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Governance Redux: The Empirical Challenge

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"Brought back from imprisonment." That is the longer, Latin-rooted dictionary definition of *redux*,[2] while another refers to the return from exile. More succinctly, the English definition refers to "brought back" and cites "revived" as its synonym.[3] Indeed, core aspects of governance were taboo for international financial institutions until not long ago. By the mid 1990s, official documents would still largely avoid spelling out the word *corruption*, for instance. Thanks to a seachange at agencies such as the World Bank, as well as to the embracing of the challenge of governance by institutions such as the World Economic Forum, it is now possible to discuss openly the reality of governance worldwide, and apply such knowledge in concrete ways in countries intent in improving. Further, given the complexity of the topic, its multidisciplinary nature, and the tentative (and often subject to different interpretations) nature of the incipient lessons learnt, it is imperative to question and attempt to advance in this field by utilizing the power of empirical work—which often reveals evidence at odds with long and popularly held beliefs. Hence the title, "Governance Redux: The Empirical Challenge," and the attempt in this paper to cover various interrelated governance topics from an empirical perspective.

Rethinking governance
The decade of the 1970s witnessed robust economic growth around the globe, averaging well over 5 percent per year. Ever since then, economic performance has been modest, averaging less than half of this growth rate. By the end of the 1990s some acceleration in worldwide growth rates appeared to be in the offing, but disappointment set in again: growth rates declined from about 4 percent in 2000 to significantly less than 3 percent in 2002. Not surprisingly, recessionary expectations reported by the enterprises in this year's Executive Opinion Survey (World Economic Forum, hereafter referred to as "Survey") deepened significantly around the globe (with some exceptions). Although more than one-half of the firms expected substantial growth in their economies in 2002, this year less than one-third remained optimistic. Instead, by early 2003, the plurality of respondents expected recessionary times ahead.

To an extent, these short-term growth figures and enterprise expectations do reflect cyclical phenomena and external shocks for many countries. Yet deeper structural and productivity-related concerns also arise when taking a longer view. Has macroeconomic management deteriorated over the past decade, or do other causes

[2] http://latin.realdictionary.com/Latin/redux.asp.
[3] "Redux." 1987. In *The Random House Dictionary of the English Language*, 2nd ed., unabridged. New York: Random House.

explain such performance? In particular, how have countries performed on key governance dimensions? Is there a "governance reform gap" in the sense of a growing divergence between the technocratic ability of policymakers to implement traditional economic policies, as opposed to the inability or unwillingness to embark in governance reforms requiring deep-seated institutional and political change? Does it matter if a country lags behind in governance? In this sense, is there a "governance deficit" in the sense that many countries' current income level and/or their projected growth path is not attainable with their current quality of governance? What heretofore ignored factors, now subject to measurement, appear to be associated with good governance at the national and subnational levels? In this paper we explore these and related questions.

In "Rethinking Governance" it was suggested that there was little evidence on progress in governance in recent years, warranting a redoubling of efforts to address this complex challenge, as well as arguing for rethinking of some key premises and recommendations in the field.[4] In particular, we focused on the role of the private sector in helping shape public governance—for better or worse—challenging traditional legal and public-sector management approaches and public-policy advice.

We argue that governance still needs rethinking, its underperformance being evident in most regions and across many countries worldwide. This underperformance contrasts with the significant strides that have been made in macroeconomic policies for well over a decade. We analyze the results of this year's Survey in terms of the main constraints to the firms' operations, contrasting governance with other factors. More generally, with a recently constructed worldwide governance indicators dataset, we explore the extent by which the quality of national governance matters, quantifying the link between key governance dimensions and a country's per capita income and social progress.

We then briefly review the recent work on the deeper historical determinants of governance, focusing in particular on the origins of the country's legal system. On the basis of the governance indicators database we suggest that, for developing countries, it is imperative to analyze factors beyond whether a country's legal origins were in the common law or civil law traditions.

Furthermore, the database provided by the Survey permits the empirical evaluation of some political dimensions of governance traditionally regarded as non-measurable, such as the extent of "capture" and of undue influence by politically connected powerful firms in shaping the regulations, laws, and policies in a country. In particular, we explore the relevance of the unequal distribution of influence (or "crony bias") in a country, and its role in explaining public and financial governance performance.

The empirical richness of the Survey dataset also permits the initial construction of a governance database at the city level. On this basis, we explore potential determinants of city-level governance, such as city-level characteristics and the country's urbanization and globalization trends.

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[4] See Kaufmann 2003c.

We conclude with selected implications, further revisiting conventional advice on strategies to improve public governance, with emphasis on the need to address the nexus between corporate strategies and public governance. Methodological challenges associated with the empirical research summarized in this paper are presented in the Appendixes.

Primacy of economic policies or of governance: A false dichotomy?
In recent writings, some authors have argued not only that governance matters significantly, but moreover that governance may dwarf the relevance of economic policies.[5] This sharply contrasts with the argument that prevailed earlier about the primacy of economic policies—and within it, the primacy of macroeconomic stabilization. Yet nowadays both extreme strands still coexist, even though there is increasing recognition among many that both governance and economic policies matter. On the macroeconomic primacy view, recent research, for instance, emphasizes the paramount importance of macroeconomic stability in attracting foreign direct investment (FDI).[6] It is by now undisputable that macroeconomic and exchange rate stability is an important precondition for FDI and growth. The question is whether macroeconomic and exchange rate stability remains a central *obstacle* to attracting FDI and economic progress, or whether its relative importance as a binding constraint may have lessened, and instead other factors have become binding. The data are indicative: they point to the fact that FDI levels (as a share of GDP) and inflation rates (or, alternatively, parallel exchange rate premia) during the last two decades have not always moved together—in Africa or elsewhere—(even though there is a correlation between both sets of variables). Macroeconomic phenomena played a crucial role in the past, but the dynamics of FDI require an analysis beyond such macroeconomic variables to understand the sources and extent of the variance.

Even more important in terms of its implications for the near future is the dramatic improvement during the 1990s in the quality of macroeconomic management in the vast majority of emerging and transition economies. This resulted in a higher degree of macroeconomic and exchange rate stability, reduced inflation levels, and, notably, the virtual disappearance of parallel market premia in most countries (and with very few exceptions, even in those few countries that still exhibit a parallel premia, it is not large). The evidence is telling: in 1983, 44 percent of the countries outside of the Organisation of Economic Co-operation and Development (OECD) had a parallel exchange rate premia exceeding 30 percent; 15 years later, by the late 1990s, a mere 11 percent of the emerging and transition economies did. By the year 2000, the number of countries with a significant parallel premia had further shrunk to such a negligible proportion that the World Bank ceased collecting data on parallel premia data altogether!

Similarly, dramatic progress has taken place in containing inflationary pressures, in even a briefer time span: 44 percent of non-OECD countries had annual inflation rates

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[5] See for instance Rodrik et al. (2002).
[6] See, for instance, Reinhart and Rogoff (2003), focusing largely on FDI in Africa.

exceeding 20 percent in 1994; by the end of 2002, a mere 8 percent did.[7] Yet during the past decade this significant improvement in macroeconomic performance in itself did not automatically translate into significantly higher levels of FDI in Africa and in emerging markets more generally or into more vigorous growth and development. In fact, as reviewed below, during the recent past the gains in macroeconomic policies were not accompanied by similar advances in governance performance, which has been stagnant—thereby widening the governance reform gap between the level of effort in governance and macroeconomic policies.

Further, a simple review of the recent data suggests a much higher correlation between FDI and governance than between FDI and macroeconomic variables. In particular, using the worldwide governance indicators dataset we have constructed (described below), we find that indicators capturing various dimensions of governance, such as the quality of the regulatory regime, rule of law, and control of corruption, matter very significantly when relating it to FDI (as a share in GDP) worldwide. This is relevant in the context of recent trends: while on average macroeconomic stability is no longer a major binding constraint in emerging economies (with a few exceptions), the quality of governance has remained stagnant at a low level for many countries. Obviously, maintaining macroeconomic stability ought to continue being regarded as a necessary precondition for growth and for FDI, yet it is far from sufficient. Particular emphasis on governance factors is warranted, since at the present juncture it appears to constitute a binding constraint.

The data from the recent Executive Opinion Survey, carried out during 2003 and covering almost 6,000 enterprises in over 100 countries, in conjunction with the comparative analysis with Survey data from earlier years, is also indicative in this context. Selected results illustrating the trend over the past five years in some key factors affecting the business climate are illustrated in Figure 1. Figure 1a suggests some progress over the years in the firms' assessment of the quality of infrastructure, contrasting the stagnant or even deteriorating trends on judicial independence (Figure 1b), and control of bribery in the judiciary (Figure 1c).[8]

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[7] Source: WDI, World Bank. Note that OECD countries have not exhibited significant macroeconomic imbalances in the recent past, so there was no room for improvement during the period according to this "cutoff" criterion. Yet its average inflation rates also declined, albeit from a much lower initial point. It should be noted, however, that despite low inflation rates, growing concern about the rapidly growing fiscal deficit in the United States at present (and its future worldwide implications) is present—an important issue outside the purview of this paper.

[8] The evidence, based on official sources on the trends on inflation and parallel exchange rate premia, pointing to an improvement over the past 10 and 20 years, respectively, is so dramatic that it is obviously highly significant in statistical terms. By contrast, the changes in the quality of infrastructure and governance questions reported over only the past 5 years, based on the Survey responses of a multitude of firms in countries experiencing high variation in such average responses, are often not highly significant statistically (at a 90 percent confidence level). Thus any statement of improvement or deterioration for the overall sample or for a regional average over this rather limited Survey-based time span needs to be treated with caution, and requires further validation with additional data and an expanded time frame. It should be noted, however, that the main conclusion of this Survey-based over-time comparison refers to the *stagnation* in governance performance (and its relatively low level in most settings), rather than claiming a definite deterioration over the past 5 years (which, where suggested by the point estimates in the trend, is not highly statistically significant). The statistical confidence in the statement that there is no evidence of a positive trend in any governance dimension is very high, based not only on the Survey evidence discussed
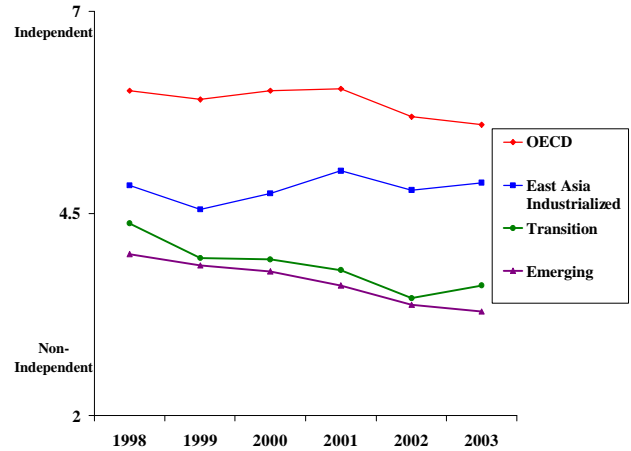
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Stagnating quality of governance in perspective: View of the firm

### Figure 1a: Quality of infrastructure
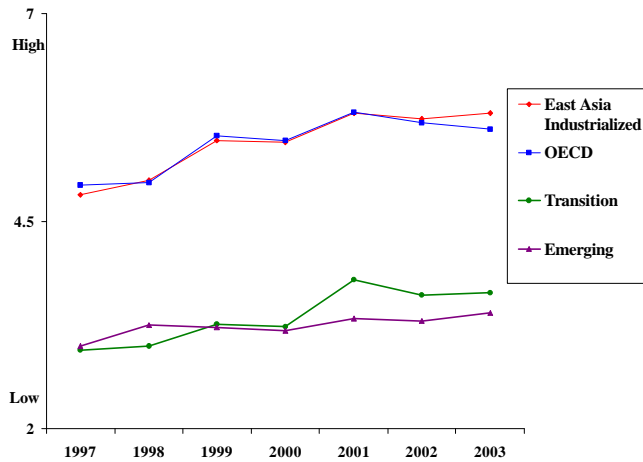
Source: Executive Opinion Surveys 1997–2003. Question 5.01: General infrastructure in your country is (1 = poorly developed and inefficient; 7 = among the best in the world).

### Figure 1b: Judicial independence

Source: Executive Opinion Surveys 1998–2003. Question 6.01: The judiciary in your country is independent from political influences of members of government, citizens, or firms (1 = no, heavily influenced; 7 = yes, entirely independent).

