Citizen-centric Governance Indicators: Measuring and Monitoring Governance by Listening to the People

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Introduction

Since the publication of pioneering work on measuring governance quality by Huther and Shah (1998), there has been a proliferation of composite worldwide governance indicators purporting to measure various aspects of governance quality (see Arndt 2008a for the history and politics of governance ratings). The growth of these indicators has been spurred by generous support by the development assistance community, especially multilateral development finance agencies, and the infinite appetite of media and the academic community for governance assessments and country rankings. Governance indicators are now being used as tools for conducting development dialog, allocating external assistance and influencing foreign direct investment. Each new indicator series is now released with great fanfare from major industrial country capitals and the popular press uses these indicators to name and shame individual countries for any adverse change in rank order over time or across countries. The development assistance community is increasingly using these indicators in making critical judgments on development assistance. The World Bank's International Association (IDA) allocation – a window of subsidized lending to the developing world and the United States Agency for International Development's Millennium Challenge Account uses various governance indicators as criteria for allocating external assistance. At the same time, some of the recent findings of these indicators have also led to much controversy and acrimony and thereby contributing to complicating the dialogue on development effectiveness.[1] In view of the influential nature of these indicators and potential to do harm if judgments embodied in these indicators are biased and erroneous, it is imperative that they capture critical dimensions of the quality of governance and all countries are evaluated using uniform and reasonably objective assessment criteria.

Do the existing indicators meet this test? While the literature on this subject is woefully inadequate and thin, four widely used indicators-namely the World Bank's Worldwide Governance Indicators (WGIs), Overseas Development Institute's World Governance Assessments (WGAs), Mo Ibrahim Foundation's Indexes of African Governance (IIAGs) and the United Nations Economic Commission for Africa's African Governance Report Indicators (AGRIs) – all lack a conceptual framework on governance, as well as citizen-based evaluations; their time and country assessment inconsistencies also make their rankings suspect (see Figures 1–3 for examples of these inconsistencies). A number of recent papers have been especially critical of WGIs for lacking 'concept' (implying lack of clarity in conceptualization) and 'construct' (implying lack of clarity in measurement) validity, sample bias (mostly interest group views), lack of transparency and time inconsistency of definitions and measurements (see Arndt 2008a; Arndt 2008b; Arndt and Oman 2006, Kurtz and Schrank 2007; Iqbal and Shah 2008; Langbein and Knack 2008; Schrank and Kurtz 2008; Thomas 2006). One of the most important limitation common to all available composite indexes of governance is that they fail to capture how citizens perceive the governance environment and outcomes in their own countries.
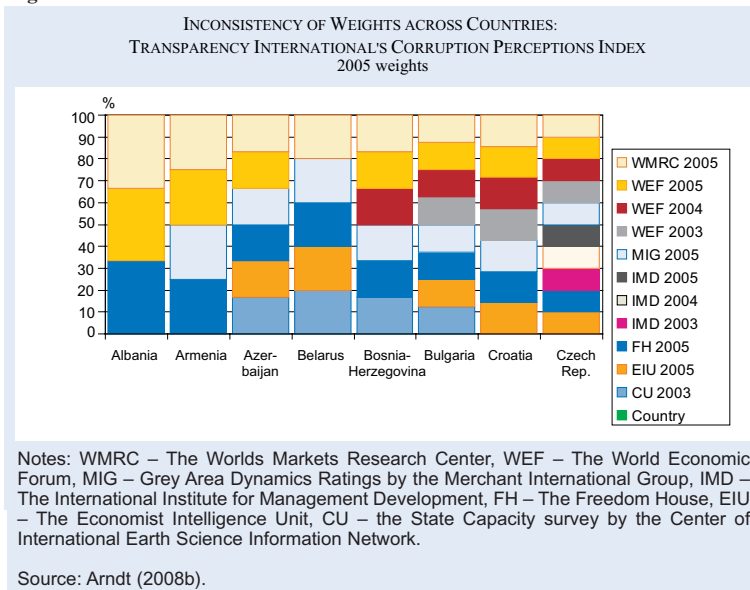
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[1] See Iqbal and Shah (2008) for examples of indefensible country ranking by WGIs. They show that 2007 WGI scores imply that: Botswana is politically more stable than either Norway or Sweden; India is politically less stable than either Rwanda or Sierra Leone; voice and accountability in China is worse than Zimbabwe; and military coup de'tat in October 1999 led to improved voice and accountability in Pakistan.

Figure 1

INCONSISTENCY OF WEIGHTS ACROSS COUNTRIES:
TRANSPARENCY INTERNATIONAL'S CORRUPTION PERCEPTIONS INDEX
2005 weights

Notes: WMRC – The Worlds Markets Research Center, WEF – The World Economic Forum, MIG – Grey Area Dynamics Ratings by the Merchant International Group, IMD – The International Institute for Management Development, FH – The Freedom House, EIU – The Economist Intelligence Unit, CU – the State Capacity survey by the Center of International Earth Science Information Network.
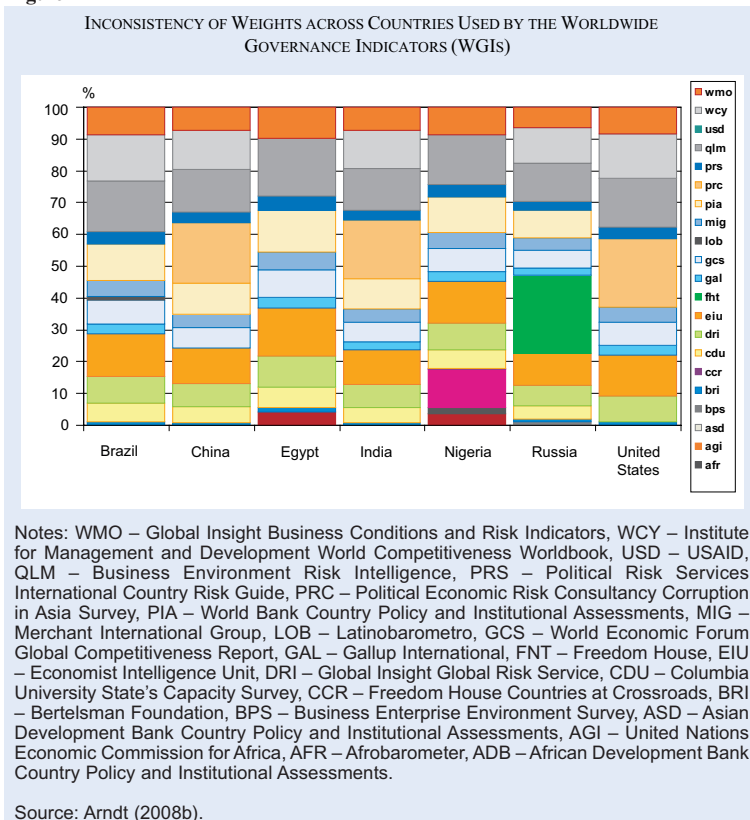
Source: Arndt (2008b).

