

Growth Without Governance

Daniel Kaufmann

Aart Kraay

The World Bank

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Abstract: Per capita incomes and the quality of governance are strongly positively correlated across countries. We propose an empirical strategy that allows us to separate this correlation into: i) a strong positive causal effect running from better governance to higher per capita incomes, and ii) a weak and even *negative* causal effect running in the opposite direction from per capita incomes to governance. The first result confirms existing evidence on the importance of good governance for economic development. The second result is new and suggests the absence of “virtuous circles” in which higher incomes lead to further improvements in governance. This motivates our choice of title, “Growth Without Governance”. We document this evidence using a newly-updated set of worldwide governance indicators covering 175 countries for the period 2000/01, and use the results to interpret the relationship between incomes and governance in the Latin America and the Caribbean region. Finally, we speculate as to the potential importance of elite influence and state capture in accounting for the surprising negative effects of per capita incomes on governance, present some evidence on such capture in some Latin American countries, and suggest priorities for actions to improve governance when such pernicious elite influence shapes public policy.

1818 H Street, NW, Washington, DC 20433, dkaufmann@worldbank.org, akraay@worldbank.org. This paper was prepared for the 5th Economia Panel Meeting, held at Harvard University on April 26th. We would like to thank our discussants, Eduardo Lora and Lant Pritchett, as well as Antonio Estache, Joel Hellman, Daniel Lederman, Guillermo Perry, Maurice Schiff, Roberto Steiner and Jaime Ventura for helpful comments, the Panel Meeting participants for their suggestions, and Massimo Mastruzzi and Erin Farnand for assistance. The views expressed here are the authors', and do not necessarily reflect those of the World Bank, its Executive Directors, or the countries they represent. Errors are the authors'. The recently updated governance indicators, are available at <http://www.worldbank.org/wbi/governance/govdata2001.htm>.

I. Introduction

Per capita incomes and the quality of governance are strongly positively correlated across countries. We propose an empirical strategy that allows us to separate this correlation into: i) a strong positive causal effect running from better governance to higher per capita incomes, and ii) a weak and even *negative* causal effect running in the opposite direction from per capita incomes to governance. The first result confirms existing evidence on the importance of good governance for economic development. The second result is new and suggests the absence of “virtuous circles” in which higher incomes lead to further improvements in governance. This motivates our choice of title, “Growth Without Governance”. We document this evidence using a newly-updated set of worldwide governance indicators covering 175 countries for the period 2000/01, and use the results to interpret the relationship between incomes and governance in the Latin America and the Caribbean region. Finally, we speculate as to the potential importance of elite influence and state capture in accounting for the surprising negative effects of per capita incomes on governance, present some evidence on such capture in some Latin American countries, and suggest priorities for actions to improve governance when such pernicious elite influence shapes public policy.

The starting point of this paper is the strong positive correlation between various measures of governance and per capita incomes. Figure 1 plots the relationship between governance (on the vertical axis) and log per capita incomes (on the horizontal axis) in a large sample of countries, for six different dimensions of governance. Per capita incomes are measured in 1995, in 1985 US dollars adjusted for differences in purchasing power, and the governance indicators refer to the period 2000/01. Since initial incomes in the distant past were not very different across countries, the current dispersion in per capita incomes on the vertical axis reflects differences across countries in growth in the very long run. Thus Figure 1 can also be interpreted as illustrating the relationship between growth in the very long run and current institutional quality.

Interestingly, there are striking differences in how countries in the Latin America and the Caribbean region (LAC) fare in terms of their performance on different measures of institutional quality relative to their per capita incomes in Figure 1. In terms of the institutions of political accountability, countries in LAC fare well relative to their per capita

incomes, in the sense that a strong majority of countries in the region lie above the simple OLS regression line of the Voice and Accountability measure on per capita incomes. In contrast, most countries in LAC fare surprisingly poorly on three other dimensions of governance (Government Effectiveness, Rule of Law, and Control of Corruption). Finally, for the last two dimensions of governance we consider (Political Stability and Regulatory Quality), countries in LAC are fairly evenly distributed above and below the ordinary least squares regression line. Table 1 summarizes these patterns by indicating the proportion of the 26 countries in the region for which we have data that fall above and below the regression line. The last column also reports the p-value associated with the null hypothesis of a sign test that countries in LAC are evenly distributed above and below the regression line for the entire sample. For the first four indicators we mention, the patterns we note are strongly statistically significant at conventional levels – with LAC faring well in the first indicator (political accountability), but poorly in the following three (government effectiveness, rule of law and control of corruption).

