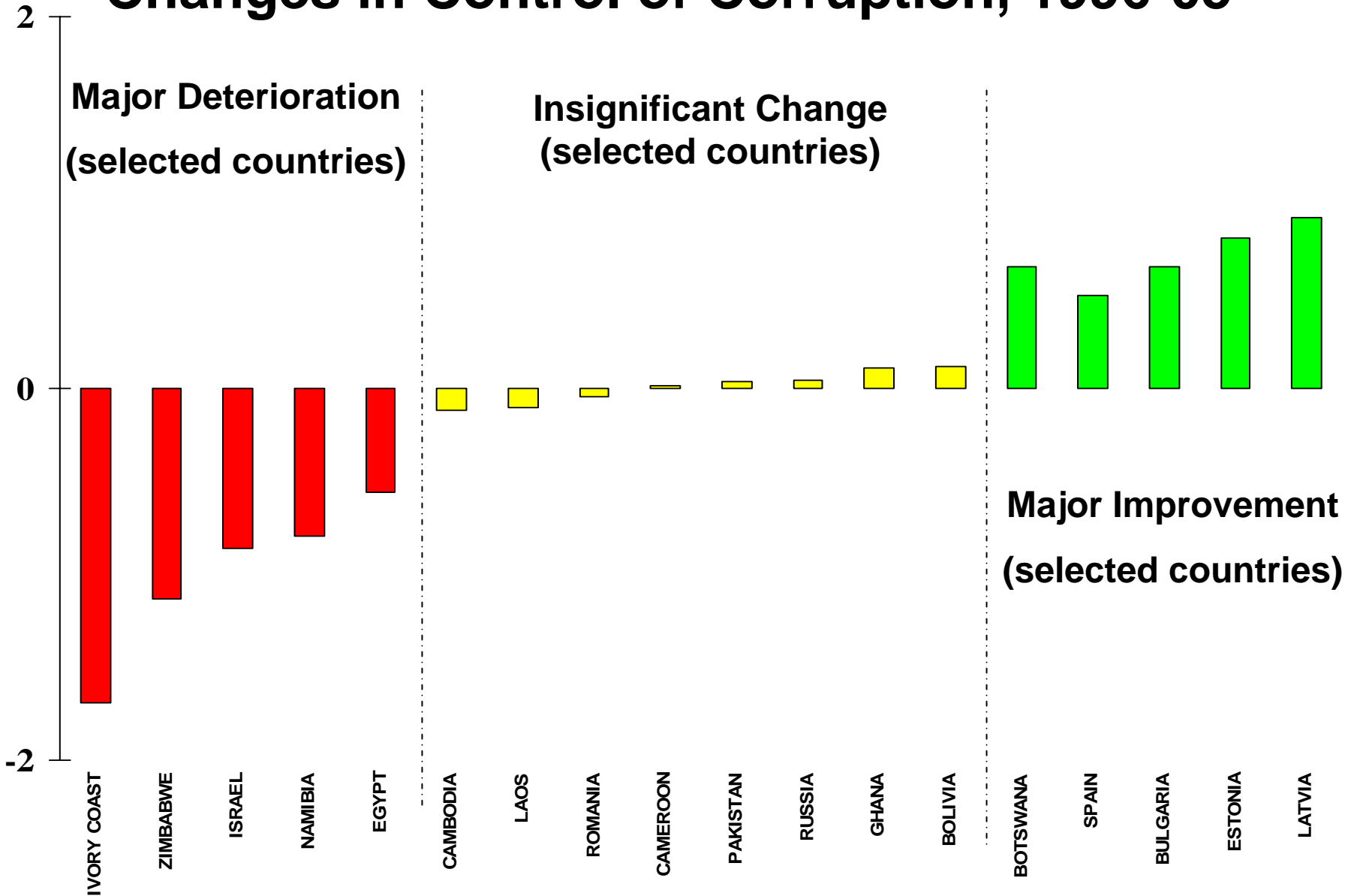
Cross-Country Comparisons: Voice and Corruption



Changes Over Time in Governance

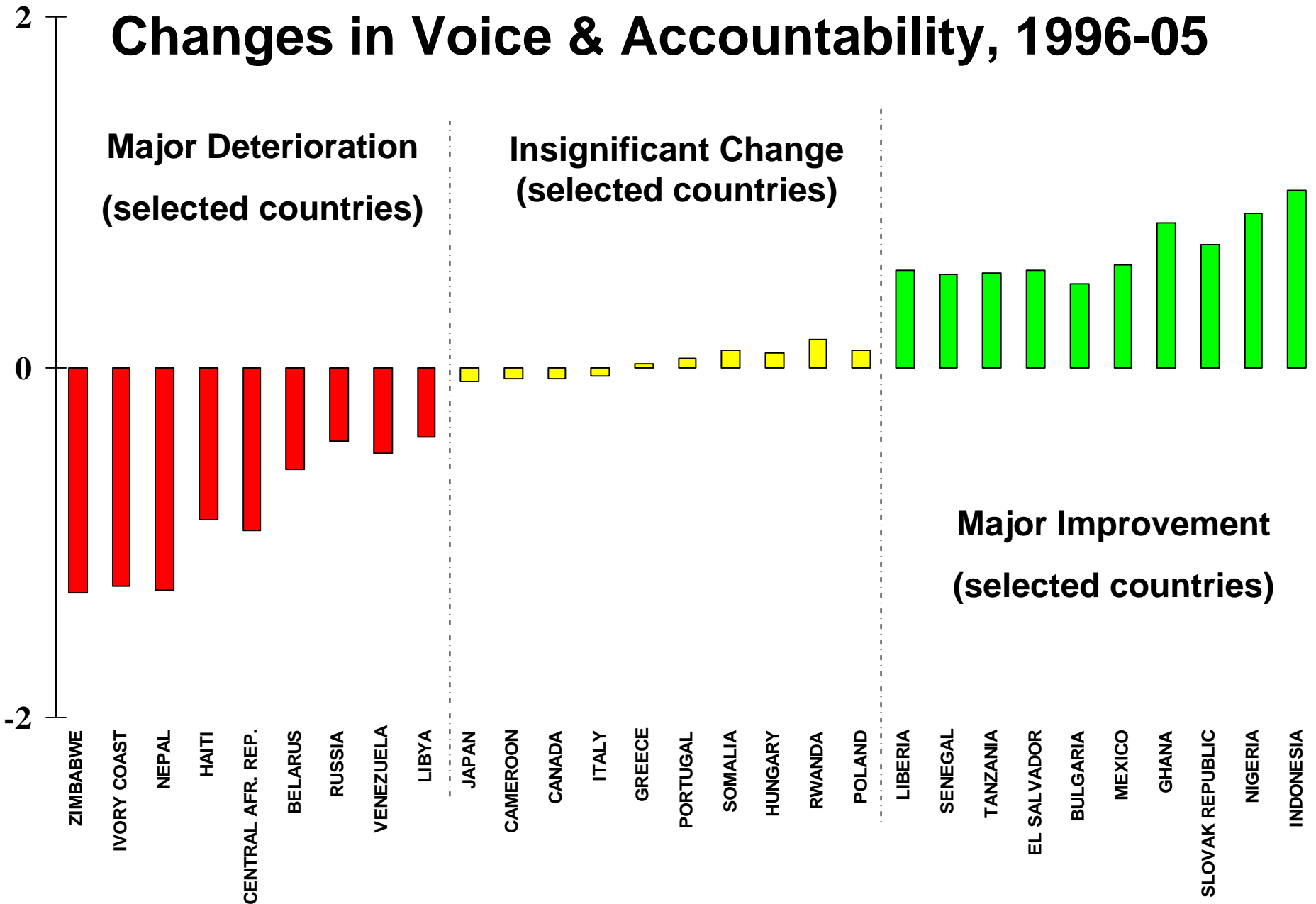
- **Many changes in governance are small relative to margins of error – even over ten-year period 1996-2005**
- **But substantial improvements/worsening in some countries**
 - **Rule of Thumb: changes over time are significant if confidence intervals don't overlap**
 - **One in three countries had significant (at 90% level) change in at least one dimension of governance 1996-2005**
- **Individual data sources suggest no evidence of improvements in worldwide averages of governance**
 - **important implication is that it is ok to look at *relative* changes**