Figure 1c: Control of judicial corruption
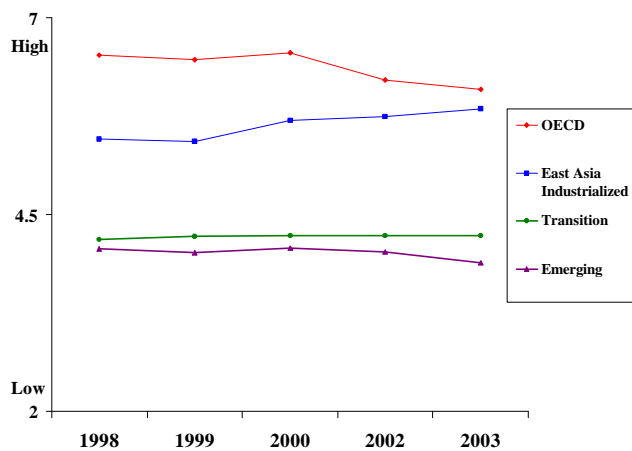
Source: Executive Opinion Surveys 1997–2003. Question 7.07: In your industry, how commonly would you estimate that firms make undocumented extra payments or bribes connected with getting favorable judicial decisions? (1 = common; 7 = never occurs). Note: this question has been asked every year since 1998 except in the 2001 Survey.

Figure 1d: Key business environment constraint to the firm: emerging economies and OECD
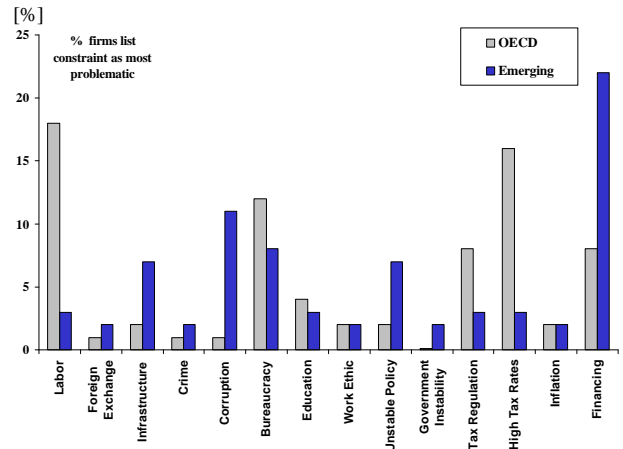
Source: Executive Opinion Survey 2003. Question 13.01. From the following list, please select the five most problematic factors for doing business in your country, and rank them between 1 (most problematic) and 5. The figure shows the percent of firms ranking the said constraint as the *most* problematic among the 14 items on the list.

Reviewing the trends of various governance variables from the Survey between 1998 and 2003 in some detail suggests the overall challenge of governance stagnation while also

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here, but also based on other available indicators from polling agencies (see Kaufmann, Kraay, and Mastruzzi, 2003).

bringing out some notable variation across regions. For administrative regulations,[9] a deterioration worldwide is apparent, including the rather dire assessment of OECD firms as well as the enterprises from emerging and transition economies. In the latest Survey, a mere 18 percent of enterprises worldwide rate administrative regulations as not that burdensome, while about 70 percent rate them as very or relatively burdensome. Only in East Asia's New Industrialized Countries (NICs) has a deteriorating trend not been evident, and about one-half of the enterprises there do not report such regulations as burdensome. By contrast, less than 10 percent do so in the former Soviet Union, Latin America, and Africa.

The quality of anti-monopoly policies has continued to stagnate from the levels reported last year. There are noteworthy differences across regions, however, with some apparent improvement in the firm reports from countries in the OECD, East Asia's New Industrialized Countries (NICs), and the Middle East and North Africa (MENA) in contrast to the deterioration seen over the same 5-year period in the former Soviet Union (Ukraine and Russia are surveyed in the Survey) and Latin America in particular (and to a lesser extent, South Asia, East Asia developing, and eastern Europe).

The extent of the independence of the judiciary has not exhibited any improvement—and may in fact have deteriorated—according to the responses by the firms (Figure 1b). It was noted in "Rethinking Governance" that a drop in the assessed extent of judiciary independence worldwide took place between 2001 and 2002. This year's Survey (2003) indicates similarly low ratings compared with last year's already low levels, suggesting that the results of a year ago were not a one-year blip. The extent of bribery in the judiciary has also been subject to deteriorating ratings from 1998 to 2002, with stagnant assessments over the past year (Figure 1c). Latin American countries on average, as well as the surveyed enterprises in the former Soviet Union, rate lower than other regions in this dimension.

The Survey has also asked every year since the late 1990s whether corruption has deteriorated, has remained unchanged, or has improved over the past 3 years. The analysis of this trend of corruption variable indicates that on average the corruption trend has remained stable, but with notable regional variance. There is a significant improvement (two-thirds of the firms) reported for East Asia NIC; some modest improvement in OECD, East Asia developing countries, eastern Europe, and MENA (for each of these regions about 40 percent or so of the enterprises report an improvement and one-quarter report a deterioration); and an overall deterioration is reported for Africa, Latin America, and the former Soviet Union (with only between one-fifth and one-quarter of the enterprises reporting an improvement).

Furthermore, over the past couple of years the same detailed questions on the assessment of the level of different forms of bribery has been asked in the Survey, which permits a

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[9] The precise wording for each question utilized to analyze variables such as the quality of infrastructure, administrative regulations, corruption, judiciary independence, and others analyzed in this paper are included as notes in the respective Figures, as well as in the Appendix glossary and in the data tables at the end of this book.

comparison between 2003 and 2002. The findings suggest the importance of "unbundling" corruption into its different types, since the various forms of corruption can be subject to varying severity within the same country, and do not always move together over time. We find that overall there are declining levels of bribery for connection to utilities and for taxation (and in particular in eastern Europe, East Asia developing countries, and Africa), while on the other hand there is an increase in bribery in procurement and in the "capture" or purchase of laws, regulations, and policies.

The reported extent of illegal party donations (not shown) remained stable on average over the past year, and at a very high level, with over one-half of all firms reporting illegal party financing to be significant. There is an apparent contrast across regions in this variable as well: East Asia (NIC) rates relatively well (better than OECD countries, in fact), with only one-fifth of the firms reporting it to be significant; in the former Soviet Union, South Asia, and Latin America between 75 and 85 percent of all enterprises indicate that illegal party financing is substantial or very substantial.[10]

In sum, the ratings reported by firms worldwide on different governance dimensions suggests a sobering picture, and points to a growing governance (policy effort) gap. Complementing the time trend analysis described above, it is of interest to review the extent to which various factors in the business environment pose a constraint to the firms and assess the relative severity of governance and other factors. This can be done by analyzing the very last question in the Survey questionnaire, which asks enterprises to provide a relative rank of obstacles to their business operations.

When asked to rate the most important constraints to their operations, businesses in emerging and transition economies rated corruption, followed closely by excessive bureaucracy, at the very top (see Figure 1d). The only constraint (among a list of 14 obstacles) that they rated higher than these governance factors was in fact access to finance, a common reaction by the enterprise sector in settings usually characterized by macroeconomic stability.

Consistent with the evolution in macroeconomic policies over the past 15 years, the firms' response to this Survey question points to a lack of concern on their part about inflation as a constraint (at the very bottom of the list of 14 candidates), as well as the foreign exchange regime (see Figure 1d). This is in contrast to the severe concern reported by firms about corruption and bureaucratic red tape in emerging economies.[11]

In contrast to emerging and transition economies, in OECD countries firms did not rate corruption as a major constraint. They considered their main obstacles for their

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[10] The scale of the Survey questionnaire is from 1 (very poor rating) to 7 (excellent). In this paper, whenever we indicate the percentage of firms reporting good/very good rating for a variable, it was calculated as the composite of those rating it a 5, 6, or 7; conversely, firm ratings of 1, 2, or 3 are interpreted as poor/very poor.

[11] In 2003, firms reported corruption to be the top constraint at even a higher rate than the already very high rate of the previous year, while their concern about inflation declined further, from an already very low level. However, these differences (over such as short time span) are not large in magnitude or statistically significant. The main observation refers to the consistency in the ratings across both years.

operations to be focused on the extent of the bureaucracy, tax rates, and tax and labor regulations (Figure 1d). Thus even firms in OECD countries did emphasize other governance dimensions (even if they did not point to corruption in particular as a major constraint). And similar to the firms in emerging and transition economies, firms in OECD economies continued to rate inflation as a very minor constraint.

In sum, from the perspective of the firm, governance constraints appear to be more binding than the (generally improved) macroeconomic stance in most settings. At the same time, it is important to note that in the medium term the trajectory of governance and macro-economic policies cannot totally be divorced from each other, since subpar governance may undermine some of the gains attained in the macroeconomic policy arena.

Governance: Basic definitions and worldwide indicators.
We recap from "Rethinking Governance," which defined *governance* as the set traditions and formal and informal institutions that determine how authority is exercised in a particular country for the common good, thus encompassing: (1) the process of selecting, monitoring, and replacing governments; (2) the capacity to formulate and implement sound policies and deliver public services; and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them. For measurement and analysis, the three dimensions in this definition are unbundled to comprise two measurable concepts per each of the dimensions above, for a total of six governance components:

1. *voice and external accountability* (that is, the government's preparedness to be externally accountable through their own country's citizen feedback and democratic institutions, and a competitive press, thus including elements of restraint on the sovereign);
2. *political stability and lack of violence, crime, and terrorism*;
3. *government effectiveness* (including quality of policymaking, bureaucracy, and public service delivery);
4. *lack of regulatory burden*;
5. *rule of law* (protection of property rights, judiciary independence, and so on, thus including elements of law and order); and
6. *control of corruption*.

Applying the above definition of governance and gathering data from many different sources, we have analyzed hundreds of cross-country indicators as proxies for various aspects of governance.[12] These individual variables, which serve as the inputs to our

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[12] For methodological details on the worldwide governance indicators presented here in brief, see Kaufmann, Kraay, and Mastruzzi (2003). The individual indicators used for the composites came from a variety of organizations, including commercial risk-rating agencies, multilateral organizations, think tanks, and other nongovernmental organizations. They are based on surveys of experts, firms, and citizens and cover a wide range of topics: perceptions of political stability and the business climate, views on the efficacy of public service provision, opinions on respect for the rule of law, and perceptions of the incidence of corruption. For a detailed explanation of sources and access to the full governance indicators

aggregate governance indicators, are produced by a range of organizations. They include the perspectives of diverse observers and cover a wide range of topics (political stability and the business climate, the efficacy of public service provision, protection of property rights and judicial independence, experiences with corruption, and so on).

Imposing structure on these many available variables from diverse sources, we mapped the data to the six subcomponents of governance listed above, expressed them in common units, measured the margins of error, and, thanks to a statistical methodology, aggregated into the six governance indicators—thereby improving the reliability of the resulting composite indicator and the analysis. These indicators for 1996 through 2002, for almost 200 countries, are available online. They can assist in providing global empirical perspective on governance performance today and assess the historical and other determinants and manifestations of governance.[13] Table 1 provides the regional averages for each governance component from 1996 until 2002, and suggests the extent to which governance remains a major challenge in a number of regions in the world. The extent of the challenge varies across different components of governance within each region: note, for instance, the poor performance on control of corruption in Latin America, although the region is performing somewhat better on voice and democratic accountability to its citizenry. This is in contrast with MENA, where by far the largest governance challenge lies with its absence of voice and democratic accountability mechanisms in many settings.[14]

Governance matters
Using the data emerging from worldwide governance indicators (and others), a number of researchers have performed systematic assessments of the benefits of good governance worldwide. Empirical studies have codified the importance of governance for development outcomes. Knack and Keefer (1997) found that the institutional environment for economic activity generally determines the ability of emerging economies to catch up to industrial country standards. Mauro (1995) studied the strong empirical link between corruption and growth. Easterly and Levine (2002) and Rodrik, Subramanian, and Trebbi (2002) have pointed to the primacy of institutions over geographical and policy determinants of growth. Sachs and Warner (1997), as well as Diamond (1999), provide evidence of the importance of geographical, ethnographic, and epidemiological factors.

In our research, we have also reviewed the link between governance quality and income growth (as well as other developmental outcomes), and attempted to address thorny issues of causality direction.