This paper is concerned with providing an interpretation of the correlation between governance and per capita incomes. In Section 2 of this paper, we describe how we have constructed the governance indicators for 2000/01 used in Figure 1 as part of an ongoing project to measure governance worldwide, drawing on a wide variety of sources of data on perceptions of governance and a consistent aggregation methodology. In addition to allowing us to construct a set of governance indicators covering a very large sample of countries, one useful feature of our methodology is that it allows us to construct measures of the precision of these governance indicators. As we have found in previous work, the standard errors associated with estimates of governance are large relative to the units in which governance is measured, suggesting that simple country rankings can be misleading and underscoring the need for caution in making precise comparisons of the quality of governance across countries using this type of data.

In Section 3 of this paper we turn to an interpretation of the positive correlations between per capita incomes and governance in Figure 1. This correlation can in principle reflect some combination of (a) causal effects running from better governance to higher per capita incomes, (b) reverse causation or feedback from higher per capita incomes to

better governance, and (c) omitted variables which improve both governance and per capita incomes. A recent literature has identified large causal effects running from governance to per capita incomes, using deep historical determinants of institutional quality as instruments.

Our contribution in this section of the paper is to provide evidence on the feedback from incomes to governance, which we argue is important for a variety of reasons. Most crudely, it sheds light on the often-heard argument that good governance is a “luxury” that only rich countries can “afford”. More practically, if as is increasingly the case, aid is allocated based on the quality of governance, understanding the effects of income on governance is important in determining whether poor countries should receive special treatment or a “misgovernance discount” in such allocation rules. Finally, as we discuss in more detail below, understanding the extent of feedback from per capita incomes to governance is crucial in interpreting the governance performance of countries in LAC documented in Figure 1.

Despite its importance, this channel of reverse causation has not been subject to much empirical scrutiny, at least in part because the required convincing instruments for per capita incomes in a cross-section of countries are very scarce. Our identification strategy does not rely on success in the search for such elusive instruments. Rather we adopt the other (but less commonly used) textbook solution to the problem of identification – the use of non-sample information. In particular, we show that the information on the precision or accuracy of the governance indicators we construct in Section 2, together with some judicious assumptions regarding the extent of measurement error in per capita incomes and the importance of omitted variables, are sufficient to identify the causal effects running from per capita incomes to governance.

Based on this empirical strategy, our rather surprising finding in this section is that it is very difficult to find any evidence of a positive effect of incomes on the quality of governance. Using our estimates of the (substantial) imprecision of the governance indicators, we find that the data are consistent with a strong *negative* feedback from per capita incomes to governance. The assumptions required to negate such results are unrealistic: the only way that it would be possible to identify positive feedback from per capita incomes to governance is if we assume that either (a) measurement error in

governance is implausibly large, and/or (b) there are important omitted variables that drive per capita incomes and governance in opposite directions. This finding of negative feedback from incomes to governance motivates our choice of title: “Growth Without Governance”, implying that without other interventions, higher incomes do not guarantee improved governance.

The empirical framework we use to identify the causal effects running from governance to incomes and vice versa is designed to capture very long run effects. As a result, our finding of negative feedback cannot be interpreted as implying that rapid growth over relatively short periods such as a decade should be associated with declines in governance. Nor can it be interpreted as implying that other shocks that are associated with temporarily higher growth should be associated with deteriorations in governance. These results also do not imply that factors that are good for growth in the long run will be negatively correlated with institutional quality, since most such variables are likely to have substantial direct positive effects on governance, which outweigh any negative feedback effects through income. And of course, the finding of negative feedback from incomes to governance does not imply a negative unconditional correlation between these two variables, since this correlation is dominated by the strong positive effects of governance on per capita incomes.

What then should we make of this finding of negative feedback? We underscore two implications. The first is rather obvious: negative feedback implies that improvements in institutional quality or governance are unlikely to occur merely as a consequence of economic development. As countries become richer, it is important not to exaggerate the conventional wisdom that higher incomes lead to demands for better institutional quality. The second follows from the first: in the absence of positive feedback we should not expect to see “virtuous circles” from higher incomes to better institutions which in turn support higher incomes in the very long run. At some level, this is perhaps not too surprising. It is not hard to think of a variety of reasons why entrenched elites in a country benefit from the status quo of misgovernance and can successfully resist demands for change even as incomes rise over very long periods of time. In the last section of the paper, supported by recent evidence gathered through more detailed governance diagnostic surveys at the country level, we try to cast light on a mechanism through which influential elites can resist demands for improvement in

governance – the phenomenon of “state capture”. We then discuss the implications of this state capture hypothesis for strategies to improve governance.

II. Measuring Governance

In this section, summarizing our work in Kaufmann, Kraay and Zoido-Lobaton (1999a, 1999b, and 2002), we describe how we organize a large set of indicators of perceptions of governance into six clusters corresponding to six basic dimensions of governance. We then describe the sources of governance data and explain our methodology for combining the many indicators within each cluster into six aggregate governance indicators.