For governance assessments to be useful for policy purposes, they must conceptualize governance and provide uniform and consistent criteria for measuring governance across countries and over time. Foremost concerns for such measurement should be citizens' evaluation of governance environment and outcomes in their own countries supplemented of course by objective indicators of the same. For development assistance purposes, these indicators could be supplemented by experts-based evaluations. There is some work available on objective indicators as done by the Doing Business indicators of the World Bank and on experts-based evaluations as done for the Global Integrity Index. The most important void in our knowledge is how citizens view governance environment and outcomes in their countries. This paper takes a first step to fill that void.

The rest of the paper is organized as follows. The following section discusses conceptual issues in measuring governance, specifies a citizen-centric conceptual framework on measuring governance quality. The third section describes an empirical framework, data sources and aggregation techniques. The fourth section presents preliminary results. In the fifth section we discuss the robustness of our results, followed by the contributions and limitations of the empirical approach in the final section.
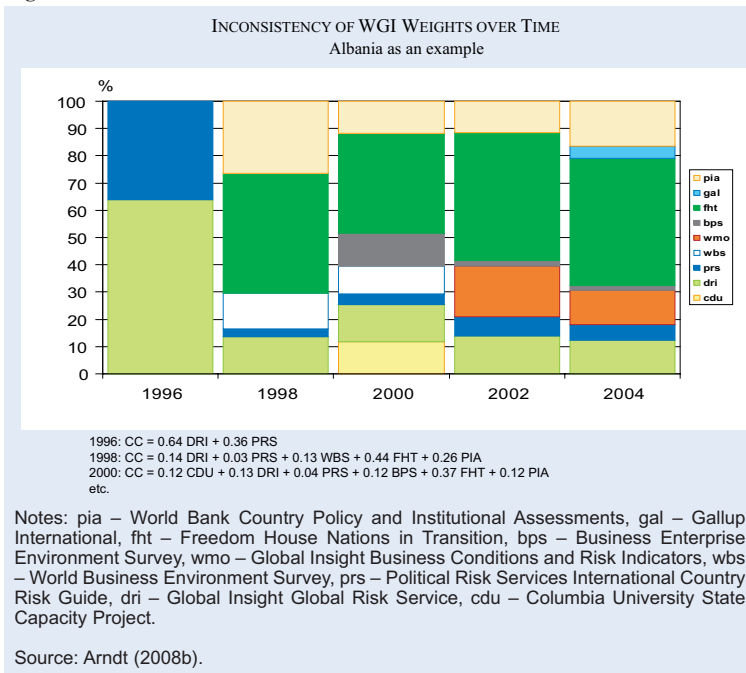
Figure 2

INCONSISTENCY OF WEIGHTS ACROSS COUNTRIES USED BY THE WORLDWIDE GOVERNANCE INDICATORS (WGIs)

Notes: WMO – Global Insight Business Conditions and Risk Indicators, WCY – Institute for Management and Development World Competitiveness Worldbook, USD – USAID, QLM – Business Environment Risk Intelligence, PRS – Political Risk Services International Country Risk Guide, PRC – Political Economic Risk Consultancy Corruption in Asia Survey, PIA – World Bank Country Policy and Institutional Assessments, MIG – Merchant International Group, LOB – Latinobarometro, GCS – World Economic Forum Global Competitiveness Report, GAL – Gallup International, FNT – Freedom House, EIU – Economist Intelligence Unit, DRI – Global Insight Global Risk Service, CDU – Columbia University State's Capacity Survey, CCR – Freedom House Countries at Crossroads, BRI – Bertelsman Foundation, BPS – Business Enterprise Environment Survey, ASD – Asian Development Bank Country Policy and Institutional Assessments, AGI – United Nations Economic Commission for Africa, AFR – Afrobarometer, ADB – African Development Bank Country Policy and Institutional Assessments.

Source: Arndt (2008b).

Conceptualizing and measuring governance quality in a comparative context

Governance is a fuzzy yet fashionable buzzword and its use in the literature has exploded in recent years. Dixit (2008) notes that there were only 4 citations in EconLit in the period 1970–1979 compared to 15,455 in the most recent period of 2000–2007 and currently Google lists more than 152,000 pages of this literature. According to American Heritage, Random House and Merriam Webster dictionaries, governance is equated with government and is defined as the 'exercise of authority and control' or 'a method or system of government and management' or 'the act, process or power of governing'. Huther and Shah (1996 and 1998) defined governance as a

Figure 3

INCONSISTENCY OF WGI WEIGHTS OVER TIME
Albania as an example

1996: CC = 0.64 DRI + 0.36 PRS
1998: CC = 0.14 DRI + 0.03 PRS + 0.13 WBS + 0.44 FHT + 0.26 PIA
2000: CC = 0.12 CDU + 0.13 DRI + 0.04 PRS + 0.12 BPS + 0.37 FHT + 0.12 PIA
etc.

Notes: pia – World Bank Country Policy and Institutional Assessments, gal – Gallup International, fht – Freedom House Nations in Transition, bps – Business Enterprise Environment Survey, wmo – Global Insight Business Conditions and Risk Indicators, wbs – World Business Environment Survey, prs – Political Risk Services International Country Risk Guide, dri – Global Insight Global Risk Service, cdu – Columbia University State Capacity Project.