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databank see http://www.worldbank.org/wbi/governance/govdata2002. See also the appendix on methodological issues related to margins of error and interpretation for these indicators.
[13] The full governance dataset for 1996–2002 is available at http://www.worldbank.org/wbi/governance/govdata2002.
[14] See World Bank (2003a) and World Economic Forum (2002).

Table 1: Worldwide governance indicators, 1996–2002
(Percentile Rank, Regional averages)

Region	Year	Voice and accountability	Political stability & lack of violence	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Sub-Saharan Africa	2002	31	35	29	31	31	32
	2000	33	32	32	35	33	34
	1998	34	33	35	33	32	32
	1996	34	35	30	32	34	32
Middle East & North Africa	2002	29	40	50	45	54	55
	2000	30	50	56	50	59	54
	1998	29	49	53	45	62	56
	1996	29	40	53	47	55	52
South Asia	2002	30	32	48	35	42	42
	2000	27	26	45	38	37	41
	1998	32	27	44	46	40	46
	1996	33	31	50	45	36	39
East Asia	2002	50	55	51	43	48	44
	2000	49	55	51	42	45	47
	1998	50	56	50	41	46	48
	1996	52	55	57	49	54	52
OECD	2002	91	87	92	92	92	91
	2000	91	90	92	91	92	92
	1998	91	88	92	90	92	93
	1996	91	89	92	90	91	90
Latin America & Caribbean	2002	61	51	53	58	53	55
	2000	60	51	50	59	51	51
	1998	61	45	50	65	50	51
	1996	60	48	46	58	47	46
Eastern Europe	2002	65	61	58	63	57	55
	2000	63	54	56	59	57	57
	1998	56	57	52	58	55	56
	1996	55	58	59	56	54	53
Former Soviet Union	2002	23	31	22	25	20	17
	2000	28	33	20	16	21	19
	1998	28	38	22	18	22	18
	1996	25	39	23	21	22	20

Note: Data shown in percentile rank (0 is the worst-ranked country, 100 is the best), regional averages. Country coverage: 199 countries, comprising the following number of countries in each region: Sub-Saharan Africa, 47; Middle East & North Africa, 20; South Asia, 8; East Asia, 29; OECD, 29; Latin America and the Caribbean, 38; eastern Europe, 16; former Soviet Union, 12. Estimates are subject to a margin of error (a more detailed treatment is provided in Appendix B), and thus small differences in percentile ranks are not statistically significant. Presented regional average point estimates are subject to margins of error (see website for details). Figures are rounded to their closest integer.
Source: Kaufmann, Kraay, and Mastruzzi (2003). Data accessible at: http://www.worldbank.org/wbi/governance/govdata2002.

Figure 2: Governance indicators and income per capita, 2000–2002
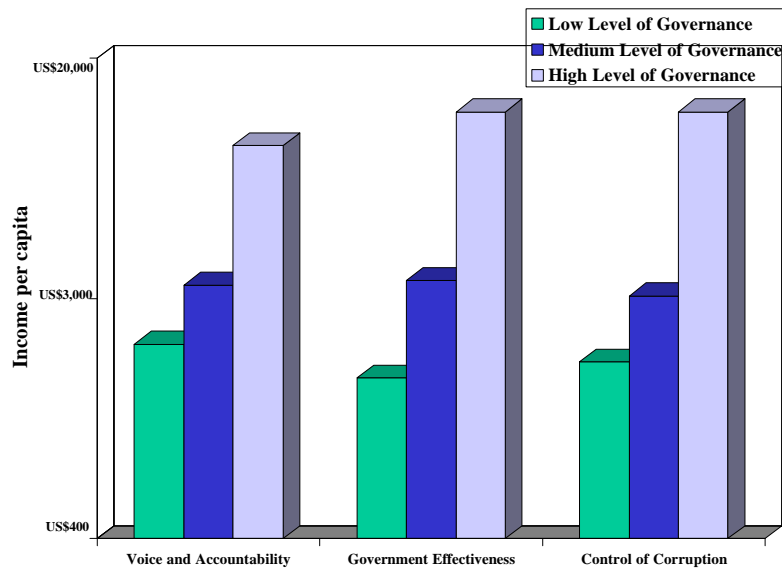
Sources: The three different indicators of governance are from Kaufmann, Kraay, and Mastruzzi (2003); income per capita (in purchasing power parity terms) is from Heston, Summers, and Aten (2002) and CIA World Factbook (2001). Vertical axis is in log scale.

Governance and incomes are highly correlated—but causality which way?
The set of six worldwide governance research indicators, available already for the 1996–2002 period, allow systematic assessment of the benefits of good governance in a large sample of countries. At the most basic level, the data at first reveal a very high correlation between good governance and key development outcomes across countries. In summary fashion, Figure 2 depicts the very close link between various governance components (voice and democratic accountability, governance effectiveness, and control of corruption) and national income per capita.[15]

Yet these very robust correlations in themselves represent a "weak" finding in terms of policy application because such correlations do not shed light on the direction of causality or on whether an omitted ("third") correlated variable is the fundamental cause accounting for the effects on developmental outcomes. Thus, we need to probe deeper, which we do with specialized statistical techniques, unbundling each causality direction.

Logically there are three possible explanations for the strong positive correlation between incomes and governance: (1) better governance exerts a powerful effect on per capita incomes; (2) higher incomes lead to improvements in governance; and (3) there are other factors that both make countries richer and also are associated with better governance. Untangling the observed high correlation between incomes and governance is important in order to ascertain whether there is an automatic "virtuous circle" where higher incomes are automatically translated into improved governance, or if such positive feedback mechanism is absent then a concerted and continuous policy intervention effort to

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[15] Not shown is the similar strong link between regulatory quality as well as rule of law on the one hand, and incomes per capita on the other (all exhibiting correlations exceeding 0.7).

improve governance is needed. Consequently, we need a good understanding of the effects of governance on incomes as well as of any feedback mechanisms from incomes to governance that might exist—simply observing a strong correlation between income growth and governance does not suffice.[16]

Let us consider first the effect of governance on per capita incomes. As recently as 200 years ago, per capita incomes were not very different across countries. The wide gaps in per capita income across countries that we see today reflect the simple fact that countries that are rich today have grown rapidly over the past two centuries, while those that are poor today did not..[17]

What about causation in the opposite direction, from per capita income to the quality of governance? Conventional wisdom holds that richer countries are better able to afford the costs associated with providing a competent government bureaucracy, sound rule of law, and an environment in which corruption is not condoned. This suggests that there is positive feedback from per capita income to governance as well. Yet to date, this conventional wisdom has not been subject to in-depth empirical scrutiny. In our research we have put such conventional wisdom through an empirical test. We implemented a novel methodology that permitted to separate out the effects of per capita income on governance, and found evidence that this effect is certainly not positive, and, if anything, negative.[18]

This finding of an absence of (or even possibly negative) feedback from per capita income to governance has three important implications. First, a strategy of waiting for improvements to come automatically as countries become richer is unlikely to succeed.

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[16] Untangling the directions of causation underlying the strong correlations is explained in detail in "Growth Without Governance," Kaufmann and Kraay (2002).

[17] A recent strand of research attributes a substantial fraction of these vast differences in very long run growth performance to deep historical differences in institutional quality. By isolating the part of current differences in governance performance that can be traced back to countries' colonial origins, these studies have identified the powerful effect of initial institutional quality on growth in the very long run. See for example Hall and Jones (1999) and Acemoglu, Johnson, and Robinson (2001). We discuss some specific historical determinants in latter sections of this paper.

[18] This of course does not mean that the simple correlation between governance and per capita income is negative, since this is dominated by the strong positive effects of governance on income. In terms of the specifics of the particular methodology used, we implemented an empirical framework allowing us to identify causal effects running in both directions between governance and per capita income. Although there is a rapidly growing literature that identifies the causation from better governance to higher per capita income, that is not the case for identifying causation in the opposite direction, from per capita income to governance. Traditionally, identification of the first direction of causality has been done with the aid of instrumental variables, such as the main language or settler mortality patterns, which we have utilized as instruments to arrive at the very large estimates of the effects of governance on income. Yet no good instruments exist for testing the reverse causality direction, namely from per capita income to improved governance. The gathering of a major governance dataset and the construction of the aggregate indicators themselves (through the particular Unobserved Component Model) give us important additional data: the margins of error for each country estimate for the governance indicators. These additional data permit us to implement a different and rarely used strategy to estimate the effect of incomes on governance, namely the utilization of non-sample information (or the "out-of-sample" technique). Implementing this technique, we find no evidence of positive feedback from higher per capita income to better governance outcomes. See Kaufmann and Kraay (2002).

Second, in the absence of positive feedback from per capita income to governance, we are unlikely to observe virtuous circles when better governance improves incomes that *in turn* will lead to further automatic improvements in governance. Together, these two implications point to the fundamental importance of positive and sustained interventions to improve governance in countries where it is lacking. Indeed, the fact that good governance is not a "luxury good" to which a country automatically graduates when it becomes wealthier means in practical terms that leaders, policymakers, and civil society need to work hard and continuously at improving governance within their countries.

The third important implication is that, in the absence of positive feedback from per capita income to governance, it is possible to explore with the data at hand the fragility of income levels of a country for its given level of governance (or what we can label as "governance deficit," referring to the "distance" between a country's actual governance level and the level required to support and sustain its income per capita level). Such long-run economic fragility, or governance deficit, can be approximated by the distance between a country's actual governance level (in a plotgram of incomes and governance) and the governance level that would place the country on the fitted regression line for its level of incomes.[19] Intriguingly, the vast majority of countries in Latin America in the late 1990s had levels of per capita income that were not sustainable by their actual levels of governance (rule of law, control of corruption, and so on). Particularly noteworthy was the extent of the governance deficit in countries such as Argentina, Ecuador, Guatemala, Paraguay, and Venezuela, and to a degree also Bolivia.[20] A corollary of this framework is that the extent of governance deficit can be suggestively interpreted as the additional governance reform effort required to make the prevailing per capita income levels sustainable—lest it come down if such governance effort is not present.[21]

It is important to understand the possible reasons for the absence of positive feedback from per capita income to governance when designing strategies to improve governance. Based on empirical evidence, we have advanced an explanation for this negative feedback: the phenomenon of *state capture*, defined as the undue and illicit influence of the elite in *shaping* the laws, policies, and regulations of the state.[22] When institutions of the state are "captured" by vested interests in this way, or, more subtly, when powerful vested interests exert undue influence in shaping the rules of the game for their own benefit (discussed below), entrenched elites in a country can benefit from a worsening status quo of misgovernance and can successfully resist demands for change even as per capita income rises.

Based on in-depth governance and anti-corruption country diagnostics carried out at the World Bank in countries in various regions, as well as enterprise surveys in economies in

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[19] This is depicted in Appendix Figure B3.

[20] Bolivia has lower actual income per capita, and thus the governance deficit for their levels of income is not as large as for the other countries listed above.

[21] For further details and the actual plotgrams depiction, with focus on the challenge in most Latin American countries, see Kaufmann and Kraay (2002) and Appendix B of this paper.

[22] Hellman, Jones, and Kaufmann (2003, forthcoming). See also more recent evidence in some Latin American countries, emerging from the governance and anticorruption diagnostics (GAC) of the World Bank Institute (WBI) at (http://www.worldbank.org/wbi/governance/capacitybuild/).

transition, we have found significant empirical evidence on the challenge of state capture (and the related "crony bias" or unequally distributed influence) in many countries. In countries with an environment that is "captured" or unduly influenced by the vested interests of the powerful few, the focus of efforts to combat corruption and improve governance needs to shift from a narrow emphasis on passing laws and rules, and on procedures within the public administration, to a much broader agenda of greater political accountability, transparency, and freedom of the press.