II.1 Governance Clusters

We construct six aggregate governance indicators, motivated by a broad definition of governance as the traditions and institutions by which authority in a country is exercised. This includes (1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them. This classification of indicators into clusters corresponding to this definition of governance is not intended to be definitive. Rather, it reflects our own views of what constitutes a useful and interesting organization of the data that is consistent with prevailing notions of governance.

The first two governance clusters are intended to capture the first part of our definition of governance: the process by which those in authority are selected and replaced. We refer to the first of these as “Voice and Accountability”, and include in it a number of indicators measuring various aspects of the political process, civil liberties and political rights. These indicators measure the extent to which citizens of a country are able to participate in the selection of governments. We also include in this category indicators measuring the independence of the media, which serves an important role in holding monitoring those in authority and holding them accountable for their actions. The second governance cluster is labeled “Political Stability”. In this index we combine several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent

means, including terrorism. This index captures the idea that the quality of governance in a country is compromised by the likelihood of wrenching changes in government, which not only has a direct effect on the continuity of policies, but also at a deeper level undermines the ability of all citizens to peacefully select and replace those in power.

The next two clusters summarize various indicators of the ability of the government to formulate and implement sound policies. In “Government Effectiveness” we combine perceptions of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government’s commitment to policies into a single grouping. The main focus of this index is on “inputs” required for the government to be able to produce and implement good policies and deliver public goods. The second cluster, which we refer to as “Regulatory Quality”, is more focused on the policies themselves. It includes measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development.

The last two clusters summarize in broad terms the respect of citizens and the state for the institutions which govern their interactions. In “Rule of Law” we include several indicators which measure the extent to which agents have confidence in and abide by the rules of society. These include perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. Together, these indicators measure the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions. The final cluster, which we refer to as “Control of Corruption”, measures perceptions of corruption, conventionally defined as the exercise of public power for private gain. Despite this straightforward focus, the particular aspect of corruption measured by the various sources differs somewhat, ranging from the frequency of “additional payments to get things done,” to the effects of corruption on the business environment, to measuring “grand corruption” in the political arena or in the tendency of elite forms to engage in “state capture”. The presence of corruption is often a manifestation of a lack of respect of both the corrupter (typically a private citizen or

firm) and the corrupted (typically a public official) for the rules which govern their interactions, and hence represents a failure of governance according to our definition.

II.2 Sources of Governance Data

In this section we describe the set of measures of governance we have used to construct our six composite governance indicators for 2000/01. We rely on 194 different measures drawn from 17 different sources of subjective governance data constructed by 15 different organizations, as listed in Table 2. These sources include international organizations, political and business risk rating agencies, think tanks, and non-governmental organizations.¹ Four of these sources are included in the 2000/01 index for the first time, and the remaining are updates of sources included in the 1997/98 indicators.² In this section, we provide an overview of some of the key features of these sources. Appendix 1 of our previous paper (Kaufmann, Kraay and Zoido-Lobaton (2002)) presents a detailed description of each of these sources.

We focus on a set of indicators which measures subjective perceptions regarding the quality of governance across countries. We do not attempt to compile or present the wide array of available quantitative and descriptive data on cross-country differences in political and social institutions.³ While these are certainly important determinants of the cross-country differences in the quality of governance, our focus centers on measuring the reporting and perceptions of various stakeholders -- residents of a country,

¹ For access the full data set of governance indicators, background papers, and detailed explanations on its sources, visit <http://www.worldbank.org/wbi/governance/govdata2001.htm>.

² Two of the sources we refer to as “updates of existing sources” are in fact new surveys which included questions similar to those in their previous incarnations. These are the World Bank’s World Business Environment Survey which is a follow-up in the 1997 World Development Report Survey, and the Gallup Millennium Survey which we treat as a follow-up of the Gallup 50th Anniversary Survey included in our previous paper. There is also some overlap between sources. A portion of the World Bank’s Business and Enterprise Environment Survey (BPS, see <http://www.worldbank.org/wbi/governance/beepsinteractive.htm>) was used in the World Business Environment Survey, and we refer to the former as a distinct source only when we use questions that appeared only in the former. Also, in 1997 we used data from the Global Competitiveness Survey for Africa as a separate source. In 2000, with the exception of the questions on state capture for transition economies, its questionnaire coincided with that of the World Business Environment Survey, and we include it in the latter source. Finally, one source we used in 1997/98 is no longer published (Central European Economic Review), and so we are unable to update this source.