Changes in Control of Corruption, 1996-05



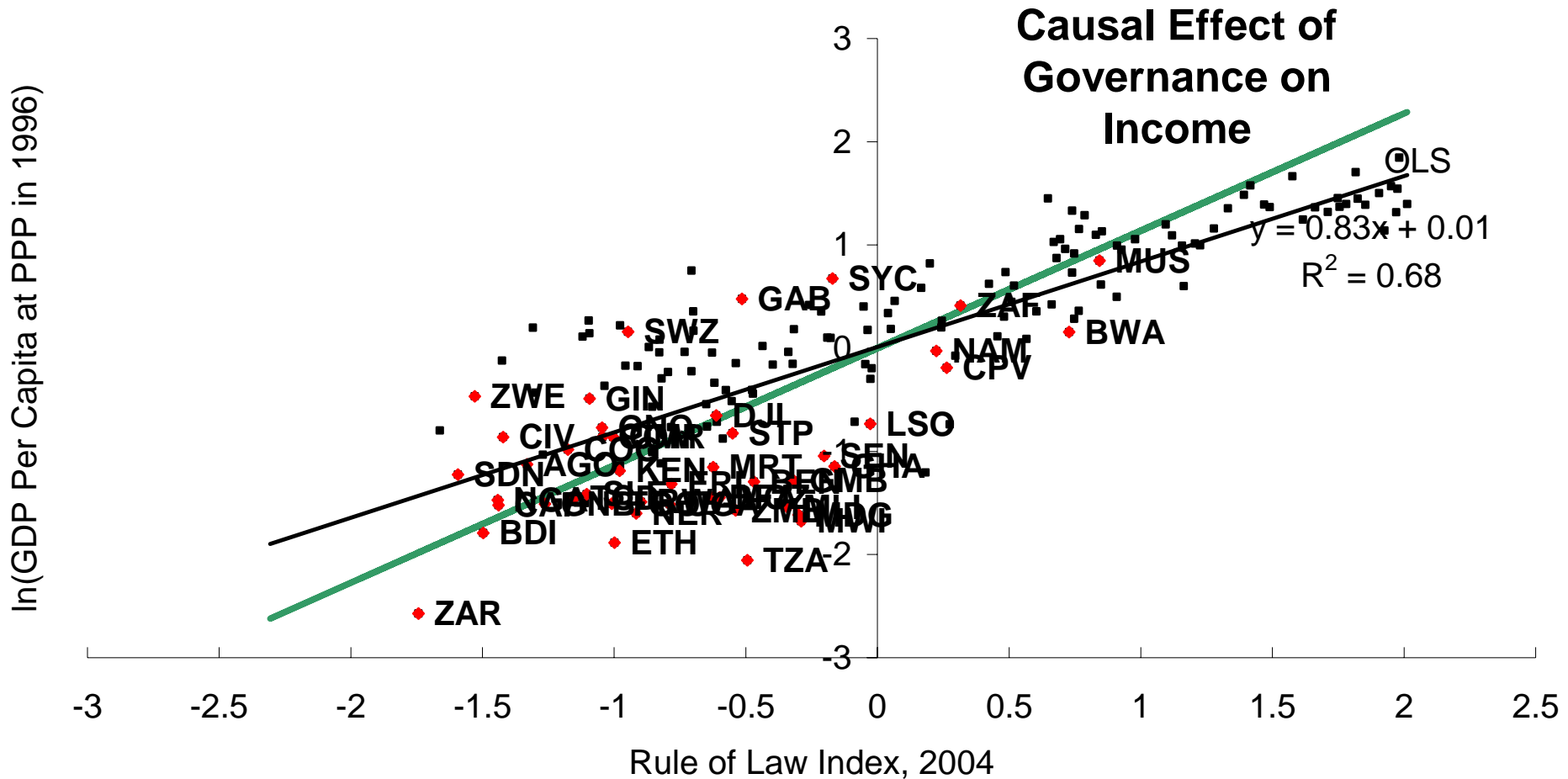
Changes were calculated on the basis of the differences in country estimates from 1996 and 2005. Classification for major deteriorations and improvements were based on 75% confidence interval. Source for data: 'Governance Matters V: Governance Indicators for 1996-2005', by D. Kaufmann, A. Kraay and M. Mastruzzi, September 2006 - www.govindicators.org