In contrast to the absence of positive effects from income to governance, we found a *large direct causal effect* from better governance to improved development outcomes. Consequently, the simple relationship depicted in Figure 2 in fact does approximate the causal impact of improved governance on per capita income (given the lack of positive feedback in the reverse causality direction).[23]

Indeed, the effects of improved governance on income in the long run are found to be very large, with an estimated 400 percent improvement in per capita income associated with an improvement in governance by one standard deviation, and similar improvements in reducing child mortality and illiteracy. To illustrate, an improvement in rule of law by one standard deviation from the current levels in Ukraine to those "middling" levels prevailing in South Africa would lead to a fourfold increase in per capita income in the long run. A larger increase in the quality of rule of law (by two standard deviations) in Ukraine (or in other countries in the former Soviet Union), to the much higher level in Slovenia or Spain, would further multiply this income per capita increase. Similar results emerge from other governance dimensions: a mere one standard deviation improvement in voice and accountability from the low level of Venezuela to that of South Korea, or in control of corruption from the low level of Indonesia to the middling level of Mexico, or from the level of Mexico to that of Costa Rica, would also be associated with an estimated fourfold increase in per capita incomes, as well as similar improvements in reducing child mortality by 75 percent and major gains in literacy.

In sum, new types of surveys and statistical methodologies permit the empirical assessment of governance worldwide. These assessments in turn suggest that there are enormous differences in governance performance across the globe, and thus within different capitalist systems. Such large variation in governance matters significantly for growth and development. Income windfalls for a country do not, however, get automatically translated into improved governance, possibly due to particular political factors related to the interface between corporate strategies of the powerful, which result in unequal distribution of influence and thus of reaping the fruits from growth. With the benefit of the new database that is now available and that recognizes the enormous differences across different types of market economies, we explore next some potential historical and political determinants of governance outcomes nowadays.

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[23] In fact, due to the likelihood of a negative feedback effect from incomes per capita to governance, the actual simple correlation summarized in Figure 2 underestimates the extent (slope) of the causal link from governance to incomes per capita. In the Appendix B, see plotgram in Figure B3 where the Instrumental Variable (IV) slope is steeper than the OLS slope.

On the new comparative economics and historical determinants
In recent years, comparative economics has experienced a revival, with a new focus on comparing capitalist economies. Shleifer and others have led the work on "New Comparative Economy," arguing that the transition from socialism, the Asian financial crisis, and the European economic and political integration have challenged our understanding of how capitalist economies and societies work.[24] They suggest that capitalist economies differ in important ways in how they regulate market activities, including the extent of public ownership, regulation of social harms, and contract enforcement, as well as how they regulate political competition. And they emphasize in particular the historical origin of a country's legal system, which they suggest has proved to be a crucial factor explaining the present quality of governance.

Although their analysis of how such systems differ in terms of legal and regulatory issues do provide further evidence of some of the negative consequences of overly interventionist measures within many capitalist systems, their central conclusion—that legal origin is the crucial determinant of performance across capitalist systems—is open to challenge, along with their particular focus on the unambiguous advantage of common law systems. A priori, we argue that a complex interplay of initial conditions, coupled with a plethora of intervening factors (throughout the development process), is likely to have a role in the substantial adaptation of governance in a country and the transformation of institutions—also within systems that have the same historical legal origins. Nonetheless, it is also valid to posit that there are considerations partly supporting the case for legal origins: the case can be made that common law is consistent with a higher degree of judiciary independence, lesser interventionism, and more institutional flexibility than under civil law. Indeed, statistical analysis of the worldwide dataset for OECD and developing countries suggests some advantage of common law systems in explaining governance performance today. However, the magnitude of this effect is not large, and the share of cross-country variation explained by the type of legal origins is rather low, which points to the importance of other factors as well.

Furthermore, at a basic level there is the simple empirical observation that OECD countries with vastly different legal origins perform well today, whereas some nations in Africa, Asia, Latin America, and the former Soviet Union, with different types of legal origins as well, exhibit notable cases of dysfunctional governance. Indeed, among the latter underperformers there is no clear pattern in terms of legal origins. Our own governance dataset comprising almost 200 countries is useful in reviewing the evidence, which we do through a matrix table (Table 2) that includes legal origins (civil versus common versus German) in the columns, and today's rule-of-law quality in the rows.

In comparing civil and common law systems (first two columns) we observe that all four cells are filled with many country illustrations. Instead of a marked diagonal pattern, many countries today exhibit subpar governance (proxied by the current indicator for the quality of rule of law indicator), across countries with common and civil law origins. And countries with very high-quality rule of law today, such as Chile, Costa Rica, France, Netherlands, and Spain, have origins in civil law. Furthermore, it is noteworthy that

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[24] See Djankov et al. (2003a, 2003b).

countries with German legal origins (the third column of the matrix), such as Estonia, Hungary, the Republic of Korea, and Slovenia, as well as Scandinavian origins (comprising the Nordic countries, not shown), are all clustered in the good rule of law performance cell, and notably absent are any countries with dysfunctional governance. This, in turn, contrasts with ex-Socialist countries (not shown in the table).

Table 2: Quality of rule of law today versus historical legal origins (selected economies)

| Legal Origin / Governance 2002	Civil Law	Common Law	German Law
High-quality rule-of law, 2002	Chile, Costa Rica, France, Italy, Netherlands, Portugal, Spain, etc.	Australia, Botswana, Canada, Ireland, United Kingdom, United States, etc.	Austria, Estonia, Germany, Hungary, Japan, Rep. of Korea, Slovenia, Switzerland, Taiwan (China), etc.
Low-quality rule-of-law, 2002	Angola, Argentina, Cote d'Ivoire, Haiti, Iraq, Laos, Libya, Myanmar, Paraguay, Venezuela, etc.	Bangladesh, Liberia, Kenya, Malawi, Nigeria, Pakistan, Sierra Leone, Somalia, Sudan, Zambia, Zimbabwe, etc.	None

Source: Kaufmann (2003b).

As suggested, in reviewing econometrically the performance ratings of our six governance indicators against legal origins for the worldwide sample, controlling for other factors, on average a small advantage for countries with common law over civil law origins in a number of dimensions can be detected. Without such controls, we observe these differences between civil and common law origins in Figure 3a. Furthermore, we also see in Figure 3a that German and Scandinavian systems have performed rather well, in contrast with the legacy of the Soviet era (classified as the legal origins for the Commonwealth of Independent States).[25] Undoubtedly there are important lessons for developing countries from a comparison across legal systems that focuses on more than the (admittedly important) distinction between civil and common law systems.

Furthermore, OECD countries have done rather well in spite of their vastly different legal origins. Certain features of common code legal systems lend themselves to further adaptability and flexibility compared with civil codes (partly as a result of the relative independence of judges, the prominence of juries, and reliance on broad legal principles). There is evidence of a small but significant correlation between legal origins and governance performance today. But as we focus on the set of 75 lower-income countries,

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[25] *Legal origin* identifies the origin of the company law or commercial code in each country. There are five possible origins: English, French, German, Scandinavian, and Socialist. Sources are: La Porta et al. (1999); Djankov, McLiesh, and Shleifer (2003).

the differences between common and civil law origins essentially disappear (with minor variations in direction across different governance dimensions), as we observe in Figure 3b. It is precisely within this group of countries, where many exhibit dysfunctional governance, that the most daunting governance challenges lie.

Figure 3: World governance indicators today (percentile ranks) by legal origins: Results worldwide (a) and for low-income countries (b)
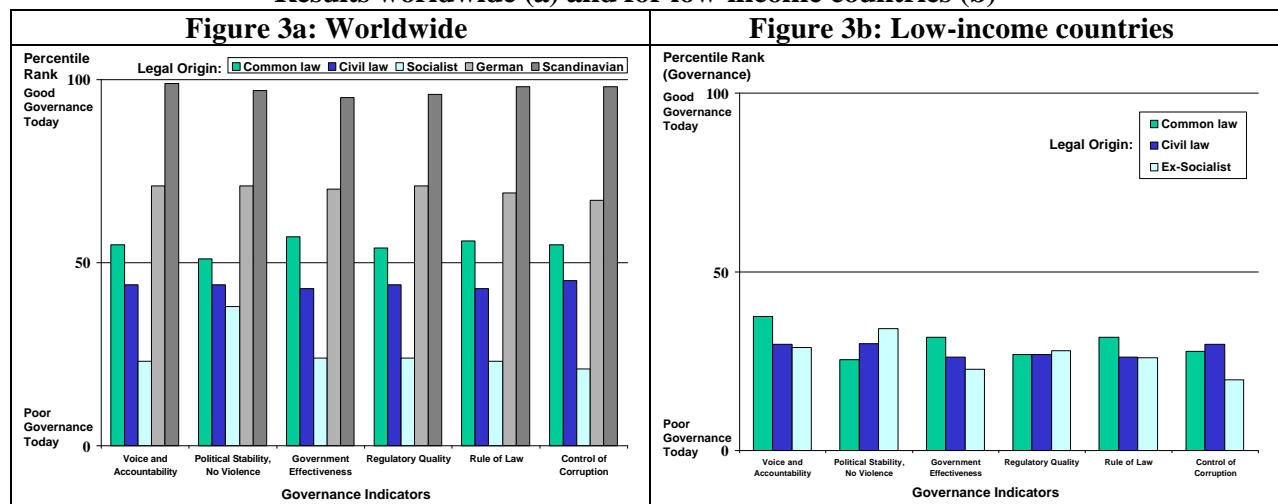
Note: Governance indicator shown as percentile rank in the world (100 being best). Worldwide (Figure 3a) includes 193 countries. The low-income country sample in Figure 3b includes all 74 low-income countries for which there are data for both variables shown. Low-income countries are defined as below GNI per capita of US$1,435 in 2001. Out of the sample of 74 low-income countries in Figure 3b, the breakdown is: common law, 25; civil law, 39; ex-Socialist, 10.
Sources: For governance indicators, Kaufmann, Kraay, and Mastruzzi (2003). For legal origin, La Porta et al. (1999) and Djankov, McLiesh, and Shleifer (2003).

Consequently, drawing on the analysis of a comprehensive governance dataset for developing and transition economies, it is appropriate to probe deeper into other potential historical determinants of governance performance today. In this context, Acemoglu and others (2001) analyze the importance of historical settler mortality patterns of colonizers, while Engelman and Sokoloff (2002) address the relevance of factor endowments and educational inequality. Others, mentioned previously, focus on geographical and other related factors. Increasingly attention is also turning to political factors, even if not necessarily taking such a deep historical perspective (and thus less able to disentangle endogeneity and causality issues). A particular dimension that we have empirically studied recently is the subversion of governance in institutions, when state capture and undue influence through vested interests take place (mentioned earlier). With the benefit of empirical findings provided by the Survey, we discuss these institutions of influence next, which are at the core of the intersection between corporate strategies, politics, and public policy.

State capture and inequality of influence
The work by Glaeser and Shleifer on the theoretical underpinnings and characteristics of institutions is also part of the new comparative economics. This work is highly relevant and complements our research findings. Indeed, their argument that an important

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property of a successful institution is its invulnerability to capture by elite vested interests dovetails with the work on state capture we have carried out in transition economies.[26] This empirical research had antecedents in the work on influence peddling by Grossman and Helpman (2001) and on regulatory capture (Laffont and Tirole, 1991). As summarized in "Rethinking Governance," we have viewed state capture as the ability of powerful firms or interests to shape the rules of the game, often through illicit means, and thereby to affect the formulation of a country's laws, policies, and regulations. We found in transition economies a dichotomized reality: about half of the countries (largely those in eastern Europe and the Baltics) have made a transition to a healthy market economy, although many other countries (concentrated in the former Soviet Union) saw some of their institutions captured by vested interests. This empirical investigation into state capture is now expanded to a number of settings in Latin America, revealing the depth of the challenge in this continent as well.

Most recently, and in large measure thanks to the availability of the data from the 2003 Survey, we have expanded this line of inquiry to probe deeply into the manifestations and implications of unequal influence within countries—that is, not merely concentrating on the more extreme manifestation of capture through corrupt practices. Based on specially designed enterprise survey questions that were incorporated into the 2003 Survey, we develop proxy measures for undue influence exerted by powerful firms and analyze the impact of influence and its unequal distribution within countries. We find a consistent pattern in which the inequality of influence (or crony bias) has a strongly negative impact on assessments of public institutions that ultimately affects the behavior of firms toward those institutions. Crony bias is associated with a more negative assessment of the rule of law, as well as with lower levels of tax compliance and significantly higher levels of bribery. Thus, the inequality of influence damages the credibility of institutions among weaker firms and affects the use and provision of tax resources—which in turn results in these institutions remaining weak and subject to capture by the influential. A self-reinforcing dynamic in which institutions are subverted is thus generated, further strengthening the underlying political and economic inequalities.