³See for example Beck et. al. (2001) for a compilation of objective indicators of political systems across countries.

entrepreneurs, foreign investors, and civil society at large -- regarding the quality of governance in a country. Although this kind of data is inherently subjective, it is especially useful for at least two reasons. First, for many issues such as the prevalence of corruption, objective data is almost by definition extremely difficult to obtain, and there are few alternatives to subjective indicators if one wishes to measure these aspects of governance. Second, perceptions of the quality of governance may often be as important as objective differences in institutions across countries. While a country may nominally enjoy a set of sound institutions according to certain standards, the confidence of residents of a country in these institutions is required if they are to contribute to good governance.⁴

We distinguish sources according to (1) whether they are *polls* of experts, or *surveys* of businesspeople or citizens in general, and (2) the extent to which the sample of countries included in the sources is *representative* of the world as a whole.⁵ These two types of sources of governance data each have their advantages and disadvantages. The main advantage of polls of experts is that they are explicitly designed for cross-country comparability, and considerable effort is placed in the benchmarking process which ensures this. However, the difficulties with such measures are also clear. Typically they are based on the opinions of only a few experts per country, and the quality of the country ratings depends to a great extent on the knowledge of experts regarding the countries they are assessing. The ratings are particularly prone to two types of feedback: countries with good economic outcomes may be more likely to receive favorable ratings, and country rankings by other organizations are frequently an input into the rating process of each organization. Country ratings may

⁴ In this context it is noteworthy that nowadays most every country in the world has adequate anticorruption legislation, yet the actual variation across countries in corruption control is enormous. The conceptual soundness of many 'objective' governance measures being advanced is another weakness. For instance, it is unclear whether countries with a high number of jailed criminals per capita indicates high or low level of rule of law (Russia and the US are in fact tied for first place in this indicator). This contrasts with subjective indicators emerging from polls of experts and surveys, where the questions are a priori designed to capture the normative range between a 'bad' and a 'good'.

⁵ In the 1997/98 version of the governance database, our sources consisted of eight polls of experts and seven surveys, and five of our sources were classified as representative. In the 2000/01 version, we have added two new surveys (the World Bank's Business Environment and Enterprise Performance Survey of firms in transition economies (BPS), and Latinobarometro (LBO), a private survey conducted in 17 Latin American countries), and two new polls of experts (the Columbia University State Capacity Study (CUD) covering 109 countries worldwide, and the PriceWaterhouseCoopers Opacity Index (PWC) covering 35 countries).

also be affected by the political or ideological agenda of the organization producing the ratings. Despite these difficulties, there are at least two reasons to think that on average, such sources provide valuable information on governance. First, the indicators produced by such organizations generally correlate strongly with measures based on surveys of residents and entrepreneurs. Second, we also find the fact that commercial rating organizations such as EIU, DRI and PRS are able to consistently sell their assessments to commercial subscribers for considerable fees as suggestive that these sources are in fact producing useful information.

The main advantage of surveys is that they reflect the opinions of a larger number of respondents that are more closely connected with the countries they are assessing. Nevertheless, they suffer from two disadvantages. First, survey questions can be interpreted in context- or culture-specific ways. For example, a response regarding the prevalence of “improper practices” is colored by country-specific perceptions of what “improper practices” are perceived to be. This will hinder the cross-country comparability of responses to otherwise identical questions. Second, cross-country surveys relating to governance are very costly to design and implement, and as a result typically cover a much smaller set of countries than polls of experts.

Sources of governance data also vary with respect to the sample of countries they cover. A number of sources cover a very large sample of developed and developing countries, while others cover very narrowly-focused samples of countries. Also, many of the poorest and/or smallest countries in the world tend not to be covered by many commercially-oriented polls because they are relatively unattractive to foreign investors. Since there is a strong positive association across countries between governance and per capita incomes, this difference between sources makes it difficult to compare indicators from sources which cover sets of countries with very different income levels. Similarly, there may be regional differences in governance which hamper comparisons across sources. For example, it is not clear how to compare a governance rating based only on transition economies with one based on a broad set of countries. As discussed in a previous paper (Kaufmann, Kraay and Zoido-Lobaton (1999a)), the methodology we use to construct aggregate governance indicators takes these differences in country coverage into account as the data from individual sources are transformed into common units for aggregation across sources. This results in a set of aggregate governance

indicators covering a very large cross-section of countries, ranging from 159 to 173 depending on the measure of governance.

II.3 Aggregation Methodology

Implicit in our organization of the data is the view that, within each cluster, each of these indicators measures a similar underlying basic concept of governance. Given this view, there are considerable benefits from combining these related indicators into an aggregate governance indicator for each cluster. First, the aggregate indicators span a much larger set of countries than any individual source, permitting comparisons of governance across a broader set of countries than would be possible using any single source. Second, aggregate indicators can provide more precise measures of governance than individual indicators. Third, it is possible to construct quantitative measures of the precision of both the aggregate governance estimates for each country, as well as their components. This allows formal testing of hypotheses regarding cross-country differences in governance. Moreover, in the following section we will use the information on the precision of the governance indicators to help to identify the effects of income on governance.