Source: Arndt (2008b).

multi-faceted concept encompassing all aspects of the exercise of authority through formal and informal institutions in the management of the resource endowment of a state. The quality of governance is thus determined by the impact of this exercise of power on the quality of life enjoyed by its citizens. The World Bank Governance and Anti-corruption (GAC) Strategy defines it as the manner in which public officials and institutions acquire and exercise the authority to shape public policy and provide goods and services (World Bank 2007).

For our current purpose, none of the above definitions with the exception by Huther and Shah (1996 and 1998) is helpful in serving as an operational guide to carry out a comparative review of quality of governance across countries or even of one country over time. This is because of their singular focus on the processes/institutions which do not lend themselves to easy or fair comparability across countries and sometimes not even within one country without conducting deeper analytical studies. There can be little disagreement that same processes and institutions can lead to divergent governance outcomes just as dissimilar processes could yield similar outcomes in two different countries. For example, anti-corruption agencies in countries with fair governance helps curtail corruption but in countries with poor governance prove either to be ineffective or worse a tool for corrupt practices and victimization (Shah 2007). As another example, budget

secrecy prior to its presentation to the parliament is just as important under parliamentary form of government as in Canada, Britain, India, New Zealand, as open and participatory budget determination process is to presidential form of government as in the United States. There can be little disagreement that both types of processes have the potential to advance public interest but may succeed or fail in different country circumstances. During the past two decades, we have also seen that single party dominant political systems in China, Malaysia and Singapore have shown dramatic results in improving governance outcomes whereas pluralistic party systems have also shown positive results in other countries such as Brazil and India. Similarly monarchy has shown positive results in Britain but unwelcome results in Nepal. Even similar electoral processes do not always lead to representative democracy and may instead yield aristocracy (elite capture) in some countries and corrupt oligarchies in others. In fact, Aristotle's main argument for elections was based upon the premise that these would produce aristocracy, a form of government he considered superior to median voter rule (see Azfar 2008).

Andrews (2008, 2) argues that such "good governance picture of effective government constitutes a threat, promoting isomorphism, institutional dualism and 'flailing states' and imposing an inappropriate model of government that 'kicks away the ladder' today's effective government climbed to reach their current state". In any case, such comparisons of processes and institutions out of their context are almost always ideologically driven and value laden and could not be acceptable as unbiased professional (scientific) judgments. This also explains that while citizens of Bangladesh, China, India and Malaysia over the last decade have experienced remarkable improvement in governance outcomes, available primary indicators fail to capture these accomplishments due to their focus on processes at the neglect of outcomes. Even for the world as a whole, the information revolution by letting the sun shine on government operations, has brought about

dramatic improvements in government accountability, but the WGIs with their on one-size-fit all vision of the world, have consistently failed to notice or recognize such a mega change.

These indicators rank China in the lowest percentile on voice and accountability but according to the former Auditor General of Canada, China has the most effective public accounts committee anywhere which has a track record of holding government to account for malfeasance (Dye 2007). Furthermore local governments in China have relatively much larger role in public service provision than in most countries. Local governments below the provincial level account for about 54 percent of consolidated public expenditures in China compared to about 4 percent in India and about 27 percent in OECD countries (Shah and Shah 2006). Thus having the decision making closer to people, directly elected local governments, and party oversight of local government performance – all work to create a system of voice and accountability that is quite unique to China and not easily comparable to other countries (Qiao and Shah 2006). China has also demonstrated superior government effectiveness through its unique and unparalleled success in alleviating poverty and improving the quality of life of its citizens over the past two decades. About two decades ago, China had about 35 percent of its population below poverty level compared to less than 2 percent in 2006 (Shah and Shen 2007).

In conclusions comparisons of governance institutions requires deeper analytical work through in-depth comparative studies rather than aggregate indicators. Such indicators are more usefully used to compare governance outcomes and complementary analytical studies of institutions and process can be used to explain varying outcomes. Of course, governance outcomes also assume commonly shared values but it is relatively less problematic than one-size fit-all prescriptions on processes.

To have meaningful governance comparisons across countries and over time, one needs to have concepts which are somewhat invariant to time and place and are focused on citizens' evaluations rather than interest groups' views. To this end, we define governance as an exercise of authority and control to preserve and protect public interest and enhance the quality of life enjoyed by citizens. Note that this definition encompasses both the governance environment (quality of institutions and processes) as well as governance outcomes.

Towards a simple framework for assessing country governance quality

Considering a neo-institutional perspective, various orders of government (agents) are created to serve, preserve, protect and promote public interest based upon the values and expectations of the citizens of a state (principals). Underlying assumption is that there is a widely shared notion of the public interest. In return, governments are given coercive powers to carry out their mandates. A stylized view of this public interest can be characterized by four dimensions of governance outcomes.

- *Responsive governance.* The fundamental task of governing is to promote and pursue collective interest while respecting formal (rule of law) and informal norms. This is done by government creating an enabling environment to do the right things – that is it promotes and delivers services consistent with citizen preferences. Further, the government carries out only the tasks that it is authorized to do that is it follows the compact authorized by citizens at large.
- *Fair (equitable) governance.* For peace, order and good government, the government mediates conflicting interests, is focused on consensus building and inclusiveness and ensures a sense of participation by all and protection of the poor, minorities and disadvantaged members of the society.
- *Responsible governance.* The government does it right i.e. governmental authority is carried out following due process with integrity (absence of corruption), with fiscal prudence, with concern for providing the best value for money and with a view to earning trust of the people.
- *Accountable governance.* Citizens can hold the government to account for all its actions. This requires that the government lets sunshine in on its operations and works to strengthen voice and exit options for principals. It also means that government truly respects the role of countervailing formal and informal institutions of accountability in governance.

Given the focus on governance outcomes, Table 1 presents some preliminary ideas for discussion on how to operationalize these concepts in individual country assessments.