Changes in Voice & Accountability, 1996-05



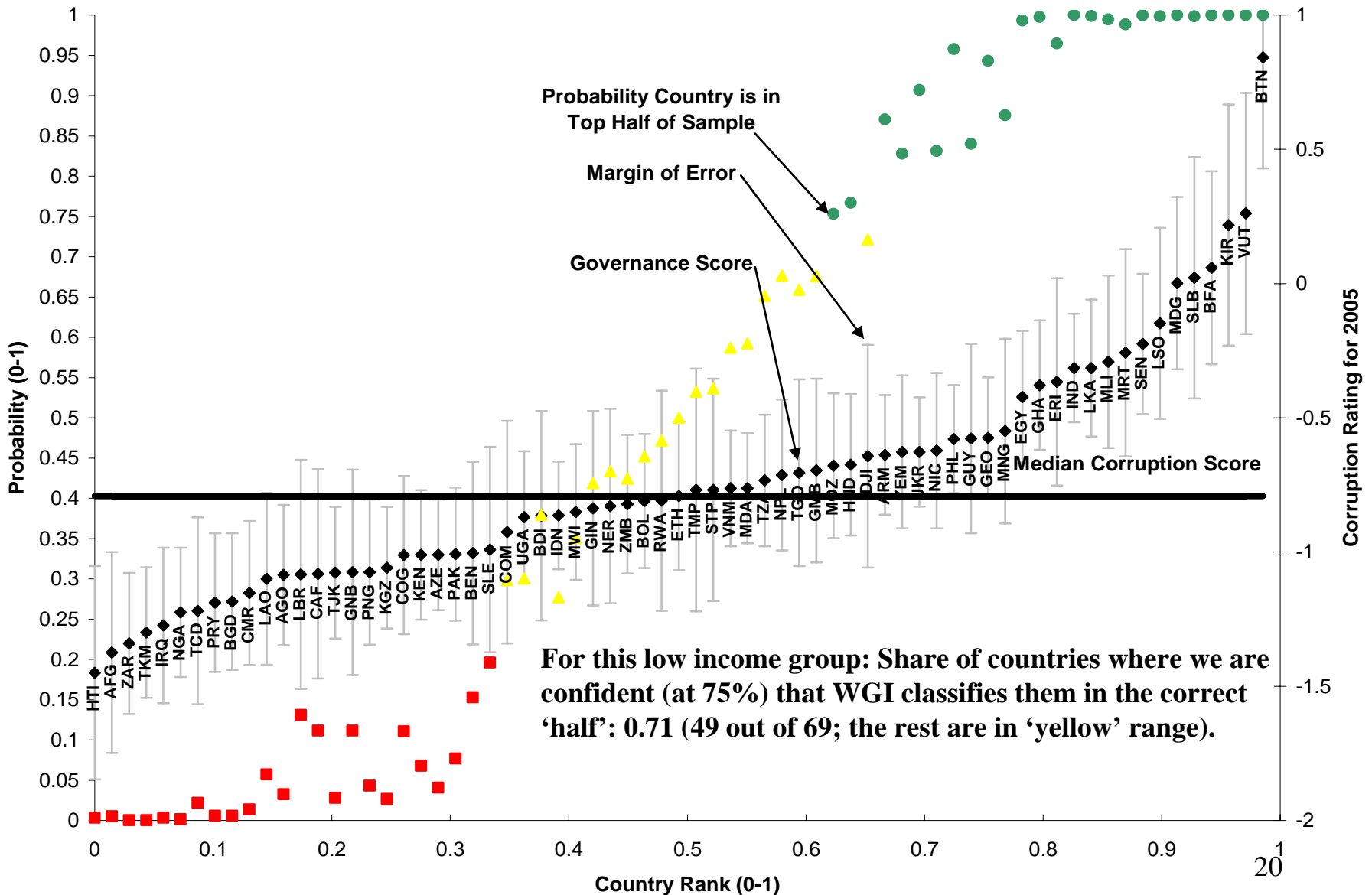
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Application 1: Research Shows Large Development Dividend from Good Governance



Application 2: MCA Eligibility Criteria

Control of Corruption, 2005



Application 3: Challenging Afro-pessimism

- **Wide diversity of governance performance in Africa**
 - **Botswana ranks better than Hungary or South Korea on Control of Corruption**
- **Examples of significant improvements as well as significant declines in governance in countries in Africa, e.g. since mid-1990s**
 - **VA improves significantly in Nigeria, Liberia, Senegal**
 - **CC improves significantly in Madagascar, Botswana**
 - **but Zimbabwe, Cote d'Ivoire see significant declines across-the-board**

Four Principles for Using Governance Indicators

- 1. All indicators have measurement error**
 - rely on variety of data sources**
 - benefit of aggregation across sources: reduces noise**
- 2. Alternative types of indicators are complementary**
 - subjective/perceptions vs. objective/statutory**
 - aggregate vs. individual indicators**
- 3. Different indicators are appropriate for different purposes**
 - regular cross-national monitoring/research vs. detailed country diagnostics/country policy advice**
- 4. Links from policy actions to outcomes are complex**
 - “actionable” versus “action-worthy” indicators**