For each of these clusters, we combine the component indicators into an aggregate governance indicator using the same methodology used to calculate our first set of indicators, as documented in detail in Kaufmann, Kraay and Zoido-Lobaton (1999a). We use an extension of the standard unobserved components model which expresses the observed data in each cluster as a linear function of the unobserved common component of governance, plus a disturbance term capturing perception errors and/or sampling variation in each indicator.⁶ In particular, we assume that we can write the observed score of country j on indicator k , $y(j,k)$, as a linear function of unobserved governance, $g(j)$, and a disturbance term, $\varepsilon(j,k)$, as follows:

$$(2.1) \quad y(j,k) = \alpha(k) + \beta(k) \cdot (g(j) + \varepsilon(j,k))$$

⁶ Unobserved components models were pioneered in economics by Goldberger (1972), and the closely-related hierarchical and empirical Bayes models in statistics by Efron and Morris (1971, 1972).

where $\alpha(k)$ and $\beta(k)$ are unknown parameters which map unobserved governance $g(j)$ into the observed data $y(j,k)$. As a choice of units, we assume that $g(j)$ is a random variable with mean zero and variance one. We assume that the error term has zero mean and a variance is the same across countries, but differs across indicators, i.e. $E[\varepsilon(j,k)^2] = \sigma_\varepsilon^2(k)$.

The disturbance term $\varepsilon(j,k)$ captures two sources of uncertainty in the relationship between true governance and the observed indicators. First, the particular aspect of governance covered by indicator k is imperfectly measured in each country, reflecting either perception errors on the part of experts (in the case of polls of experts), or sampling variation (in the case of surveys of citizens or entrepreneurs). Second, the relationship between the particular concept measured by indicator k and the corresponding broader aspect of governance may be imperfect. For example, even if the particular aspect of graft covered by some indicator k , (such as the prevalence of “improper practices”) is perfectly measured, it may nevertheless be a noisy indicator of graft if there are differences across countries in what “improper practices” are considered to be. Both of these sources of uncertainty are reflected in the indicator-specific variance of the error term, $\sigma_\varepsilon^2(k)$.

Given estimates of the parameters of the model, $\alpha(k)$, $\beta(k)$, and $\sigma(k)$, we can compute estimates of governance for each country, as well as measures of the precision of these estimates. Formally, the estimate of governance for a country produced by the unobserved components model is the mean of the distribution of unobserved governance conditional on the $K(j)$ observed data points for that country. This conditional mean is the following weighted average of appropriately-rescaled scores of each of the component indicators:

$$(2.2) \quad E[g(j) | y(j,1), \dots, y(j, K(j))] = \sum_{k=1}^{K(j)} w(k) \cdot \frac{y(j,k) - \alpha(k)}{\beta(k)}$$

where the weights applied to each source k , $w(k) = \frac{\sigma_{\varepsilon}(k)^{-2}}{1 + \sum_{k=1}^{K(j)} \sigma_{\varepsilon}(k)^{-2}}$, are inversely

proportional to the variance of the error term of that source. We also report the standard deviation of this conditional distribution as an indicator of the confidence we can have in this estimate, which is:

$$(2.3) \quad SD[g(j) | y(j,1), \dots, y(j,K(j))] = \left(1 + \sum_{k=1}^{K(j)} \sigma_{\varepsilon}(k)^{-2} \right)^{-\frac{1}{2}}.$$

This standard deviation is declining in the number of individual indicators in which a particular country appears, and is increasing in the variance of the disturbance term on each of these indicators.

The assumptions of the unobserved components model ensure that the distribution of governance in each country is normal, conditional on the data for that country. Therefore, these conditional means and standard deviations for each country have a natural interpretation. For example, a useful interpretation of the reported estimates and standard deviations for each country is to note that there is a 90% probability that the “true” level of governance in a country is in an interval of plus or minus 1.64 times the reported standard deviation centered on the point estimate itself. We refer to such a range as a 90% confidence interval around the estimate of governance for a country.⁷

In order to implement this approach, we require estimates of all of the unknown survey-specific parameters, $\alpha(k)$, $\beta(k)$, and $\sigma_{\varepsilon}^2(k)$. We do this in a two-stage procedure. First, we assume that governance and the error terms in Equation (2.1) are jointly normally distributed, and then apply maximum likelihood methods using only the representative sources to retrieve the parameters of interest for each governance cluster. This is nothing more than a standard application of the unobserved components model. We cannot however include our many non-representative sources in the first

⁷ This is a slight abuse of terminology, as these are not confidence intervals in the usual frequentist sense of a stochastically varying interval centered around a fixed unknown parameter. Rather, we treat governance as a random variable, and the 90% confidence interval is simply the 5th and 95th percentiles of the conditional distribution of governance given the observed data.

stage of the estimation procedure. This is because the distribution of unobserved governance in the subset of countries covered by these surveys is unlikely to be the same as that for the world as a whole, so that the maximum likelihood procedure breaks down. Instead, in the second stage we use the initial estimates of governance obtained from the representative sources as an observable proxy for governance, and obtain the parameters of interest for the non-representative sources by regressing these indicators on observable governance, i.e. by directly estimating Equation (2.1).⁸ We then use all the estimated parameters of the unobserved components model to construct a final set of estimates of governance.