The above simple framework captures most aspects of governance outcomes especially those relevant

Table 1

Governance outcomes and relevant considerations

	Relevant considerations
Responsive governance	- public services consistent with citizen preferences; - direct possibly interactive democracy; - safety of life, liberty and property; - peace, order, rule of law; - freedom of choice and expression; - improvements in economic and social outcomes; - improvements in quantity, quality and access of public services; and - improvements in quality of life.
Fair governance	- fulfillment of citizens' values and expectations in relation to participation, social justice, and due process; - access of the poor, minorities and disadvantaged groups to basic public services; - non-discriminatory laws and enforcement; - egalitarian income distribution; and - equal opportunity for all.
Responsible governance	- open, transparent and prudent economic, fiscal and financial management; - working better and costing less; - ensuring integrity of its operations; - earning trust; - managing risks; - competitive service delivery; and - focus on results.
Accountable governance	- justice-able rights and due process - access to justice, information; - judicial integrity and independence; - effective legislature and civil society oversight; - recall of officials and rollbacks of program possible; - effective limits to government intervention; and - effective restraints to special interest capture.

Source: Shah (2008).

for development policy dialogue and can serve as a useful starting point for a consensus framework to be developed. In any event, there can be little disagreement that one cannot embark on measuring governance quality without first defining and defending an appropriate framework that measures governance – a point also emphasized by (Thomas 2006) and the European Commission (see Nardo *et al.* 2005). Once a consensus framework is developed then one needs to focus on only a few key indicators that represent citizens' evaluations and could be measurable with some degree of confidence in most countries of the world and could be defended for their transparency and reasonable degree of comparability and objectivity.[2] Having an enormous number of indicators which could not be scrutinized is nothing but a distinct disadvantage for a measure that aims for wider acceptance and confidence.

Implementation of the above framework requires a worldwide survey with uniform questionnaire honing on the four dimensions of governance identified above across countries. Given that such a survey is not available and costly to commission, in the following section, we take a pragmatic approach based upon available survey data to develop rough indexes of governance quality.

Citizen-centric governance: empirical framework

Our procedure of the governance assessment consists of the two main steps. First, data source – the raw data from inter-country public opinion survey – is chosen. The responses on questions in the survey, which characterize governance outcomes as in Table 1, are recorded. Second, the responses are aggregated in order to achieve governance index for each country from the sample.

In what follows, we consider both of the steps in details.

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[2] See Andrews and Shah (2005) for details and relevant indicators of an approach that emphasizes citizen-centric governance; and Shah and Shah (2006) for citizen-centered local governance and relevant indicators.

Data

Ideally one needs a worldwide survey with uniform questionnaire focused on aspects of governance highlighted in Table 1. The data must also be available for free so that other researchers are able to replicate and verify results. Such a survey, however, is not currently available. Instead a wide range of surveys with varying methodologies and coverage are available. It is tempting to draw upon these sources as done by the Worldwide Governance Indicators. However as Bertrand and Mullainathan (2001) has argued that even the small difference in the formulation of a question (assigned to the same sub-criterion) or the sequence of questions in a survey may bring significant discrepancies in the responses for the same country and same sub-criterion. Following this advice, we have used the World Values Survey (WVS) as the primary source of the data. The WVS uses a uniform questionnaire that is applied in 97 countries. The survey, however, does not cover all countries in the same years and it is primarily focused on cultural values with limited number of questions of direct relevance to the measurement of governance quality. However, each aspects of governance noted in Table 1 has sufficient number of questions to get reasonable first estimates. To enhance coverage to an additional 28 countries, we supplemented these data with four other surveys of the same genre i.e. uniform questionnaire and data is publicly available free of charge, namely Afrobarometer, Asiabarometer, Global Corruption Barometer and the World Gallup Poll. This enabled us to construct a unique data set covering 421,994 responses on 74 questions covering 125 countries. The records in the dataset can be sorted by the gender, income, education of a respondent, as well as by the sub national administrative unit of his/her residency. The dataset is available from the authors upon request.

Our main estimation procedure is done for 3 waves of the World Values Surveys based on the year when the surveys were taken. Wave 1 includes countries surveyed from 1994 to 1998, wave 2 – from 1999 to 2004, and wave 3 – from 2004 to 2008. In addition to questions from WVS, in the wave 3 we also use one question about corruption from Transparency International's Global Corruption Barometer (TI 2005). As an alternative to the WVS, we also report results when using Gallup World Poll data points for four questions, which are available freely from the World Bank Institute website (see WBI 2008).[3]

Aggregation

The underlying assumption of our empirical investigation is that the quality of governance in a given country is best judged by the citizens themselves rather than foreigners. At the same time, answers of the respondents are random variables, which are subject to errors:

(1)

$$s_{ijk} = \beta_k g_i + \varepsilon_{ijk} \Rightarrow g_i = \frac{1}{\beta_k} s_{ijk} - \frac{1}{\beta_k} \varepsilon_{ijk},$$

where $i = 1..M$ is the index of a country, $j = 1..N_i$ is the index of a respondent (total number of respondents, obviously, changes from country to country), and $k = 1..K$ is the index of a question in a survey (thus of a particular governance outcome). s_{ijk} is the answer on question k of the respondent j in the country i. Each response was normalized by us on a scale from 0 to 1, with 0 being the worst answer, and 1 being the best answer. g_i is the quality of governance in the country i, which obviously does not depend neither on concrete respondent, nor on specific question. Coefficient β_k reflects the degree, to which governance affects the answer of a respondent. Note that it does not depend on a country or a respondent. Finally,

$$\varepsilon_{ijk} \overset{i.d.}{\sim} N(0, \sigma_{ik}^2)$$

is the personal random error of the respondent j in the country i, which may also depend on a specific question. Each error is independently normally distributed with zero mean and the variance σ_{ik}^2, which may depend on the country and the specific question.

The expression for g_i can be rewritten:

(2)

$$g_i = w_k s_{ijk} - w_k \varepsilon_{ijk},$$

where

$$w_k = \frac{1}{\beta_k}, k = 1..K$$

are the question-specific weights assigned to each question. The weights are normalized to add up to one –

$$\sum_{k=1}^{K} w_k = 1$$

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[3] Gallup World Poll, is itself very expensive (28 thousands US dollars per year) and also does not have governance focus, and therefore cannot be used as a base for a rigorous and replicable research.