1. All Indicators Have Measurement Error

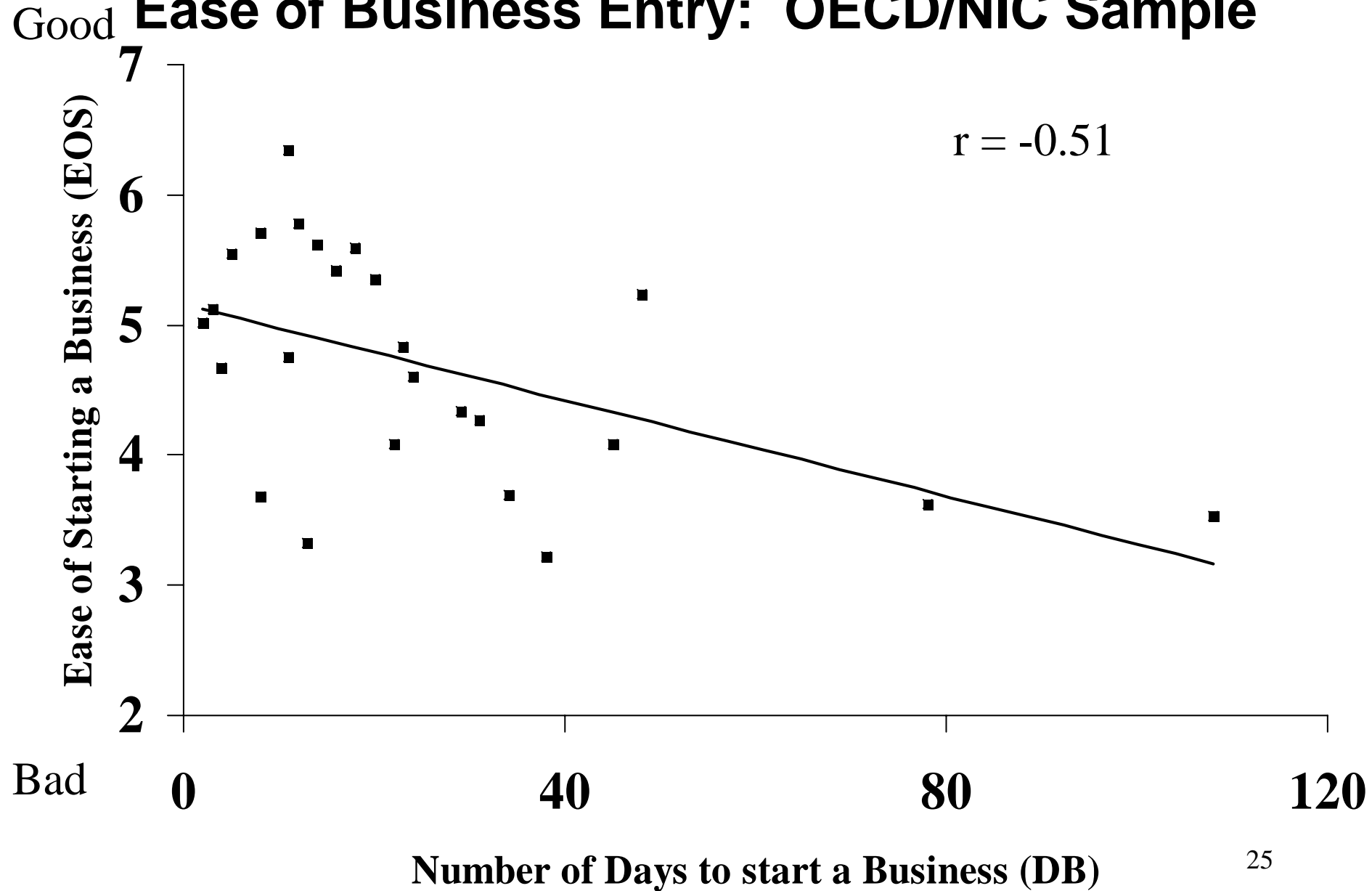
- **Governance is difficult to observe directly, so all available measures are only proxies, e.g.**
 - **Perceptions measures:**
 - **Corruption in procurement?**
 - **Confidence in the courts?**
 - **Onerous regulation of entry for a new firm?**
 - **Objective/Statutory measures**
 - **Do regulations stipulate competitive bidding in procurement?**
 - **Do materials used correspond to materials paid for?**
 - **How many procedures to fire a worker?**
- **WGI (unusually!) reports explicit margins of error**
 - **Yet margins of error are implicit in ‘objective’ and in individual subjective indicators – *and they are large too***