Our choice of units for governance ensures that the estimates of governance have a mean of zero and a standard deviation of one.⁹ Moreover, since we adopt the same choice of units for governance in each period, the indicators are not informative about a worldwide average trend in governance. However, they are informative about how countries' relative positions change over time. The aggregate indicators are oriented such that higher values correspond to better governance outcomes. Table 3 reports the point estimates of governance, the estimated standard errors, and the number of sources by country, for each of six governance indicators, for 2000/01. For reference, the corresponding information for the 1997/98 indicators are reported as well in the same table.

As emphasized in our previous work, we find that the six dimensions of governance are not very precisely measured, in the sense that the measured standard deviations are large relative to the units in which governance is measured. We illustrate this point in Figure 2 using the rule of law indicator. We order countries in ascending order according to their point estimates of governance on the horizontal axis, and on the vertical axis we plot the estimate of governance and the associated 90% confidence interval described above. The size of these confidence intervals varies across countries, as different countries appear in different numbers of sources with different variances. The resulting confidence intervals are large relative to the units in which governance is

⁸ In order to get consistent estimates of the parameters of the non-representative sources, we need to adjust for attenuation bias caused by the fact that our observable proxy for governance is a noisy indicator of true governance. Fortunately, we can use the information on the standard errors associated with the governance estimates obtained in the first stage to do this.

⁹ Since the estimates of governance are normally distributed, this implies that the vast majority of observations will fall between -2.5 and 2.5 .

measured. To emphasize this point, the horizontal lines in Figure 2 delineate the quartiles of the distribution of governance estimates. Even though the differences between countries in the bottom and top quartiles are significant, relatively few countries have 90% confidence intervals that lie entirely within a given quartile.

From this figure, it is clear that many of the small differences in estimates of governance across countries are not likely to be statistically significant. For many applications, instead of merely observing the point estimates, it is therefore more useful to focus on the *range* of possible governance values for each country (as summarized in the 90% confidence intervals shown in Figure 2). For two countries at opposite ends of the scale of governance, whose 90% confidence intervals do not overlap, it is clear that there are in fact significant differences in governance between these two countries. For pairs of countries that are closer together and whose 90% confidence intervals overlap (which can also be seen in Figure 2), one should be much more circumspect about the significance of estimated differences in governance between two such countries. The same is true for changes over time in the governance indicator. To illustrate this, in Figure 2, we also plot the 1997/98 estimate for each country as a solid dot. For most countries, the 90% confidence interval around the 2000/01 score also encompasses the governance estimate for 1997/98. This emphasizes that many (although not all) of the changes over time in our governance indicators over this very short period of time are unlikely to be statistically significant at conventional levels.¹⁰

In a recent paper (Kaufmann, Kraay and Zoido-Lobaton (2002)) we analyze in more detail the sources of the changes over time in our governance indicators. Mechanically, changes over time in the governance indicators are due to a combination of three factors: (i) changes in governance perceptions as reported by the individual underlying sources; (ii) changes in the weights the aggregation procedure assigns to the individual underlying sources; and (iii) changes in the set of underlying sources used to construct the aggregate governance indicators. For four of our six indicators we find that changes in the country ratings of underlying sources account for more than three-quarters of the variance in changes over time in observed governance. However, for the Rule of Law and Control of Corruption indicators, we find that roughly half of the

¹⁰ In Kaufmann, Kraay and Zoido-Lobaton (2002) we discuss in more detail the interpretation of changes over time in the governance estimates.

variance of changes over time is due to changes in weights assigned by the aggregation procedure, as well as changes over time in the available sources for individual countries. This points to a further reason for caution in interpreting changes over time in these governance indicators.

III. Causation from Governance to Income and from Income to Governance

In this section, we first present an empirical framework which allows us to identify causal effects running in both directions between governance and per capita incomes. There is a rapidly-growing literature which identifies the causation from better governance to higher per capita incomes. Our contribution here is to propose a strategy of using non-sample information to identify causation in the opposite direction, from per capita incomes to governance. When we implement this strategy, we find that it is not possible to find evidence of positive feedback from higher per capita incomes to better governance outcomes, unless rather implausible assumptions on this non-sample information are made.