– so that g_i is between 0 and 1 for every country. For our main estimation, and for further comparative analysis, the weights are exogenously chosen. They reflect the relative importance of every question in assessment of governance (i.e. 'satisfaction with life in general' is clearly more comprehensive than 'satisfaction with health' or 'satisfaction with environment'), as well as alleviate certain data deficiencies (i.e. European countries were not asked some questions in the second wave of WVS, so these questions received lower weights). At the same time, the weights can be easily changed to tailor one's specific research agenda or check the robustness of the results reported here.

Given our assumptions, the most efficient, unbiased, and consistent estimator for the governance in country i is just the sample mean of weighted averages of citizens' responses, the estimator for the governance's variance is adjusted sample variation:

(3)

$$\hat{g}_i = \frac{1}{N_i} \sum_{j=1}^{N_i} \sum_{k=1}^{K} w_k s_{ijk},$$

$$\mathrm{v\hat{a}r}(g_i) = \sum_{k=1}^{K} w_k{}^2 \frac{1}{N_i-1} \sum_{j=1}^{N_i} (s_{ijk} - \frac{1}{N_i} \sum_{j=1}^{N_i} s_{ijk})^2$$

We chose not to use more sophisticated data mining approaches (e.g. principal component analysis or random projections) for the sake of transparency, simplicity and replicability. The choice of weights or aggregate procedure does not significantly alter the overall assessment of governance quality (see Ivanyna and Shah 2010 for details). Our procedure is maximally open and simple in order to allow for further research and analysis. Besides, in addition to the governance scores we report and analyze the responses on each separate question, which makes our indicators 'actionable', and allows drawing the conclusions which are completely independent of weights and aggregation procedure.

Citizen-centric governance: worldwide rankings

In the following, citizen-centric governance indicators are presented for most countries in the world using the three waves of World Values Surveys and the Gallup World Poll. This is followed by reflections upon these results in comparison to the Worldwide Governance Indicators. Finally sub-
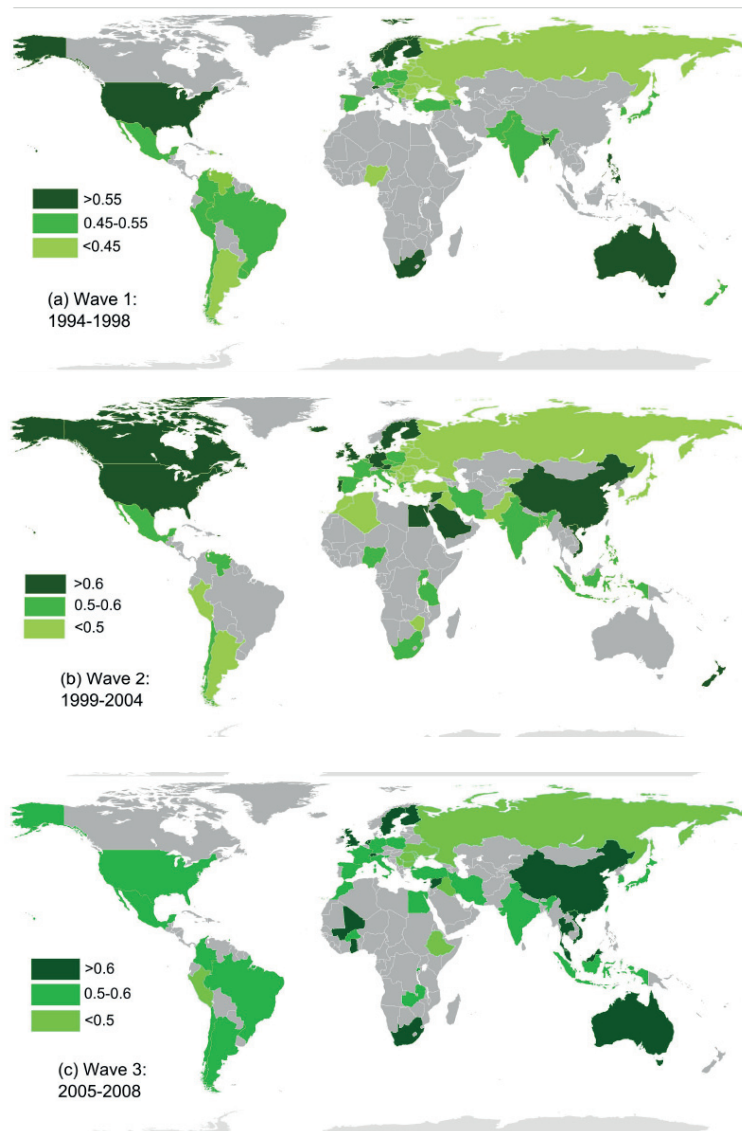
national governance indices for Germany and Italy are portrayed.

Mapping of country rankings: waves 1 to 3

Worldwide ranking of countries on governance quality are mapped in Figure 4 (World Value Survey 2005) and Figure 5 (Gallup World Poll). All three waves of survey are shown in Figure 4: (a) wave 1 – for surveys taken between 1994 and 1998 (53 countries), (b) wave 2 – for surveys taken between 1999 and 2004 (71 countries), and (c) wave 3 – for surveys taken between 2005 and 2008 (51 countries). In Figure 4, we rank our sample of countries into three broad categories of governance quality and six governance rankings in Figure 5: from dark-green high-governance-quality countries to light-green low-governance-quality countries. While developed countries (especially Scandinavian countries and Switzerland) show high stable governance rankings, contrary to WGIs but not surprisingly, the East Asian countries (especially, Vietnam, China) are also highly rated by their citizens. The governments of Central and Eastern European countries, on the other hand, are rated poorly by their citizens and are always in the lowest percentiles in worldwide rankings.