2. Alternative Indicators are Complementary:

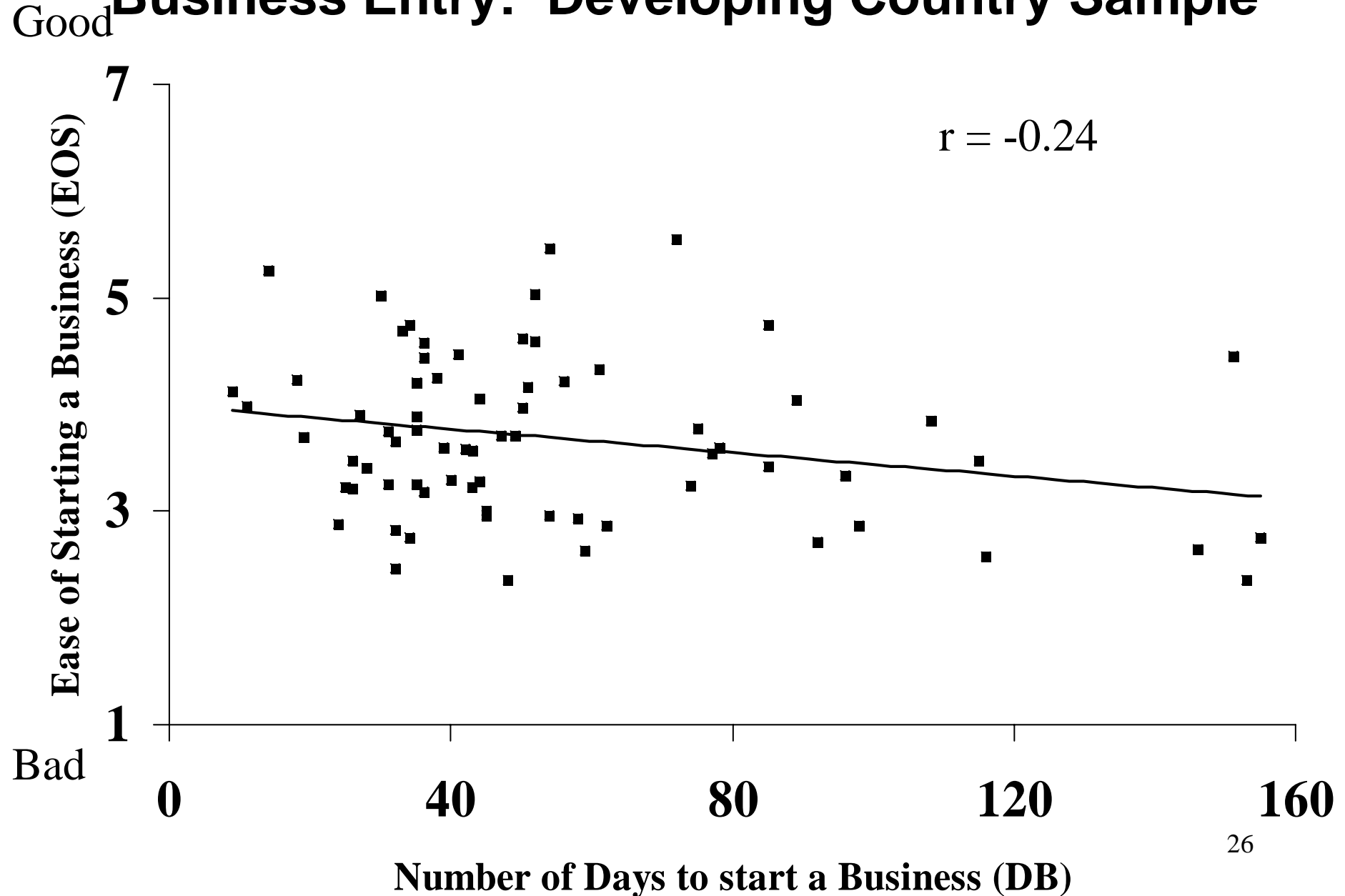
a. Subjective Versus Objective Measures

- **Perceptions data are very useful even when objective measures exist**
 - **But often only type of cross-country data available (e.g. corruption)**
- **Perceptions matter directly!**
- **Perceptions data add insight over *de jure* measures when such objective measures exist, e.g. comparison of:**
 - **statutory number days to start a business from Doing Business database (*de jure*)**
 - **firms perceptions of ease of business entry from Global Competitiveness Survey (*de facto*)**
 - **two are weakly correlated in developing countries**
 - **prevalence of corruption explains much of gap between the two**

Subjective and Objective Measures of Ease of Business Entry: OECD/NIC Sample



Subjective and Objective Measures of Ease of Business Entry: Developing Country Sample



2. Alternative Indicators are Complementary: (a) Subjective vs. Objective Measures, cont'd

- **Objective indicators can be very specific, but interpretation can be ambiguous and imprecise**
 - **parliamentary vs. presidential system may matter for political outcomes, but not a “governance indicator”**
 - **does an anti-corruption commission exist? precise answers, ambiguous interpretation**
 - **also, errors of fact in many objective measures**
- **Perceptions data need not be vague or imprecise**
 - **“do you think corruption is a problem, yes or no?” vs.**
 - **“what percent of the total contract value do firms like yours typically have to pay in bribes to secure procurement contracts?”**

False dichotomy between subjective and objective measures is not helpful

Aside: test on biases --

Are Subjective/Perceptions Data Biased?

- Possible ideological biases (“right-wing” think tanks?)
 - test: are *differences* between expert assessments and surveys correlated with political orientation of government being rated? *Mostly no.*
- Cultural differences in what constitutes corruption?
 - test: expert assessments by outsiders should not be very correlated with surveys of domestic actors. *But they are, typical correlation of experts with surveys of firms is 0.8*
- Perceptions of expert assessments tainted by “group-think”?
 - test: are expert assessments more correlated with each other than with surveys of firms? *No, typically correlations are very similar*

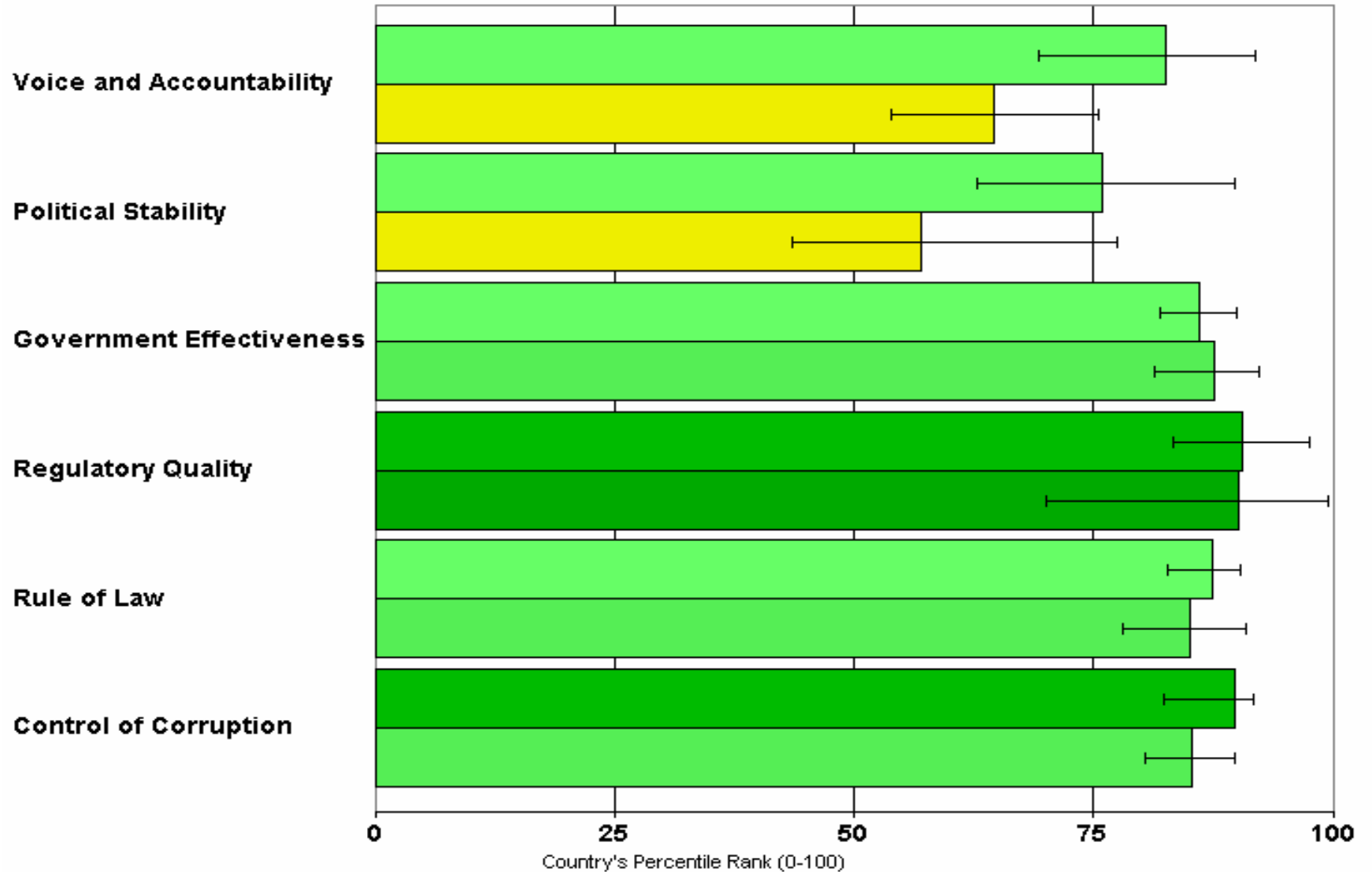
2. Alternative Indicators are Complementary:

b. Aggregate versus Individual Indicators

- **Aggregate indicators:**
 - have broad country coverage (e.g. TI on corruption)
 - are more informative about broad concepts of governance
 - have (potentially) explicit margins of error
- **Individual indicators:**
 - are easier to interpret
 - are (potentially) easier to identify policy interventions
- **Ideally use aggregate indicators that can be unbundled**
 - **Multi-source: WGI aggregate and individual indicators**
 - **Single-source: World Bank CPIA; and Global Integrity Index (GII)**

Aggregate Governance Indicators for Chile

Comparison between 2005, 1998 (top-bottom order)



Unbundling WGI Aggregate Indicators – case of Chile

Aggregate Indicators for Chile

Governance Indicator	Year	Percentile Rank (0-100)	Estimate (-2.5 to +2.5)	Standard Error	Number of surveys/polls	Sources
Voice and Accountability	2005	82.6	+1.04	0.14	10	List
	1998	64.7	+0.59	0.23	6	List
Political Stability	2005	75.9	+0.85	0.21	10	List
	1998	57.1	+0.37	0.26	6	List
Government Effectiveness	2005	86.1	+1.26	0.15	12	List
	1998	87.6	+1.31	0.26	7	List
Regulatory Quality	2005	90.6	+1.40	0.17	10	List
	1998	90.1	+1.10	0.27	6	List
Rule of Law	2005	87.4	+1.20	0.13	15	List
	1998	85.1	+1.18	0.18	11	List
Control of Corruption	2005	89.7	+1.33	0.14	12	List
	1998	85.3	+1.13	0.19	10	List

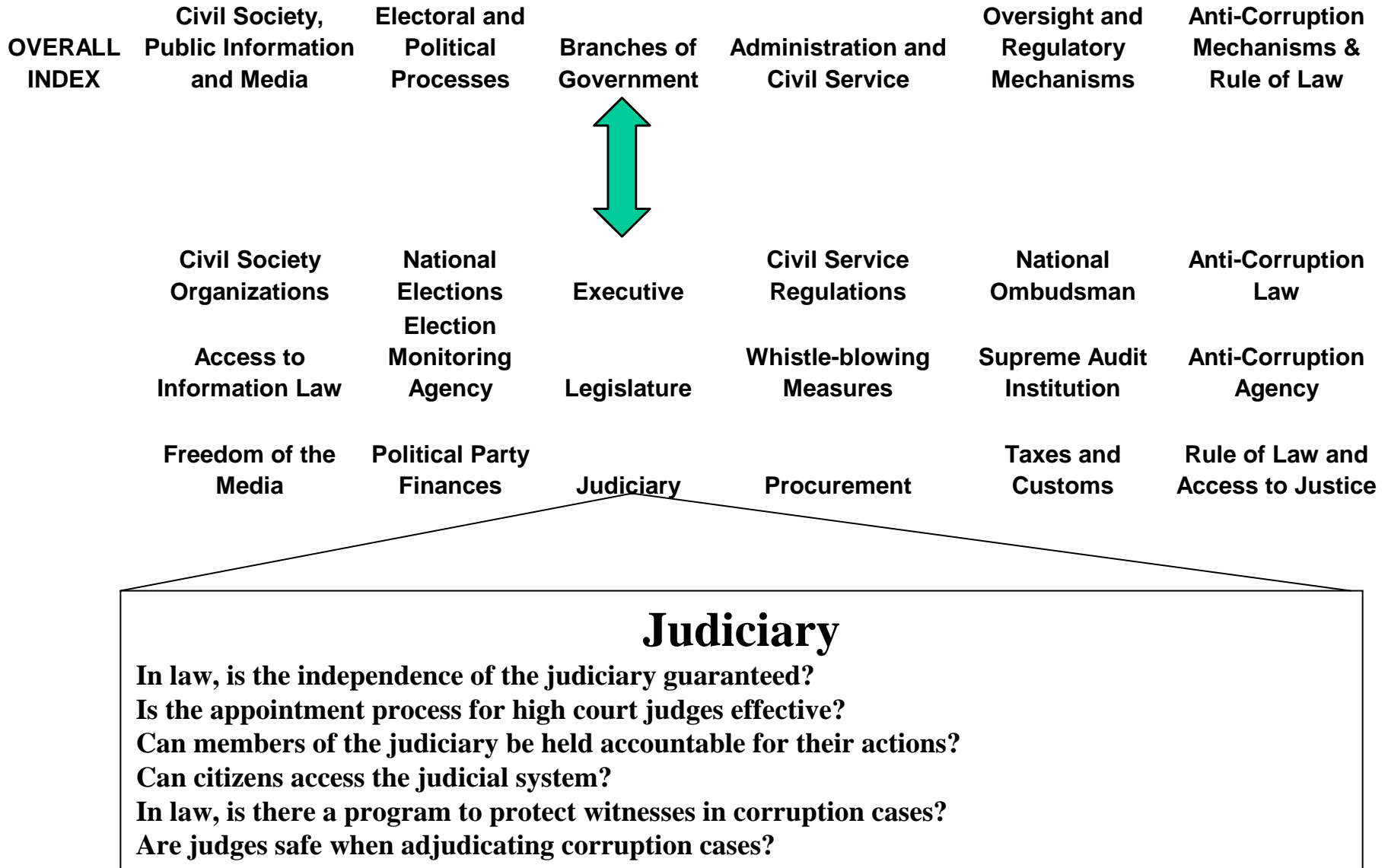
Individual Indicators for Chile
Voice and Accountability, 2005
(0 (bad) to 1 (good) scale)

Source	Publication	CHILE
Bertelsmann Foundation	Bertelsmann Transformation Index	+0.90
Economist Intelligence Unit	Country Risk Service	+0.90
Freedom House	Freedom in the World	+0.92
World Economic Forum	Global Competitiveness Report	+0.59
Cingranelli-Richards (CIRI)	Human Rights Database	+0.75
Latinobarometro	Latinobarometro Surveys	+0.40
Political Risk Services	International Country Risk Guide	+0.79
Reporters Without Borders	Reporters Without Borders	+0.89
Institute for Management and Development	World Competitiveness Yearbook	+0.66
Global Insight	Business Conditions and Risk Indicators	+0.88

Reporters Without Borders <http://www.rsf.org>

Reporters without Borders, headquartered in Paris, is an international organization dedicated to the protection of reporters and respect of press freedom in the world. In 2002, International Reporters Without Borders published its first worldwide press freedom index, compiled for 139 countries. The index was drawn up by asking journalists, researchers, and legal experts worldwide to answer 50 questions about a whole range of press freedom violations.