Specifically, the data from the World Economic Forum. which covered over 7,000 firms responding to the 2003 Survey, with its expanded coverage of 102 countries, allow us to construct a crony bias index and relate it to governance variables and regime type for this large set of countries. Such a crony bias index is the difference between two firm-level questions from the Survey: the influence exerted by politically well-connected firms in the country minus the influence exerted by the respondent firm's business association.[27] The relative percentile rank average regional ratings for these two component (of crony bias) questions, as well as the resulting crony bias itself, are depicted in Figure 4. Regions where influence by well-connected firms is not that large and/or such influence is

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[26] This work is summarized in Hellman, Jones, and Kaufmann (2003, forthcoming).

[27] We also worked with an alternative variant for calculating a proxy for crony bias or extent of inequality of influence: instead of utilizing the variable measuring the influence of the firm's business association as the second term, we subtracted the respondent firm's own perceived influence. The firm's own influence is, on balance, less than the influence of its business association, thus the ratings of the two crony bias variants, while highly correlated, would not be the same. At any rate, which variant is used in the statistical analysis reported here does not materially affect the results. See Hellman and Kaufmann (2003).

counteracted by the influence of the individual firm's own business association will tend to exhibit lower relative levels of crony bias. Examples include East Asia NIC, OECD (where business associations tend to be stronger), as well as the MENA countries participating in the Survey, in contrast with settings where some powerful vested interests exert undue influence in shaping policies, laws, and regulations without counterweight by effective or powerful business associations—such as in the case of the ex-socialist countries and Latin America.[28]

Figure 4: Political influence and crony bias, regional averages, based on the 2003 Survey
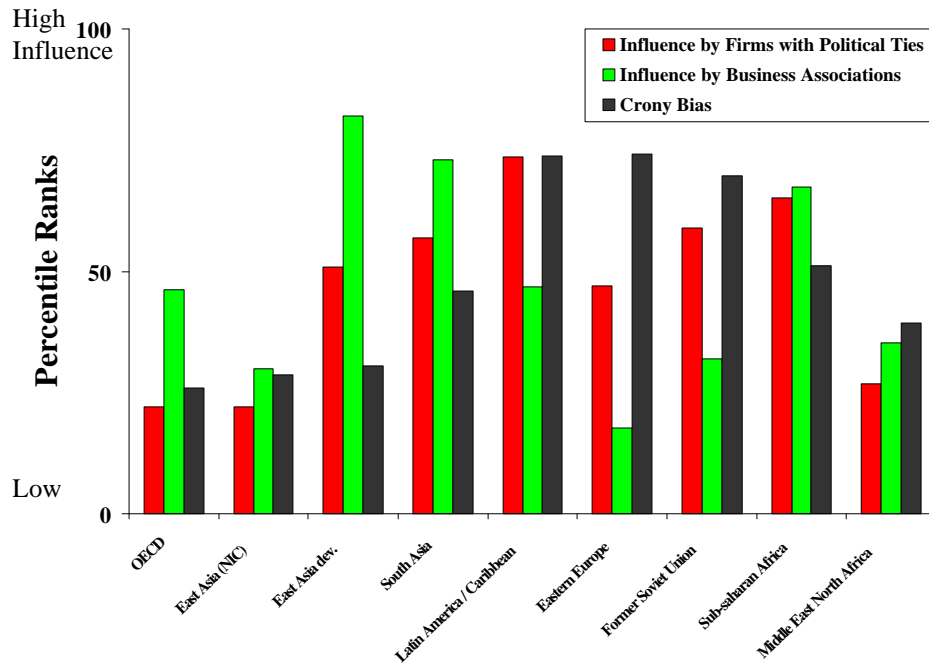
Note: *Crony bias* is defined as the difference between influence by the firms with political ties and influence by firm's business association. The other two variables related to political influence refer to the Survey questions on the impact on growth produced by influence on recently enacted national laws and regulations by (1) dominant firms or conglomerates, and (2) firms or individuals with close political ties to political leaders.
Source: Executive Opinion Survey (2003).

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[28] An important statistical issue often ignored is whether there are inherent biases in presenting regional averages based on partial regional samples (instead of average ratings that include all countries in each region, which is often not possible due to incomplete country coverage in individual surveys or polls). When performing cross-regional comparisons, self-selection bias may reduce comparability, given the tendency to include in the survey coverage the countries that a priori (on average) may be performing better than the countries excluded. In Appendix B we explore in brief this issue. We found that the substantial increase in country coverage by the Survey since the late 1990s (now encompassing 102 countries) has significantly reduced the sample bias, although some of it remains (as reported in Appendix B, the largest remaining estimated upward bias for governance due to the excluded set in the 2003 Survey (only 7 out of 20 countries are included) is for the MENA region, at an estimated 0.28 standard deviation units. This is, however, a fraction of the implied upward bias in smaller datasets, such as IMD's WCY, with much less regional coverage.

The econometric analysis of the Survey performed to ascertain the significance of crony bias (controlling for other factors), which is presented in Appendix A, indicates that crony bias is significantly associated with higher levels of corruption, misgovernance, lower institutional quality in parliament and the judiciary, and a larger unofficial economy (and thus lower tax revenues), also backstopping the results found for the earlier research focused on transition economies.[29] These relatively large and rather significant effects of crony bias on governance variables and institutional informality are as robust when controlling for other potentially important explanatory variables, such as the extent of the country's globalization (which incidentally indicates a positive association between globalization and governance), the ideology of government, and the country's per capita income (proxying for level of development), as well as the recent growth rate of the country and the firm's own expectations about the economy (to control for potential "irrational exuberance" or excessive pessimism in the subjective response of the firms). Further controlling for firm characteristics does not affect the magnitude or significance of the impact of crony bias on governance variables. The very significant relationship between the extent of crony bias and the unofficial economy is illustrated in Figure 5, consistent with the firm-level regressions of Appendix Table A1.

In reviewing the country averages for crony bias across the transition countries, an interesting pattern emerges. The lowest crony bias averages are in some of the most democratic as well as some of the least democratic regimes in the Survey sample. Indeed, Figure 6 shows a simple correlation between the average crony bias and the voice and democratic accountability indicator from our worldwide governance database, suggesting a nonlinear relationship, where there is no systematic pattern at low levels of voice and democratic accountability (where there are some market economies and some former or current socialist ones). This contrasts with the significant negative relationship between voice and accountability and crony bias for the medium and high ranges. In general, perceived inequalities of political influence are greatest on average in those countries with *partial* political reforms, what some are referring to as "semi-authoritarian regimes" or "managed democracies." Such regimes may allow some competition for political influence, but the market for influence is still highly segmented and distorted with significant entry barriers and monopolistic practices (see Appendix A for details).

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[29] See Hellman and Kaufmann (2003) for a detailed explanation of the framework of analysis, antecedents in the literature, and specific application for transition economies (with a different firm survey dataset). In such research, in addition to the same links between crony bias and governance outcomes reported above for the Survey dataset, we also show that in transition economies higher levels of crony bias as reported by the firm is significantly associated with less use by such firms of the courts. This is another illustration of the self-reinforcing dynamics by which institutional weakening (and subversion) takes place due to highly unequal distribution of influence. Testing of the links between crony bias and the firm's utilization of some specific formal institutions, such as the courts, is not possible with the Survey dataset since such data on court usage is not collected.

Figure 5: The unofficial economy and crony bias (data from worldwide Survey, 2003)
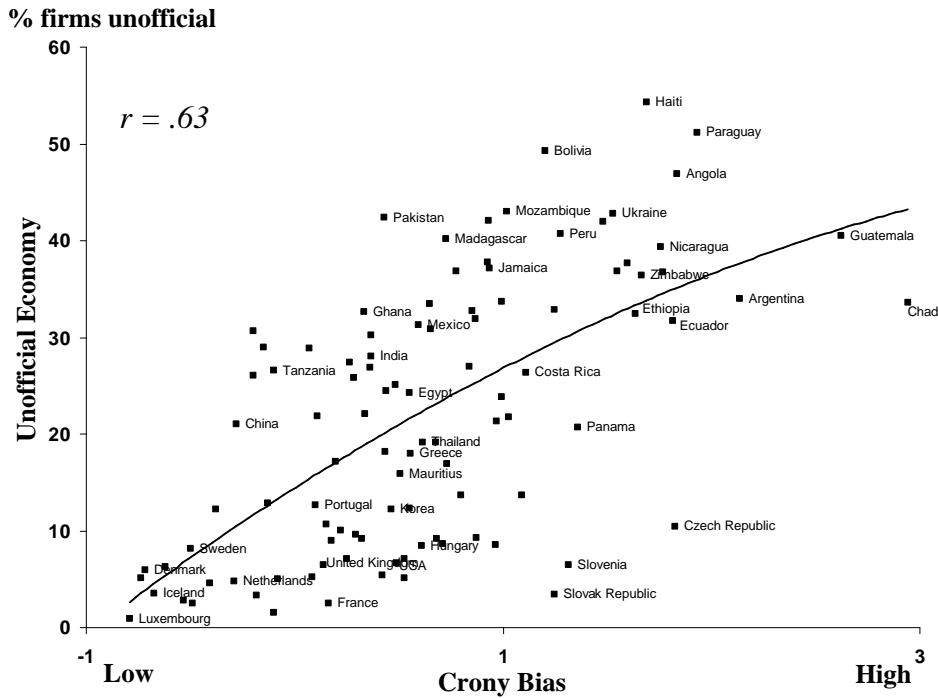
Note: Only selected countries among the 102 are labeled due to space limitations. Unofficial economy data drawn from firms' responses to following question: What percentage of business in your country would you guess are unofficial or unregistered? (categorical, converted using minimum within each range). Crony bias is constructed by authors, based on data from the 2003 Survey of firms in 102 countries, calculated as the difference between influence by firms with political ties and influence by the firm's own business association.

Governance and the city

The dramatic increase in empirical work on governance over the past few years has spearheaded a more in-depth analysis of the manifestations, causes, and consequences of misgovernance and corruption. It has drawn from cross-country data as well as in-country diagnostic perspectives. Significant inroads have been made in unbundling governance to measure and analyze its detailed components, as well as in exploring empirically (through surveys such as the World Economic Forum's Executive Opinion Survey and others) the governance performance of different institutions—such as parliament, police, customs, and the like. Furthermore, as we have illustrated in the previous section, it has become possible to gather empirical measurements of "softer" (and traditionally unquantifiable) politically related variables, such as variables measuring the extent of the unequal distribution of influence within a country's corporate sector.

At the same time important gaps remain within this broad-based empirical measurement approach to governance. An important challenge is to study governance empirically at the subnational level. In particular, given the growing importance of the city as an economic and sociopolitical unit, it is important to undertake a worldwide cross-city analysis of governance that encompasses a large number of important cities in most countries of the world. The main limitation of carrying out this worldwide analysis of city governance has

been the availability of primary data at the city level, as well as the construction of a suitable dataset for analysis. Thanks to the 2003 Survey, which collected information on the respondent's enterprise location, our current dataset can map the reported assessment of institutions and governance factors to the location of the firm. This Survey-based information, complemented by the collection of other city- and country-specific variables from sources outside of the Survey, permits us to construct a basic and initial city-based dataset of governance and related indicators for 271 cities in 101 countries.

Figure 6: Crony bias and voice and accountability
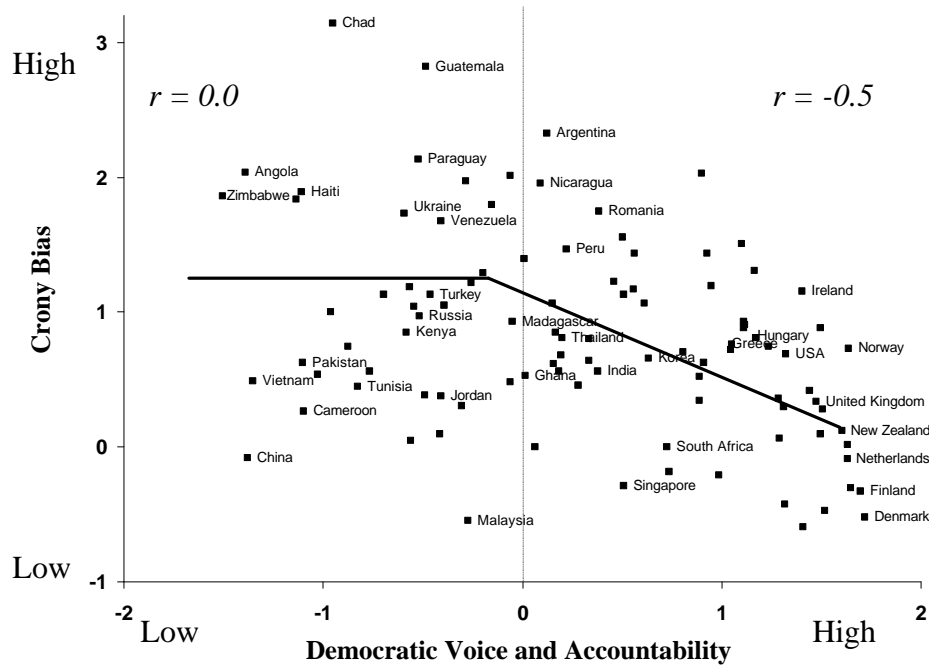
Source: 2003 Executive Opinion Survey and author's calculations. Crony bias defined in note of Figure 5 and text. Voice and accountability variable from Kaufmann, Kraay, and Mastruzzi (2003).