III.1 Identifying Causal Effects

Several papers have identified the causal effects running from better governance to higher per capita incomes in the very long run, using instrumental variables regressions on a cross-section of countries (Hall and Jones (1999), Kaufmann, Kraay and Zoido-Lobaton (1999b), Acemoglu, Johnson and Robinson (2001), Easterly and Levine (2002)). Underlying all these papers is the following empirical model:

$$(3.1) \quad y_j = \alpha + \beta \cdot g_j + e_j$$

$$(3.2) \quad g_j = \mu + \gamma \cdot y_j + \delta \cdot x_j + v_j$$

$$(3.3) \quad y_j^* = y_j + w_j$$

$$(3.4) \quad g_j^* = g_j + u_j$$

Equation (3.1) says that log per capita income (y) depends on governance (g) and other factors outside this very parsimonious specification, (e). Under the assumptions that initial incomes in the distant past are not too different across countries, and that governance does not change too much over time so that current observed levels of governance are a reasonable proxy for their “initial” values, Equation (3.1) can be interpreted as capturing the effects of governance on growth in the very long run.

Equation (3.2) says that governance depends on incomes, some other observed variable (x), and other factors outside the model (v). The dependence of governance on incomes could be interpreted as reflecting a demand for better formal institutions in richer and more complex environments. Institutional quality also depends on a variety of other factors included in x , and as discussed below cross-country variation in such variables allows identification of the effects of governance on incomes in Equation (3.1). Finally, Equations (3.3) and (3.4) simply state that observed income (y^*) and observed governance (g^*) are noisy measures of actual income and governance, with measurement error w and u respectively.

To complete the description of the model, we assume that the disturbances have zero mean, and variances σ_i^2 , $i=e,v,u,w$. We also assume that measurement error is classical in the sense that w and u are uncorrelated with e , v and x . We also assume that the omitted variables in Equation (3.2) are uncorrelated with x , but may be correlated with the omitted variables in Equation (3.1), i.e. $E[e \cdot v] = \rho \cdot \sigma_e \cdot \sigma_v$. This captures the possibility that there may be other variables outside the simple model which affect both governance and per capita incomes. Finally, we assume that the error term in Equation (3.1) is uncorrelated with x , which allows us to use x as an instrument to estimate Equation (3.1).

Existing papers have focused primarily on finding the magnitude of the effect of governance on per capita incomes, i.e. β . This can be done by estimating Equation (3.1) by instrumental variables, using x as an instrument. The search for good instruments has led many researchers in the direction of “deep” historical determinants of institutions. For example, Acemoglu, Johnson and Robinson (2001) use settler mortality in the 18th and 19th centuries as instruments, arguing that colonial powers had weak incentives to establish the institutions of good governance in colonies where a permanent European

presence was unlikely to take root. This can be thought of as a more nuanced interpretation of the simple instruments for colonial origin proposed by Hall and Jones (1999). Another strand of the literature has emphasized the importance of natural resource endowments in determining the development of good institutions (Engerman and Sokoloff (1997, 2002), and a recent cross-country empirical implementation is in Easterly and Levine (2002)).

In view of the popularity of such historically-motivated instruments, we will often use the shorthand of referring to x as “history”. These papers go to considerable lengths to justify the validity of the assumption that x is a valid instrument in the sense that it is strongly correlated with governance and is uncorrelated with the error term in Equation (3.1). We do not repeat their arguments here but simply proceed under the assumption that this is a reasonable instrumentation strategy, and refer the reader to these other papers for details.

Our contribution in this section is to focus on Equation (3.2), which tells us about the feedback from higher incomes to better governance, γ . This is obviously relevant for policy. For example, should poor countries get a “misgovernance discount” when allocating aid based in part on the quality of their institutions? Does development itself bring about improvements in governance without direct interventions to help build institutions? More crudely, is good governance a “luxury” that only richer countries can afford? Finally, identifying γ is useful because it allows us to understand the relative importance of history versus income in determining observed levels of governance today.

In principle, one can estimate Equation (3.2) given a suitable instrument, i.e. a variable that belongs in (3.1) but not in (3.2). In practice this is hard to do since it is difficult to think of very convincing instruments for income – i.e. variables that are correlated with income but have no effects on governance other than through their effects on income. Many of the likely “deep” determinants of long-run cross-country income differences, such as favorable geographical location, good natural resource endowments, temperate climates, or colonial history plausibly exert a direct effect on institutional quality as well, disqualifying such variables as instruments in this application.