Unbundling the Global Integrity Index



Aside: test on weights--On Weighting Individual Sources in the Aggregate Indicators

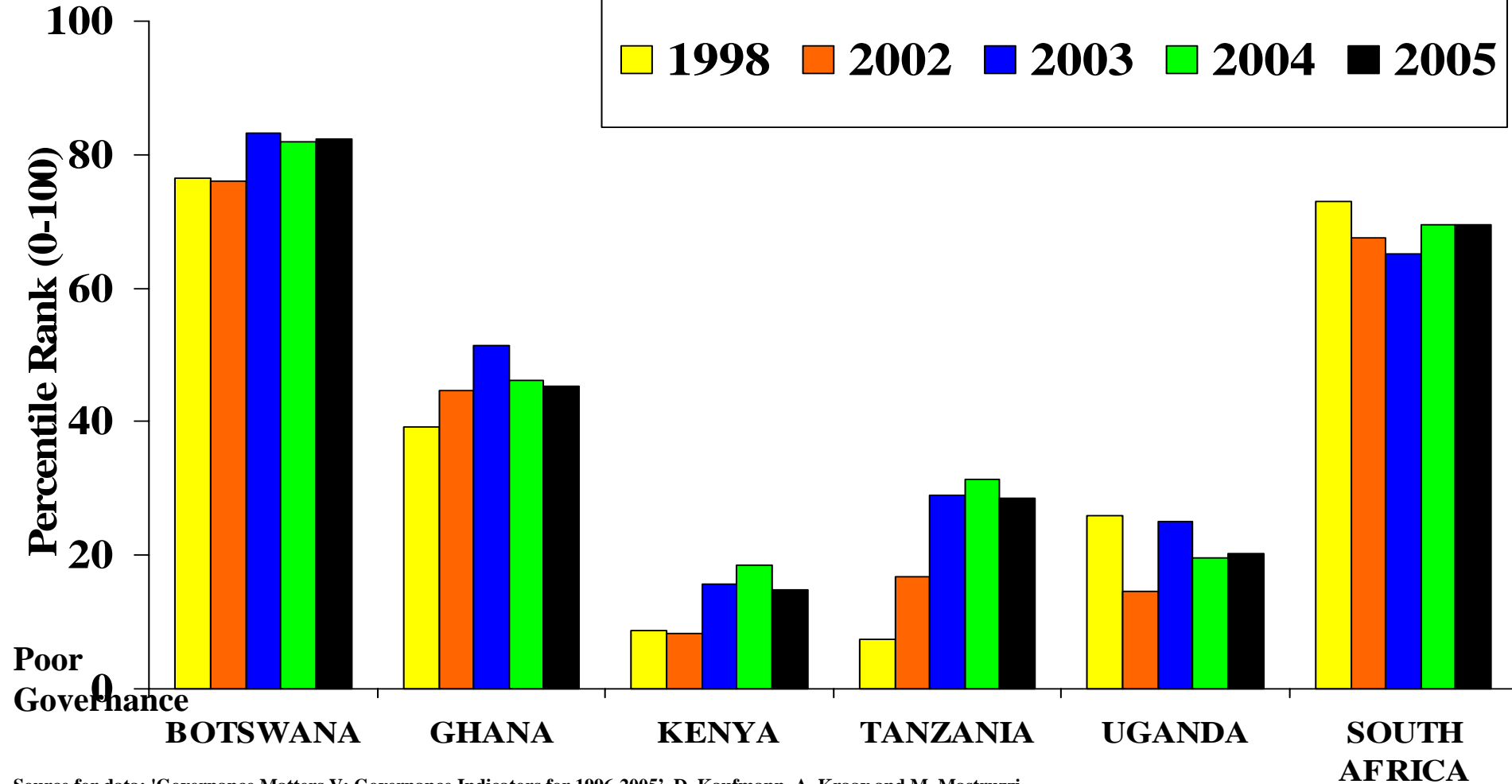
- **Aggregate indicators need a weighting scheme: WGI gives more weight to sources that are more correlated with each other**
 - makes sense if high correlations due to fact that they are measuring the same thing across countries
 - but what if high correlations are due to “group-think”?
- **Alternative 1: *Weight all sources equally***
 - New indicators correlated with old at 0.99!
 - Reason is because sources tend to agree!
- **Alternative 2: *Weight types of sources equally***
 - Surveys, NGOs, Commercial Experts, Gov’t Experts
 - New indicators correlated with old at 0.95!
 - Reason is because *types* of sources tend to agree!

3. Different Indicators for Different Purposes

- For particular institutions within a country: in-depth & disaggregated diagnostic instruments—e.g. PET & PEFAs**
- For project within a country: specific project/sectoral in-country research indicators – e.g. on Iraq oil ‘discount’ in UN oil for food; infrastructure spending in Italy; audit of road materials vs. recorded spending in Indonesia**
- Worldwide benchmarking & over time monitoring and cross-country research: aggregate governance indicators**
- In-depth country-wide governance assessment (*e.g. Kenya*): complementarity between aggregate & detailed indicators & between subjective & objective (*de jure* and *de facto*) – for analysis country-wide and of specific institutions**

Governance Assessment Illustration: Kenya in Comparative Perspective -- Control of Corruption Over Time, WGI 1998-2005