But are differences across cities significant enough to warrant this line of empirical inquiry? And even if they are, do they matter? In this initial dataset we first assessed the extent of the within-country variance across cities among governance (and related) variables. We found that the variance is rather substantial; its orders of magnitude for different variables are not dwarfed by the extent of variation in these same variables across countries. For some variables the extent of within-country cross-city variance is roughly the same as the cross-country variation, while for others it is roughly one-half. Given the large cross-country variation typically found in worldwide surveys of this type, this implies a sizeable diversity of ratings at the city level—even within the same countries. Such apparent rich diversity of experiences and performance across cities within countries (likely reflecting much more than mere reporting margins of error) is worth reviewing, and thus exploring the potential determinants of the variation in performance across cities is thus warranted.

In particular, aspects drawn from the Survey for this new dataset include various forms of corruption, financial governance (such as money laundering and soundness of the banking sector), public governance (such as trust in politicians, party finance, street crime, and organized crime), the regulatory regime (regional differences in the business environment and the overall burden of imports), as well as infrastructure and social variables. These governance and related performance variables are integrated and correlated against data on city characteristics (city size, capital and/or port) as well as relevant country characteristics (such as degree of urbanization, extent of globalization by the country, ideology of the government, and per capita income).[30]
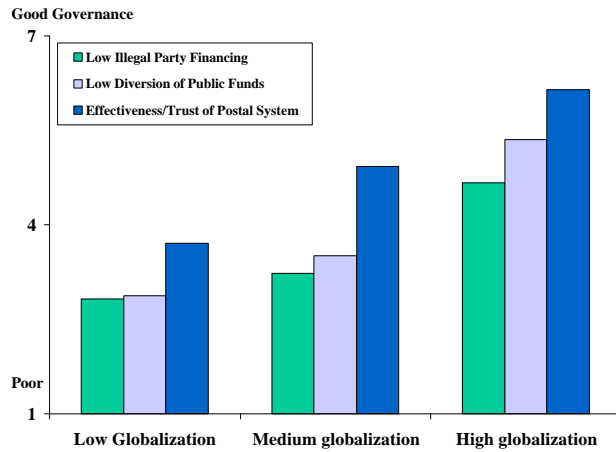
We start from the urban economy perspective by focusing on the city as a key unit of analysis. Different analytical approaches have emphasized the costs and benefits of urbanization, the economies and diseconomies of agglomeration, and city governance. Such different perspectives are subject to empirical testing, for which this initial dataset may provide (admittedly preliminary) insights.

With this dataset for over 270 cities, utilizing econometric analysis we test whether some city and country characteristics appear to affect the governance and sectoral outcomes at the city level (controlling for income). As illustrated in Figures 7a, b, and c, the data suggest that neither city nor country size negatively affect governance at the city level. Further, there is no evidence that a higher degree of urbanization within a country has a detrimental impact on the governance of cities; in fact, for some dimensions the extent of urbanization may have a positive effect. Significantly, we also find, as depicted in Figure 7, that the extent to which the country is globalized has a significant positive impact on city governance performance (controlling for other factors, including income). The empirical importance of the extent of globalization contrasts with the evidence suggesting that whether a city is a capital city or a port is not statistically important (Figure 7c).

This early exploration suggests that some commonly held beliefs on city-level performance can be empirically challenged—such as the notions that in larger cities performance and governance will suffer due to diseconomies of agglomeration; that port cities, or the country's capital, will generally tend to be more corrupt than other cities; or that urbanization or globalization may bring about misgovernance.
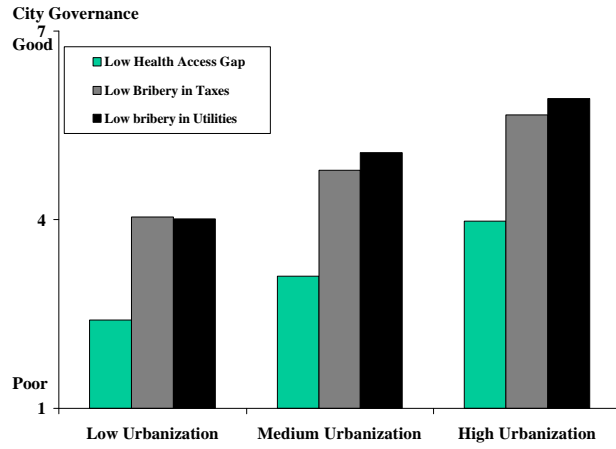
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[30] For details, see Kaufmann, Léautier, and Mastruzzi, forthcoming, where inter alia the full set of econometric results on potential determinants of city governance (controlling for country characteristics) is presented.

Figure 7a: City governance and globalization

Good Governance

Legend:
- Low Illegal Party Financing
- Low Diversion of Public Funds
- Effectiveness/Trust of Postal System

Categories: Low Globalization, Medium globalization, High globalization

Source: Executive Opinion Survey (2003).

Figure 7b: City governance and urbanization

City Governance

Good — 7

Legend:
- Low Health Access Gap
- Low Bribery in Taxes
- Low bribery in Utilities

Categories: Low Urbanization, Medium Urbanization, High Urbanization

Poor — 1

Source: Executive Opinion Survey (2003).

Figure 7c: City governance and city characteristics

Good — 7

Legend:
- Low Bribery to affect laws, regulations
- Low Diversion of Public Funds
- Low Organized Crime

City/country Size Ratio: Low ratio, High ratio

City Population: Low Population, High Population

Capital City: Not the Capital, Capital City

Poor — 1

Source: Executive Opinion Survey (2003).

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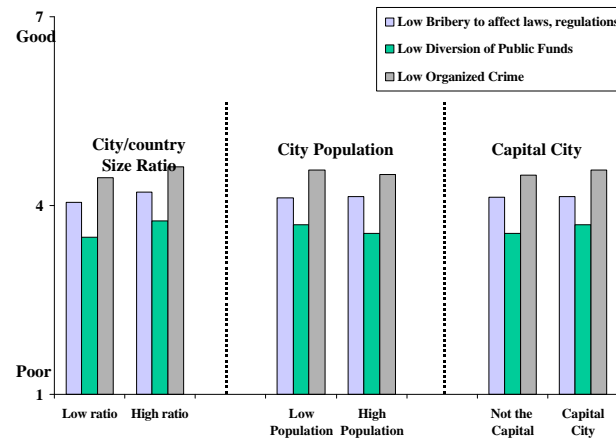
Conclusions and implications

Given the present global political debate and crossroads at which governance is at present, its "revival" as a central issue for empirical study and informed action appears justified. Hence the rationale for this paper's heading and its content.

We started this paper by suggesting that governance continues to be a major challenge, its underperformance evident in most regions and across a vast number of countries within these regions. This contrasts with the significant strides that have been made in many countries in improving the content of macroeconomic policies for well over a decade. There is an evident and growing "governance gap" in terms of differential policy efforts, since improvements in governance are not keeping pace with the progress attained in some areas, including economic policy. Such a gap in governance effort implies that public governance has become a central binding constraint to growth and development today in many settings. In fact the enterprises from developing and transition economies included in this year's Survey single out corruption and excessive bureaucracy among the top constraints to their business operations, while the respondent firms from the OECD countries single out excessive bureaucracy and the tax regime. Relative to these and other institutional weaknesses, high inflation and distortions in the exchange rate regime are not ranked as important constraints by the firms.

More generally, with a recently constructed worldwide governance indicators dataset, we suggested the extent to which national governance matters: a country that significantly improves key governance dimensions such as the rule of law, corruption, the regulatory regime, and voice and democratic accountability can expect in the long run a dramatic increase on its per capita incomes and in other social dimensions. An improvement in governance by only one standard deviation can result, in the long run, in up to a fourfold increase in per capita income (as discussed earlier). And a larger increase in, say, the quality of rule of law (or in control of corruption or improved voice and democratic accountability) would further multiply such income per capita increase and social gains in the long term.

In contrast to the major impact that improved governance can have on incomes and development, however, the findings show no reverse feedback mechanism: higher incomes in themselves do not get automatically translated into improved governance. The fact that there is no automatic virtuous circle means that continuous political resolve and interventions are required to attain good governance. It also implies that a country exhibiting higher incomes than would be predicted by its current levels of governance can expect downward pressure on the sustainability of such incomes—given their governance level. Such shortfall in the country's actual quality of governance as compared with the governance level required to support the country's current (or desired) income level is described as the "governance deficit". This deficit in governance outcomes can constitute a warning regarding the income and growth prospects of a country. For instance, the evidence suggests that by the late 1990s most countries in Latin America had a substantial governance deficit: their actual per capita incomes were significantly higher than would have been predicted by the prevailing levels of governance, thereby exerting downward pressure on incomes.

We then discussed in brief recent work anchored in the new comparative economics strand of the literature, which advances concepts to compare different capitalist systems. In particular, we reviewed some of the deeper historical determinants of current governance performance, and found that the origins of a country's legal system—particularly whether it adopted common or civil law systems—may not be a central determinant of governance outcomes nowadays, especially for lower-income countries. Yet further inquiry into the deeper determinants of governance, including understanding the relevance of historical patterns of settlement and of geography, seems to hold promise.

We illustrated empirically that politics also matter substantially in understanding good governance, and found that the corporate sector plays an active role in shaping political and policy outcomes. The database provided by the Survey also permitted the empirical evaluation of political dimensions of governance traditionally regarded as non-measurable, such as the extent of "capture" and the extent of undue influence by some politically connected powerful firms in shaping the regulations, laws, and policies of a country. Unequal distribution of influence on policy and regulatory outcomes (or "crony bias") were found to be closely associated with poor public and financial governance performance.

Finally, the empirical richness of the Survey dataset provided a key input for the construction of an initial governance database at the city level. This database and research-in-progress is to be expanded over the coming year, yet the early results support the observation that governance performance at the city level is aided by the extent of the country's globalization and urbanization path (controlling for income levels). Further, the city's relative size and its status as a capital or a port do not appear to have a deleterious effect on the quality of city-level governance.

The findings described in this paper emphasize the need to revisit conventional advice on strategies to improve public governance. Such advice has focused excessively on attempts to reform the internal functioning of public institutions, often drawing from standard templates from industrialized countries. Instead, further focus is needed on other aspects that do contain a political dimension. In particular, addressing the nexus between corporate strategies and public governance (mediated by the "institution of influence") is of particular interest. Specifically, the findings on undue influence and state capture point to the limits of traditional public-sector measures (such as incessant legal drafting and codes of ethics manuals, creating new Anti-Corruption agencies, or launching another anticorruption campaign). By contrast, the findings here underscore the need for far more focus on external accountability, on transparency mechanisms, and on prevention within institutions.[31] These transparency mechanisms are also required to ensure a well-governed interface between the private and public sectors, inter alia providing a more level field of influence peddling consistent with a competitive enterprise sector. And such enhanced focus on governance matters is also warranted at the subnational level.

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[31] For more detailed discussion of policy implications, see Kaufmann (2003c).

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Appendix A: On the role of inequality of influence ("crony bias") in determining governance outcomes: Analytical and econometric considerations

Analytical considerations
In the paper's text we presented in brief the results of the research on the analysis on the inequality of influence ("crony bias"), drawn from the ongoing research project by the paper author with Joel Hellman on state capture and inequality of influence.[1] This research has antecedents in the theoretical literature on influence peddling in shaping policies (in trade and related areas) by Grossman and Helpman (2001), the contributions of Laffont and Tirole on regulatory capture (1991), and it is also related to the very recent work by Glaeser, Scheinkman, and Shleifer (forthcoming) on subversion of institutions.