In Figure 6, we compare citizen-centric governance indicators with corresponding Worldwide Governance Indicators (WBI 2008), which are (in our view mistakenly) considered as the 'gold standard' of governance assessment by the popular media. The scale changes from dark-green for countries, which were severely under-rated by WGIs, to dark-red for countries, which were greatly over-rated. 27 out of 82 countries in our sample were over- or under-rated at a significance level less than 25 percent (9 at a level less than 5 percent) by WGIs in comparison to our assessments. The East Asian countries are mostly underrated with China, and Vietnam being the leading outliers, while Central and Eastern European countries are over-rated by WGIs with Latvia, Lithuania, Moldova and Hungary being the leading outliers. Our indicators are not value laden and simply capture growing satisfaction of citizens of East Asia with their governments in improving quality of governance over the past decades, whereas the WGIs in view of their focus on the Anglo-Saxon institutional design of a government appear unable to capture governance quality improvements associated with different cultural and institutional contexts. For example, China is ranked relatively low on government effectiveness by the WGIs while it has demonstrated superior performance in delivering public services and

Figure 4

CITIZEN-CENTRIC GOVERNANCE INDICATORS (WAVES 1–3)

>0.55
0.45-0.55
<0.45

(a) Wave 1:
1994-1998

>0.6
0.5-0.6
<0.5

(b) Wave 2:
1999-2004

>0.6
0.5-0.6
<0.5

(c) Wave 3:
2005-2008

Source: World Value Survey (WVS) database.

Figure 5

CITIZEN-CENTRIC GOVERNANCE INDICATORS

>0.67
0.58-0.67
0.50-0.58
0.43-0.50
0.34-0.43
<0.34
no data
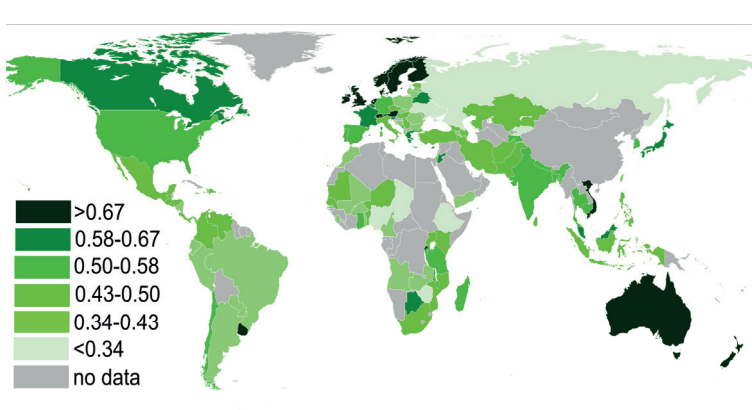
Source: Gallup World Poll (GWP) database.

combating poverty. Its record in poverty alleviation is unparalleled in the economic history of the world.

Group comparisons

Figure 7 presents analysis of governance outcomes by groups of countries. Here we depict regional averages by each governance outcome (based on the data from the third wave of WVS). It can be seen that the governance ranking curve of the EU-15 group – 'old' members of the European Union – is almost always above other curves in the dimension of Responsive governance (till the 'happiness' point on the x-axis). When it comes to the questions about Responsible and Accountable governance (confidence in parliament, government, press, TV, courts) the curve steeps down. The governance ranking curve of the East Asian countries, while mostly above the world average, rises above the curve of EU-15 only on trust-related dimensions. The curve of Central and Eastern European countries (CEE) is always below the East Asian curve, as well as below the world average. The citizens of CEE countries give relatively very low rankings to police ('safety' on x-axis) and respect for human rights in their respective countries ('human rights' on the x-axis).

The fact that people in the East Asia, trust their governments more than the people in industrial countries is understood as these countries have experienced positive economic, social and governance transformation in recent years. However, in some instances, there may also be biases. In politically repressed countries, people may not be forth-

Figure 6

**HOW DO WORLDWIDE GOVERNANCE INDICATORS STACK UP AGAINST
CITIZEN-CENTRIC GOVERNANCE INDICATORS?**
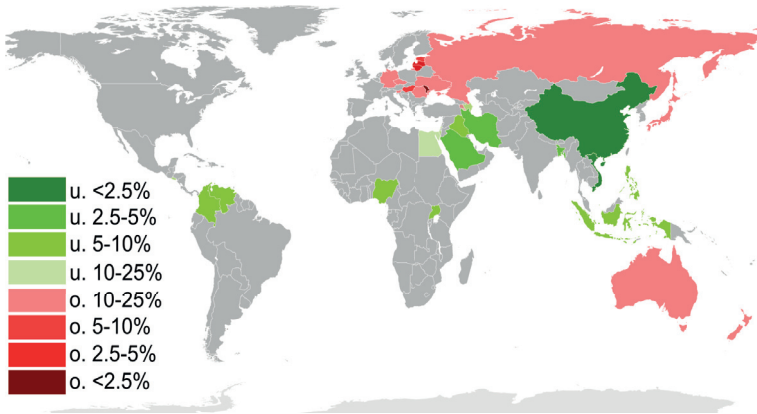
Note: u. X-Y% means that the country was underestimated by WGI in comparison to CGI at the significance level between X and Y%; o. X-Y% means that the country was overestimated by WGI in comparison to CGI at the significance level between X and Y%. The time period considered is 1994-2005, aggregate CGIs are taken, WGIs are averaged over all 6 components.
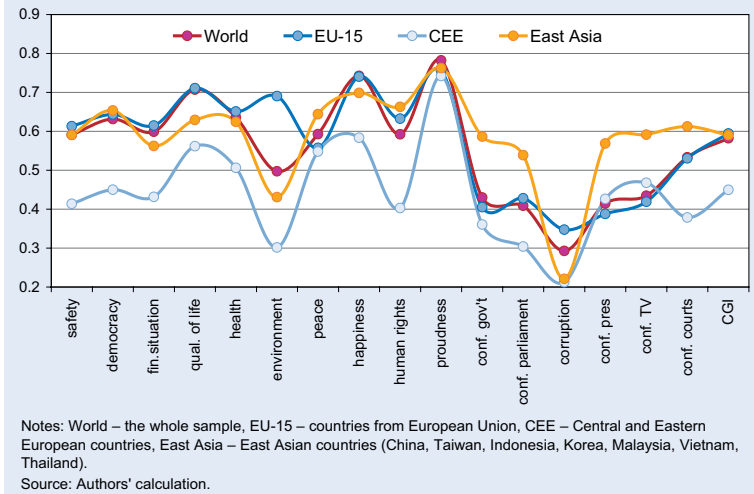
Source: Authors' calculation.

coming to express their true assessment of the governance environment and outcomes. Also, when mass media in a country is controlled by the government, people may be indoctrinated to believe in false truths. We test for presence such effects in our data later in this paper.