Good Governance



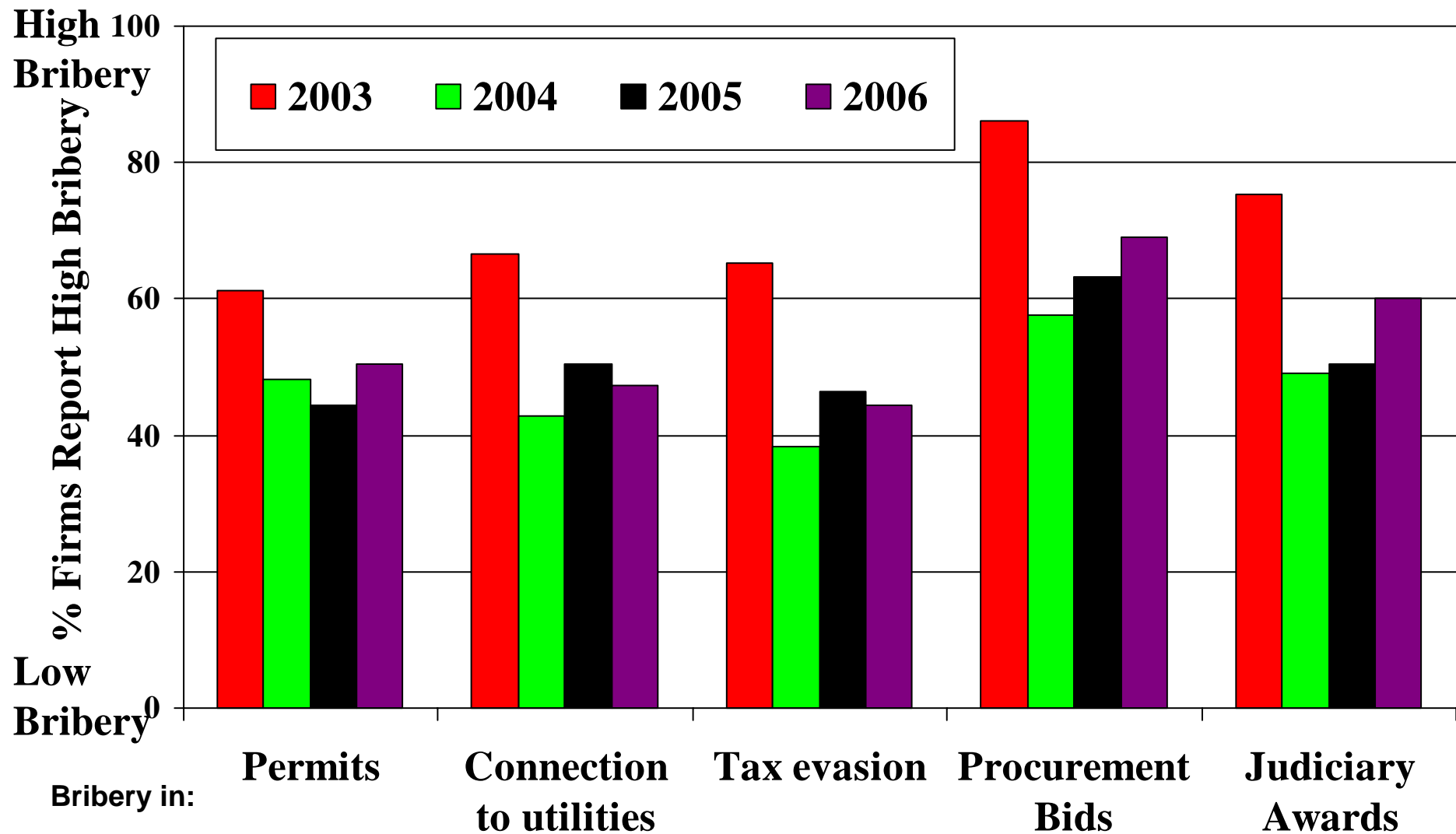
Poor Governance

Source for data: 'Governance Matters V: Governance Indicators for 1996-2005', D. Kaufmann, A. Kraay and M. Mastruzzi,

(www.govindicators.org); Colors are assigned according to the following criteria: Dark Red, bottom 10th percentile rank; Light Red between 10th and 25th; Orange, between 25th and 50th; Yellow, between 50th and 75th; Light Green between 75th and 90th; Dark Green above 90th. Percentile rank reports the percentage of countries rating worse than Kenya. Country coverage ranges from a minimum of 166 in 1998 to 213 in 2005.

Governance Assessment: Unbundling extent of Bribery, Kenya, 2003-06

Share of Firms Report High Bribery



4. Links from Policy Interventions to Governance Outcomes are Complex

- **‘Objective’ and easy measures may not matter most (or have normative ‘good governance’ interpretation), e.g.**
 - **existence of anticorruption commission?**
 - **turnover of civil servants?**
 - **proportion of population incarcerated?**
- **Risk of confusing reform reality and reform illusion (fiat)**
- **Across countries, different priorities & impact of different actions (vs. ‘template’)--outcomes should also be measured**
- **Important to measure BOTH: i) “action-worthy” (vs. merely “actionable”) indicators, and, ii) outcome indicators – both of which often will also necessitate asking firms, citizens and experts**

In concluding....

**Winston Churchill,
the arduous climb,
and the 'bumper sticker'...**

Further Reading & Data Access

- Kaufmann, Daniel, Aart Kraay, and Pablo Zoido-Lobaton. 1999a. “Aggregating Governance Indicators.” WBPR No. 2195, Washington
- _____ 1999b. “Governance Matters.” WBPR No. 2196, Washington, DC
- _____ 2001. “Governance Matters II.” , Washington, DC
- Kaufmann, Daniel, and Aart Kraay. 2002. “Growth Without Governance”. *Economia*. 3(1):169–215
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2004. “Governance Matters III: Governance Indicators for 1996, 1998, 2000, and 2002” *World Bank Economic Review*. 18:253–287
- _____ 2005. “Governance Matters IV: Governance Indicators for 1996–2004” WBPR No. 3630. Washington, DC
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- _____ 2006. “Measuring Governance Using Perceptions Data.” In Susan Rose-Ackerman (ed.), *Handbook of Economic Corruption*. Edward Elgar
- _____ 2006. “The Worldwide Governance Indicators Project: Answering the Critics”, September 2006, World Bank
- _____ 2006. “Measuring Corruption: Myths vs. Realities.” *Development Outreach*, September 2006, World Bank

Data & Papers Available at: www.govindicators.org