The results presented in the paper text suggested a very strong association between the extent of crony bias, on the one hand, and governance outcomes, on the other. Based on new research, the paper explored potential determinants of crony bias as well. Regarding the association between crony bias and governance variables (illustrated in Figure 5 in the text), depicting the link between a country's average crony bias indicator and the extent of unofficial activities as reported by the firms, there are a number of analytical and econometric considerations.

The first issue refers to whether the econometric model should test the potential impact of crony bias at the firm level or for country averages. A priori considerations do suggest that there are some potential advantages in performing statistical analysis at the firm level. This is the case insofar as the varying perceptions of different firms on the extent of crony bias do affect differentially each firm's perception of governance outcomes and its interaction with governance institutions (eg, the perceived unequal influence by a weaker firm may lead it to avoid utilizing the courts, to avoid paying taxes, and to engage in corrupt or unofficial activities). Conversely, if the a priori model was one where country-wide crony bias—which is assessed relatively uniformly by the many firms within each country—is a key factor associated with country-wide governance outcomes (as opposed to firm-level perceptions or behavior regarding institutions), then estimation for country averages would be warranted.

Econometric challenges
Even if a priori considerations do suggest that firm-level variance in terms of perceptions and behavior do matter (as we suggest in our framework in "Inequality of Influence" (Hellman and Kaufmann [2003 forthcoming]), caution ought to be exercised in the econometric model specification and in the interpretation of results, and a case could still be made to rely on country average econometric estimations. We focus here on two particular challenges: the likelihood of systematic respondent perception bias (whether across firms within a country or across responses to the questions for the same firm), and the likelihood of correlated errors in firm-level regression estimations. These can result in biased coefficients and in particular in artificially inflated t-statistics (levels of significance). Further, a particular case of upward bias in t-statistics is likely to take place in firm-level regression results for country-wide independent variables that are applied

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[1] See Hellman, Jones, and Kaufmann (2003 forthcoming), and Hellman and Kaufmann (2003).

uniformly across all firms for a country (such as the country's income per capita controls). However, for the reasons enumerated above, an upward bias in the estimated levels of significance is likely to take place even for firm-level independent variables (in the firm-level regressions, even if not as pronounced as for country-wide independent variables).

On the econometric testing of the effects of crony bias
Consequently, our empirical strategy includes the following. First, we performed two sets of Ordinary Least Square (OLS) regressions, one at the firm level and another at the country average level. The levels of significance of the country average regressions can provide a lower bound estimate, while those at the firm level are likely to be an upper bound. In the case of country-wide variables in particular, the levels of significance of country average regressions are likely to be a better approximation. We report here this (more conservative) variant, namely the country average specifications (see Table A1 and the glossary with the variable definitions and sources; the firm-level econometric results performed are not shown here and are available upon request). We note that the variable of interest, crony bias, is highly significant even in these country average specifications, and the magnitude of the coefficient is rather large as well.

Second, we included three sets of variables to control for possible perception biases. There are (1) the (appropriately scaled) difference between the reported perception by the firm on the Survey question about access to telephone lines in their country and the actual access to telephone lines in the country (from official statistics); (2) the firm-level assessment on recessionary expectations (possibly affecting its overall outlook and responses across the Survey), and (3) the country-level GDP growth rate over the previous three years. Notwithstanding such controls for potential perception biases, the extent of crony bias remains very highly associated with governance outcomes (both in terms of magnitude of the coefficient and significance levels) such governance outcomes (dependent variables) proxied by the Survey questions on corruption, the unofficial economy, the judiciary, and parliament (as reflected in Table A1 for country-level regressions). It is also worth noting the potential importance of globalization as a likely determinant governance as well, even after controlling for per capita income, while by contrast the government ideology variable is unimportant.

Table A1: The role of crony bias in affecting governance (firm-level OLS regressions)

Dependent Variables:	Diversion of Public Funds	Bribery in procurement	Bribery for laws, policies & regulations	Unofficial Economy	Independence of the Judiciary	Effectiveness of Parliament
Independent Variables						
Crony bias	0.78	0.68	0.8	0.62	-0.88	-0.83
	6.41***	6.04***	8.65***	4.24***	7.08***	8.74***
Firm's recessionary expectations	-0.09	-0.02	-0.01	-0.28	0.14	0.35
	1.02	0.28	0.08	2.51**	1.3	5.13***
Capital city location dummy	-0.18	-0.11	-0.03	0.05	-0.3	0.12
	1.08	0.69	0.22	0.18	1.17	0.71
Globalization Index	-1.95	-1.24	-1.32	-2.18	1.3	1.47
	5.23***	3.68***	5.40***	5.09***	3.35***	5.22***
Per capita income (PPP)	-0.57	-0.6	-0.44	-0.68	0.23	0.13
	5.01***	7.19***	5.34***	5.25***	1.94*	1.56
Government's ideology (left-right)	-0.01	-0.05	-0.01	0.01	-0.1	-0.07
	0.08	0.71	0.12	0.11	0.99	0.87
Voice and Accountability	-0.01	0.12	0.06	-0.12	0.38	0.02
	0.07	0.91	0.58	0.51	2.51**	0.16
Telephone access (bias)	-0.13	-0.08	-0.12	-0.11	0.17	0.02
	1.59	1.27	2.10**	1.05	1.75*	0.27
GDP growth rate (3-year country average)	-0.24	-0.68	-1.02	-2.75	0.59	0.49
	0.19	0.65	1.04	1.43	0.38	0.51
Number of Observations	102	102	102	102	102	102
Adjusted R-square	0.77	0.74	0.80	0.74	0.73	0.74

* significant at 10% level; ** significant at 5% level; *** significant at 1% level

Note: The telephone access variable was computed by taking the difference of each firm's individual rating of phone availability with the respective official country average data on telephone lines, drawn from International Telecommunications Union, 2003.

Sources: All dependent variables drawn from the 2003 Survey; ideology variable drawn from the Database of Political Institutions, 2000 (Beck et al., 2001); globalization index downloaded from *Foreign Policy* (2002), available online at http://www.foreignpolicy.com/wwwboard/g-index2.php; country population and urbanization rate drawn from WDI (2002); city population downloaded from website: http://www.citypopulation.de; data on country population (PPP) drawn from Heston, Summers, and Aten (2002).

On a potential explanatory factor for crony bias

In exploring the potential determinants of crony bias as depicted in Figure 6 in the paper text—an admittedly speculative undertaken given serious endogeneity issues—we started by plotting the Survey-based crony bias in the vertical axis against a variable measuring voice and democratic accountability from a separate dataset (the aggregate governance indicators dataset). The visually evident nonlinear nature of the simple plotgram was also validated by simple regression analysis, where a kinked-linear specification performed relatively well. It suggested what effectively was a zero correlation (a vertical line) for lower ranges of voice and accountability (countries with only partially democratic regimes (or non-democratic) can either have a "market economy" history (as in some African countries) or a socialist economy history. The former can be associated with high levels of undue influence and capture by powerful corporates, yet that is not necessarily so in the latter if they have yet to emerge. Importantly, in contrast to the lower ranges of voice and accountability, there is a marked downward sloping relationship between enhanced democratic accountability and lower levels of crony bias in the higher range (as we observed in the plotgram in Figure 6 in the text).

Table A2: Glossary of variables utilized in econometric analysis of crony bias, based on 2003 Survey in 102 countries

Variable	Source	Wording of Question/Detail	Variable Range / Unit
Diversion of public funds	2003 Survey, WEF	In your country, diversion of public funds to companies, individuals, or groups due to corruption	(1 = is common, 7 = never occurs)
Bribery in procurement	2003 Survey, WEF	In your industry, how commonly would you estimate that firms make undocumented extra payments or bribes connected with public contracts (investment projects)?	(1 = common, 7 = never occurs)
Bribery for laws, policies, and regulations	2003 Survey, WEF	In your industry, how commonly would you estimate that firms make undocumented extra payments or bribes connected with influencing laws and policies, regulations, or decrees to favor selected business interests?	(1 = common, 7 = never occurs)
Unofficial economy	2003 Survey, WEF	What percentage of businesses in your country would you guess are unofficial or unregistered?	(1 = less than 5% of all businesses, 2 = 6–10%, 3 = 11–20%, 9 = more than 70%)
Effectiveness of parliament	2003 Survey, WEF	How effective is your national Parliament/Congress as a law-making and oversight institution?	(1 = very ineffective, 7 = very effective, equal to the best in the world)
Crony bias	2003 Survey, WEF and author's calculations	Difference between influence of firms with political ties and influence of business association	No crony bias = –6, Full crony bias = 6
Voice and accountability	KK 2002	"Voice and Accountability" Aggregate Governance Indicator (out the set of six, in Kaufmann, Kraay, and Mastruzzi "Governance Matters III: Updated Indicators for 1996–2002")	–2.5 = bad, 2.5 = good
GDP 3-year growth rate	WDI 2002	Average growth rate 1999-2001, from World Development Indicators, World Bank	% growth rate
Income per capita	Heston-Summers	Heston-Summers; *CIA World Factbook*; in Purchasing Power Parity (PPP) terms	Log US$ units
Globalization Index	A. T. Kearney; *Foreign Policy Magazine*	Composite indicator aggregating across various dimensions of globalization, for 62 countries	Rank (worst-best)
Ideology	DPI 2002	Chief Executive's Party Affiliation, from Database on Political Institutions	1=left, 3=right
Telephone access	2003 Survey and GCR database	Difference (in standardized scale) between the reported access to phone lines by the Forum's Survey respondent firms minus official data on actual number of telephone lines per 100 inhabitants.	Negative = "Pessimist Bias" Positive = "Optimist Bias"

Appendix B: Governance measurement: Selected methodological issues [1]

In the paper text we defined *governance* as the traditions and institutions that determine how authority is exercised in a particular country, and described in particular the set of six governance indicators we have constructed for about 200 countries. Further, we have made extensive use of the more disaggregated governance questions of the Executive Opinion Survey. There are a number of methodological challenges in the construction, analysis, and interpretation of these data. Succinctly, we present below seven issues, complementing the treatment in the paper text itself (and for which further details are included in the background research referenced below and in the bibliographical references).

1.   Use of data containing elements of perception or subjectivity. The data we utilize in constructing aggregate governance indicators has a significant element of subjectivity, as they rely on reports, assessments, and perceptions of citizens, firms (including those responding to the Forum's Survey), and experts. For measuring governance, to a large extent this is unavoidable, since only qualitative data are generally available. Moreover, stakeholders' perceptions of the quality of governance—as reflected in these qualitative ratings—matter at least as much as objective data from official statistics, and they often more accurately reflect actual outcomes. For instance, property rights are legally guaranteed in virtually all countries. Yet effective enforcement of those rights by the courts varies widely. When enterprises perceive that courts do not enforce these rights, the enterprises will look for other, less efficient ways of enforcing contracts.[2]

2.   Being precise about imprecision. Sifting through this wealth of qualitative data, one might have several skeptical reactions. Are these data informative, coherent, comparable across countries? The answer to these questions is in the affirmative. The available indicators shed light on a fairly small number of these broad concepts of governance (voice and accountability, political instability and violence, government effectiveness, regulatory burden, rule of law, and control of corruption). The data are informative; there is surprisingly strong agreement across sources about the quality of governance. Particularly striking is the broad consensus that emerges when one compares responses of risk-rating-agency analysts with those of businesses or citizens in a country. International analysts bring a global view while businesses and citizens bring local knowledge, and generally their views coincide. And although different sources measure governance in very different units, statistical techniques are available that allow us to anchor each source in a common set of units, making them comparable. We use an "unobserved-components model" to extract a statistical consensus from the many available indicators corresponding to each of the six broad governance concepts mentioned previously. The resulting aggregate governance indicators efficiently summarize the data available and cover virtually all countries in the world. Hence, thanks to the 'unobserved components model' we have quantified the extent of precision in our indicators, which also helps in quantifying the precision of individual perception-based indicators as well as objective indicators (see below and also Figure B1). We find that in

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[1] See Kaufmann, Kraay, and Mastruzzi, (2003).
[2] See Hellman and Kaufmann (2003).

general in governance measurement, even though indicators and surveys are informative, and inferences can be made (with caution), these indicators are not very precise. Thus, particular care needs to be exercised in comparisons across countries and over time. One of the implications of the relative imprecision is that that running "horse races" between countries to determine their precise rankings on governance is not useful. It is more appropriate simply to group countries into a number of broad categories along various governance dimensions (such as using a "traffic light" approach).[3] A broad categorical approach flags vulnerabilities and points to the need for reform without encouraging fruitless debate about the precise scores or rankings assigned to particular countries.