Intertemporal comparisons

The inter-temporal consistency of WVS questionnaires and repeated surveys during three waves allow us to assess changes governance quality over time in
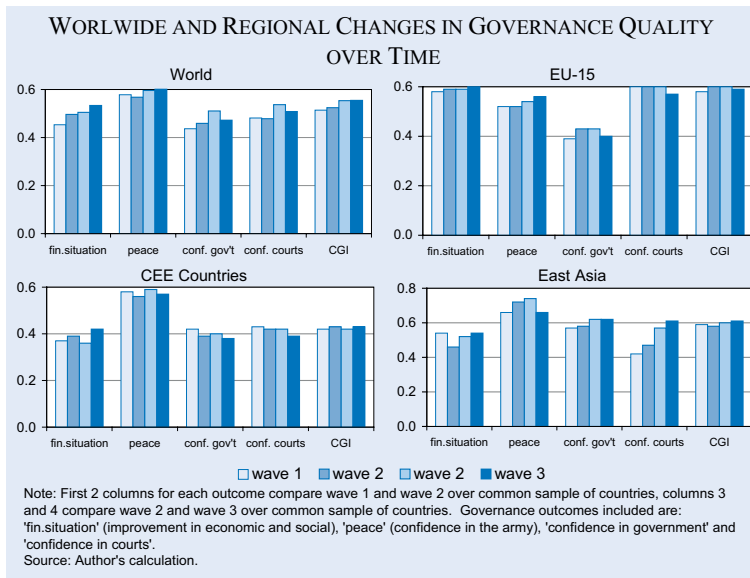
selected countries. In particular, citizens of 41 country were surveyed both during the first wave of WVS (1994–1998) and during the second wave (1999–2004). Surveys both from the second wave and the third wave (2005–2008) are available for 33 countries. An analysis of changes in governance quality is reported in Figure 8. It is worthwhile noting that WGIs, in contrast, to analysis reported here, assume that governance quality remains invariant over time.

The results reported in Figure 8 show that there was statistically significantly increase in governance quality (at significance level of less than 1 percent) from wave 1 to wave 2 – in contrast to the WGI's world of unchanging governance quality – but no statistically significant change from wave 2 to wave 3. The principal driver of the growth in world's quality of governance was increasing (in practically all regions) satisfaction of the citizens with improvement in economic and social outcomes and attendant improvements in governance environment. This trend continued unabated from wave 2 to wave 3 but the overall progress was apparently mitigated by the fall of confidence in governments, courts and army in developing and transition countries, though CEE countries still ended up progressing from wave 2 to wave 3.
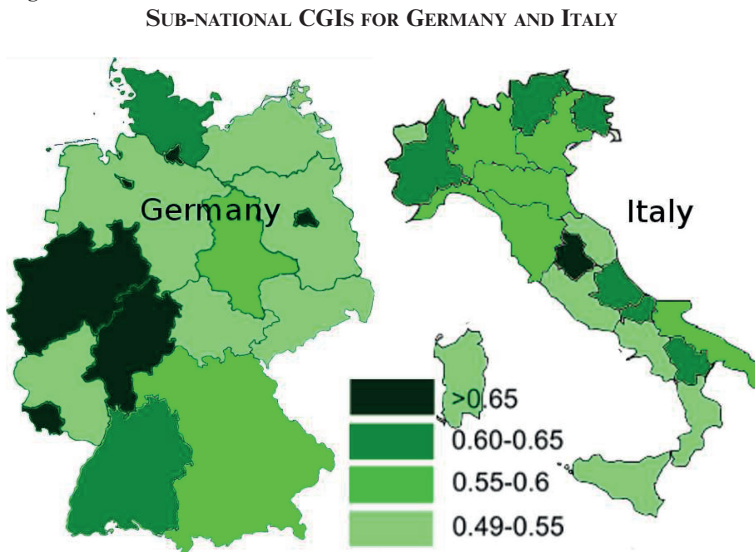
Subnational CGIs

Assessing governance quality at the sub-national levels is important for determining the impact of decentralization policies, knowledge about regional equity and discovering early signs of potential threats to national unity. However, such assessments have not been carried to-date due to a lack of appropriate framework and associated data. Fortunately, our dataset and empirical framework enables us to rank governance quality at sub-national levels in most countries. The idea is to aggregate cit-

Figure 7

GOVERNANCE OUTCOMES BY GROUPS OF COUNTRIES: WVS-WAVE 3

Notes: World – the whole sample, EU-15 – countries from European Union, CEE – Central and Eastern European countries, East Asia – East Asian countries (China, Taiwan, Indonesia, Korea, Malaysia, Vietnam, Thailand).
Source: Authors' calculation.

Figure 8

WORLWIDE AND REGIONAL CHANGES IN GOVERNANCE QUALITY OVER TIME

Note: First 2 columns for each outcome compare wave 1 and wave 2 over common sample of countries, columns 3 and 4 compare wave 2 and wave 3 over common sample of countries. Governance outcomes included are: 'fin.situation' (improvement in economic and social), 'peace' (confidence in the army), 'confidence in government' and 'confidence in courts'.
Source: Author's calculation.

izens' responses not over the whole country, but over its sub-national jurisdictions. For the wave 3 of WVS there are 1,121 sub-national jurisdictions in our sample – these include for some countries, all second tier administrative jurisdictions and for others only groups of second tier jurisdictions. Figure 9, by way of illustration, presents sub-national governance rankings for Germany and Italy. Similar calculations are possible for several more countries. In Germany, residents in rich industrial lands of Hessen, Nordrhein-Westfalen and Saarland together with independent cities of Bremen, Hamburg and Berlin are most satisfied with their governments. While relatively poorer eastern states receive much lower governance ratings from their residents – only in Sachsen-

Anhalt residents gave their Länder government close to average rating, surprising are the average scores received by the governments of rich southern states like Baden-Würtemberg and Bayern.

The relative correspondence between richness of a sub-national jurisdiction and its government's score on governance quality is also maintained in Italy. Most rich northern regions receive a governance score of more than 0.55, while poorer Southern regions – with the exception of Abruzzo, Molise, and Basilicata regions – receive a lower score.