Thus, the relative imprecision of these aggregate indicators do not severely impair their value, however. They can still identify the group of countries facing major governance challenges, in a statistically meaningful fashion. Furthermore, thanks to econometric techniques, margins of error notwithstanding, they can be used to systematically assess the causes and consequences of governance for a large sample of countries, as illustrated in the paper text.

3. *Degree of precision of aggregate versus individual indicators.* Furthermore, aggregate governance indicators are more precise than any individual indicator. The caution that needs to be exercised in terms of the interpretation of governance indicators applies in fact even more strongly to individual surveys or polls. A significant advantage of the aggregation method (such as the UCM), in addition to its ability to estimate margins of error, is that it reduces significantly the margins of error as compared with any individual source. As seen in the plotgram of the country-specific margin of error plotted against the number of sources available for such country, there is a sharp decline in the margins of error for countries with only one source as compared with those that have five or more sources. The margins of error effectively are halved when the aggregate estimate relies on numerous (five or more) sources (Figure B1). This implies that seemingly precise comparisons across countries based on a single perception survey (or expert poll, or combination of perceptions and objective data), can be misleading, particularly when the differences between countries (in rating estimates, or in ranks) are not very large. As in the case of the interpretation of aggregate governance indicators, it is however possible to make meaningful comparisons across broad categories of countries in a worldwide sample, indicating the for instance the countries in the top quartile in the distribution, as a significantly different performance group than the countries in the bottom quartile. But comparisons within each broad category, or for relatively small changes in country ranking from one year to the next, are unlikely to be statistically significant.

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[3] See further details, including a "traffic light" color-coded governance map, at http://www.worldbank.org/wbi/governance/govdata2002/.

Figure B1: Precision and number of sources (rule of law, 2002)
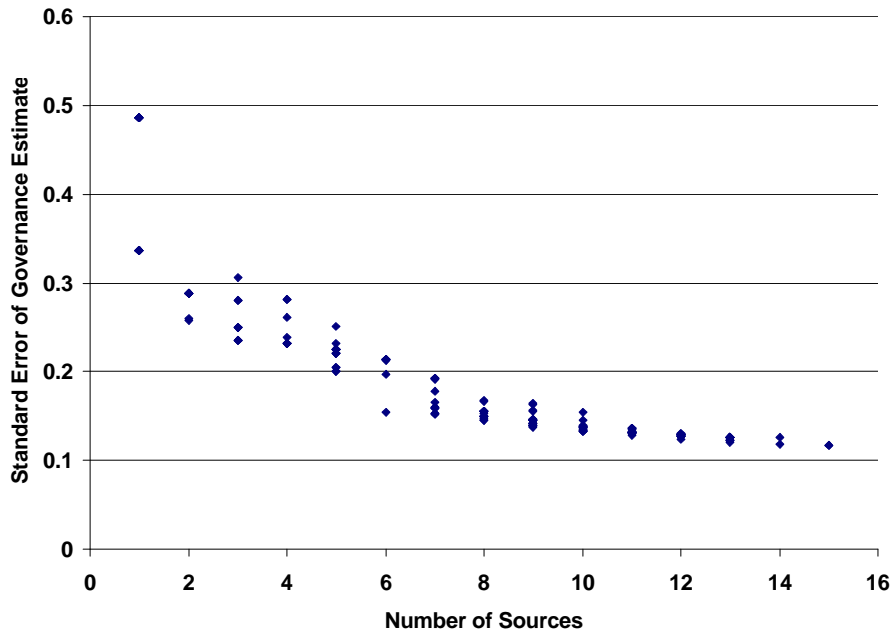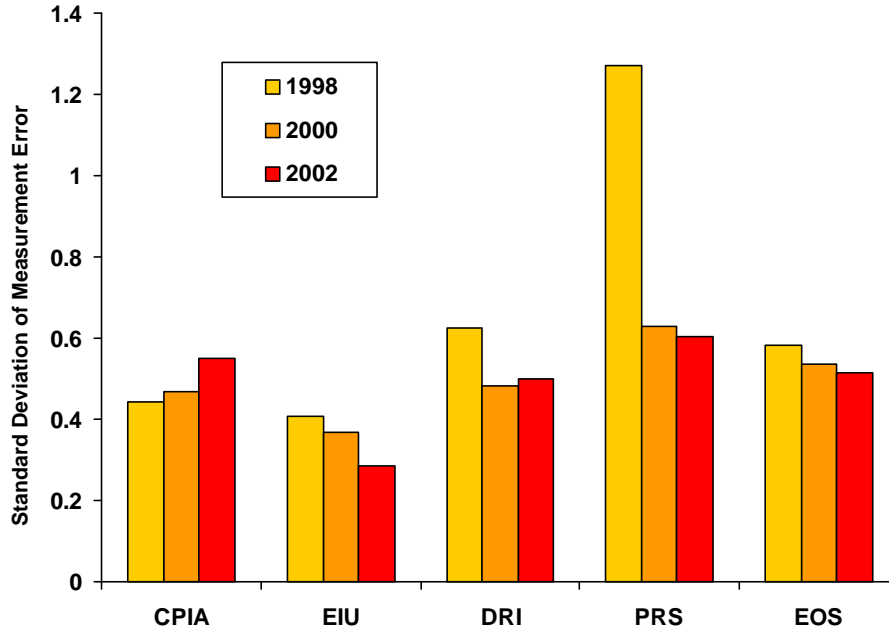

Source: Kaufmann, Kraay, and Mastruzzi (2003).

4.   Imprecision varies according to indicators and country estimates. Different individual indicators, surveys, and sources exhibit different degrees of imprecision, depending on plethora of factors (methodology, quality of the governance questions, survey design and sampling, country coverage, how the data are gathered, quality of field work, coding, etc). Thanks to our UCM aggregation methodology, it has been possible to arrive at an estimate not only of the overall degree of (im-)precision of the aggregate indicators, but also of each one of its individual components. As discussed in the previous point, on average the margin of error of individual surveys can be about twice those of aggregate indicators. Within individual sources there can be differences as well, and across years for a particular source as well—as we see depicted in Figure B2.

5.   Margins of error of objective indicators? Since the margins of error are large, it is at times argued that one should rely on "objective" indicators that may not have these measurement problems. We have analyzed the data, and found that where objective measures exist, such objective measures of governance also have measurement error— and hence should also have associated margins of error. Consider, for example, using the share of trade tax revenue in total revenues to capture the inability of a government to broaden its tax base. This measure will be a "noisy" indicator of overall government effectiveness for at least two reasons: the tax revenue itself may contain a variety of errors, and the extent of the tax base is only one dimension of government effectiveness. Our calculations suggest that measurement error in many objective sources is at least as

important as measurement error in subjective governance indicators. It is important to ensure measurement of such margins of error for objective indicators as well.[4]

Figure B2: Measurement error of individual sources (government effectiveness)

Note: Selected sources, three periods.
Source: Kaufmann, Kraay, and Mastruzzi (2003).

6.   Caution on inferences made on limited country sample. An advantage of aggregate governance indicators is that it can effectively have full worldwide coverage (about 200 countries), while individual sources will tend to have a much more restricted coverage. On the high end, the Survey has improved its coverage dramatically over the past five years, by effectively doubling the countries surveyed to over 100. Other enterprise surveys, such as the enterprise survey conducted by IMD's World Competitiveness Yearbook, have significantly less coverage. Our estimations, based on comparing the worldwide aggregate governance dataset with limited country samples within the same dataset, suggest that potential biases can be present due to the limited country coverage in surveys. For instance, regional average comparisons would tend to show a particular upward bias in those regions that are particularly under-represented in terms of countries participating in the survey, in the case of MENA in the Survey as compared with, say, East Asia NIC or OECD.[5]

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[4] See Kaufmann, Kraay, and Matruzzi (2003).
[5] Fortunately, at only one-third the estimated bias level with the much more limited country coverage in 1997, such regional bias in the average regional point estimate is much lower nowadays, thanks to the increased Survey country coverage, and also significantly less than other enterprise surveys such as IMD's WCY.

7.   Defining, measuring, and (cautiously) interpreting the "governance deficit."
Per capita incomes and the quality of governance are strongly positively correlated across
countries. This can be seen in Figure B3, which plots the protection of property rights or
rule of law against real per capita GDP adjusted for differences in purchasing power
across countries on the vertical axis. Rule of law is one of the six aggregated governance
measures we have constructed, and in this case we draw from the 2000 dataset, while
income in PPP terms is from the late 1990s. The best fit approximating the effects of
governance on incomes in the long term is when instruments were used, as in the "IV"
line in the plotgram in Figure B3.

Figure B3: Governance deficit and income fragility
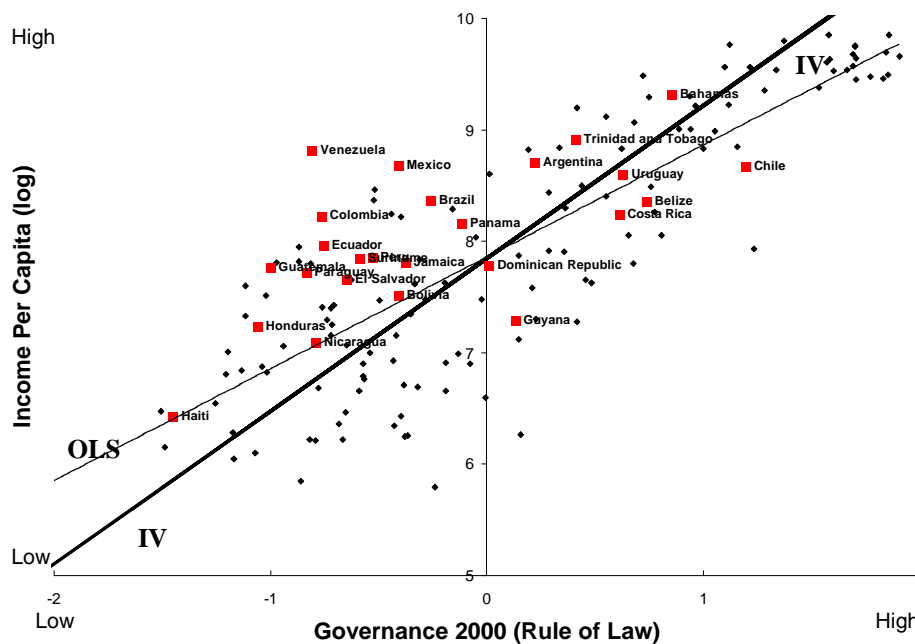
Source: Kaufmann and Kraay (2002).

Since there is no evidence of effects running from higher incomes to governance, an
approximation of an estimate of the "governance deficit" for a country can be derived
from this statistical devise. This is because a higher actual income level than predicted by
a country's governance level cannot be an indicator of potential governance gains, but
instead the focus is on the reverse causality direction. Thus, the vertical distance between
the actual governance estimate for the country and the "best fit" estimate for that
country's income level provides such governance deficit. For instance, in the case of
Venezuela, the governance deficit spanned about the equivalent of two standard
deviations in governance quality (the aggregate governance indicators units are in
standard deviations), which is very large. At the other extreme, Chile enjoyed a "surplus"
of almost one governance standard deviation, implying that Chile's level of governance
in 2002 could support higher incomes in the future.

Obviously this simplistic governance deficit exercise constitutes an approximation for illustrative purposes, and does not fully account for some other important country-specific characteristics. Nonetheless, it is striking to note that 21 out of 26 countries in the Latin American region fell above the simple line of best fit in Figure B3, implying a substantial governance deficit for the region as a whole (with countries such as Chile, Uruguay, and Costa Rica being exceptions). Similar governance deficit analyses can be conducted for other regions and countries. For those countries saddled with a significant governance deficit, it can be suggested that its income level (and growth path) may be particularly fragile in the medium to long term, unless concerted efforts to improve governance are under way.