Robustness tests

The empirical analysis presented here must be subjected to rigorous testing for statistical reliability and validity. Such tests are presented in Ivanyna and Shah (2010) and only the conclusions of these tests are reported below.

The public opinion in a country – especially about the issues related to the government – might be influenced by factors, which are not directly related to the quality of governance. These factors may include 'intimidation' effect, when people are afraid to express their true opinions about their government for fear of reprisals. A second factor frequently mentioned in the literature, is the 'indoctrination' effect, when mass media in a country is used to brainwash people. A third factor is the degree of citizen activism and perceived role of government in a country. Norris (1999) observes the emergence in the 1970s in developed countries of 'critical citizens' – people who are increasingly critical and demanding even of well performing governments.

Assuming that intimidation, indoctrination and critical citizenship affect respondents' views about the quality of governance,

Figure 9

SUB-NATIONAL CGIS FOR GERMANY AND ITALY

>0.65
0.60–0.65
0.55–0.6
0.49–0.55

Source: Authors' calculation.

it is not possible to estimate the magnitude of these effects, since 'true' governance quality is unobservable. However, the problem can be mitigated, if we note that for some questions about governance outcomes there are no effects of intimidation, indoctrination or critical citizenship, and for some others such effects may be present. For instance, when an individual is asked about the satisfaction with her/his health, it is likely that she/he will not be intimidated to tell the truth. At the same time, questions like 'Do you have confidence in your government?' are most probably subject to all of the above mentioned effects. Therefore, we can isolate the effect of governance on the individual responses by taking the difference between these questions.

As the proxy for indoctrination we take the frequency with which an individual exposes her- or himself to TV and press. Specifically, we use questions 'Did you watch TV during the last week?' and 'Did you read newspapers last week?' from the World Values Survey. The more people watch TV or read newspaper the more they are likely to be exposed to possible indoctrination. The main conclusion from our estimation is that even though developing countries, especially those in the East Asia, may have indoctrination, the mass media bias is also present in many developed countries – Japan, Sweden, Switzerland, the United States, France. The latter might be the outcome not of state monopoly (or dictate) on mass media, but ideological orientation of mass media ownership such as conservative leaning of Robert Murdoch, the owner of Fox News. The magnitude of the indoctrination effect ranges from 0.02 (except for Ukraine and Rwanda, where those who watch TV are actually more critical towards the government) to 0.12, which combined with on average 75 percent of respondents watching TV or reading newspaper, may lead to a decrease in our estimates of governance by 0.005–0.03 points.[4]

Intimidation and critical citizenship effects are measured at the country level. Specifically, as a proxy for the intimidation level in a country we use the average score of the country in the 'Freedom in the World' ranking – an annual publication of the Freedom House, where political and civil rights of the citizens are assessed. As for the critical citizenship effect, we follow Norris (1999) in her definition of a critical citizen, and define the country to be in the stage of critical citizenship if it had been classi-

fied 'free' by the Freedom House for at least ten years before the survey was conducted (long period of stable democracy), and the GDP per capita in this country (taken from IMF) was more than 10 thousands US dollars (wealthy population). Most OECD countries together with Slovenia and Chile form this group.

We find that both freedom of the county and its being in the stage of critical citizenship are highly statistically significant in explaining biases on responses on trust-related questions in the WVS surveys. The directions of the effects are what would be intuitively foreseen. 1 score up in the Freedom House ranking (which means country becomes less free, 1 being the best score, and 7 – the worst) leads to the citizens of this country to be more cautious in answering government-related questions in a survey, and consequently overestimate their governments in trust-related questions by 0.03 points. For the least-free country, the effect on our governance estimate would be – 0.07 points. On the other hand, residents of the countries, which are in a stage of critical citizenship, do have significantly less confidence in their governments then they should have. If not too 'critical', residents of these countries would give their governments a score 0.09 points higher, which would imply an increase of about 0.03 in the citizen-centric governance indicator.

Even though we find statistically significant effects of indoctrination, intimidation and critical citizenship in some countries, the magnitude of these effects is not particularly large. For example, Vietnam is ranked 0.72 on governance but it is ranks relatively low (rank of 6 in 2005) on the Freedom House index, and there is a moderate (0.05) effect of indoctrination by mass media (television). Together these effects would cut its citizen-centric governance indicator by 0.07 points. New indicator would be 0.65 – still in the highest 20th percentile of the sample. Economic stability and growth may also lead to improvements in governance environment and the citizens' perceptions in governance quality (Lou and Wang 2007). At the same time, poor economic performance, political conflicts and corruption in the 1990s in Central and Eastern European countries may be responsible for low scores on governance quality for this region. Overall, our tests confirm the robustness and validity of citizen-centric governance rankings even in the presence of indoctrination, intimidation and critical citizens' effects.

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[4] Note that our estimates of governance are assessed on a scale from 0 to 1.

Contributions and limitations of the empirical approach

This paper has provided a conceptual framework for measuring governance quality using citizens' evaluations consistently across countries and over time. It further provided empirical illustration – using data from the World Values Survey Association – of the usefulness of the methodology by developing governance quality rankings for 125 countries. These rankings significantly differ from those provided by available indicators that mostly capture foreigners' (mostly interest groups) or arm-chair experts' opinions. Further, we illustrate the usefulness of our approach for measuring governance quality at subnational levels.

The WVS data are subject to important limitations. They are not conducted in the same year for all countries, and the questionnaires may slightly differ from country to country, which may produce significant departures from objective estimation. It is also possible that in spite of the claims to the contrary by the survey organization, the survey may not be based on stratified random sampling for some countries due to practical difficulties.

Notwithstanding these limitations, the dataset constructed by us has important merits. The governance-related questions and answers are reported at the level of individual respondents in our dataset, which gives researchers flexibility in computing rankings across different strata e.g. education class, by gender or by income groups etc. Most importantly and contrary to the WGIs, the data used in our estimation is freely accessible, and can be used by other researchers to replicate or modify our estimation procedure. Ideally, our theoretical framework should be implemented using a world poll with stratified random sampling employing a uniform questionnaire across countries and over time. The World Gallup Poll or a similar instrument might offer such an opportunity in the near future.

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