Instead of searching for instruments for income, we adopt the other (but less commonly used) textbook solution to the problem of identification – the use of non-sample information. As we show in detail in the appendix, in order to identify the effects of income on governance, i.e. γ in Equation (3.2), we need to come up with three pieces of non-sample information – the variance of measurement error in incomes and governance (σ_w^2 and σ_u^2), and the correlation between the error terms in Equations (3.1) and (3.2), ρ . As we discuss below, our assumptions about measurement error in per capita incomes will not matter much for the results. This means that we basically need only to come up with two additional pieces of information in order to identify the model in Equations (3.1)-(3.4). Our strategy is to use our estimates of the standard errors associated with the governance indicators to pin down the measurement error in governance, and then to consider a range of plausible values for the correlation between the error terms in the two structural equations. With these two non-sample pieces of information in hand, we have a system of equations linking the parameters of the model with the observed sample moments in the data, which we can solve for the remaining parameters of interest.¹¹

In order to develop some intuitions for the role of our assumptions about these two key parameters, note that all the papers mentioned above find that the instrumented estimates of the effects of governance on per capita income in Equation (3.1) are larger than the OLS estimates of the same equation. With some manipulation of Equations (3.1)-(3.4), one can show that this implies that:

$$(3.5) \quad \gamma + \rho \cdot \frac{\sigma_v}{\sigma_e} < \beta \cdot (1 - \gamma \cdot \beta) \cdot \left(\frac{\sigma_u}{\sigma_e} \right)$$

Suppose that there is no measurement error in governance, i.e. $\sigma_u = 0$ so that the right-hand side of (3.5) is zero. Then the only way there can be positive feedback from

¹¹ Both Hall and Jones (1999) and Acemoglu, Johnson and Robinson (2001) use the difference between their OLS and IV estimates to make inferences about the importance of measurement error in governance. Since we have direct estimates of this measurement error, we can go one step further and use this information to estimate the feedback from per capita incomes to governance.

incomes to governance, i.e. $\gamma > 0$, is if there are omitted variables in Equations (3.1) and (3.2) that move income and governance in opposite directions, i.e. $\rho < 0$.

In the absence of such variables, the only other way that there can be positive feedback from incomes to governance is if there is substantial measurement error in governance, $\sigma_u > 0$. In this case, the IV estimates are larger than the OLS estimates simply because they are eliminating the usual attenuation bias caused by measurement error in the dependent variable.¹² The key question is whether there is “enough” measurement error in the data in order to allow for the possibility of positive feedback from per capita incomes to governance, i.e. that $\gamma > 0$. We investigate this question in the remainder of this section.

III.2 Results

To implement this exercise, we begin by estimating Equation (3.1). We measure per capita income using real per capita GDP from Summers and Heston Penn World Tables Version 5.6, extended into the 1990s using constant local currency growth rates. We measure governance using the index of rule of law discussed in the previous section. We focus on this particular dimension of governance for two reasons. First, it corresponds most closely to the concept of protection of property rights which has been widely used in this literature. Second, as discussed in the introduction, this is one of the dimensions of governance for which simple OLS regressions suggest that countries in Latin America appear to do relatively poorly given their per capita incomes. Since rule of law is highly correlated with both corruption and government effectiveness, we can view this one dimension of governance as representative of the broader areas in which the quality of governance appears relatively poor in LAC.

Our preferred instrument for governance is the settler mortality measure introduced by Acemoglu, Johnson and Robinson (2001). Unfortunately, it is available for only 68 countries. However, empirically it is strongly correlated with both tropical location (as measured by distance from the equator) and colonial origins (as measured by the fractions of the population speaking English or a major European language). In order to

¹² Throughout we assume that the stability condition $\gamma \cdot \beta < 1$ holds.

expand the size of our sample, we use these last three variables to impute the missing values of settler mortality for all of the countries for which we have data on per capita incomes and governance. This results in a sample of 153 countries for which we have data on y , g , and x . We do however obtain similar results if we restrict attention to the smaller sample of 68 countries for which the original settler mortality instrument is available, or if we use the linguistic origins variables directly as instruments, as do Hall and Jones (1999).

Table 4 reports the OLS and IV estimates of Equation (3.1), together with the corresponding first-stage regression of governance on the instrument. Consistent with the existing literature discussed above, we find a strong causal effect running from governance to per capita incomes. The estimated coefficient of 1.37 implies that a one-standard deviation improvement in the governance measure raises per capita incomes nearly four-fold in the very long run. We also find the same phenomenon in the literature that the instrumented estimate of the coefficient on per capita income is substantially larger than the OLS estimate of 0.999.¹³

Although in this paper we focus on the rule of law indicator, we note that the pattern of substantially larger IV estimates relative to their OLS counterparts consistently holds across all six governance indicators. Table 5 reports the OLS and IV estimates of the slope coefficient in Equation (3.1), using the five other measures of governance and using the same settler mortality variable as an instrument. Since we do not have distinct instruments for each of the six dimensions of governance, we cannot interpret the results in Tables 4 and 5 as capturing the partial effects of each of these variables. However, to the extent that each of these is a proxy for some broad notion of governance, these estimates can be interpreted as providing a range of estimates of the effect of governance broadly construed on per capita incomes in the very long run. We return to this point in more detail below.

¹³ Interestingly, the bivariate scatterplot of rule of law against log per capita incomes visually suggests a nonlinear effect of governance on per capita incomes, with a weaker effect (i.e. a lower slope) in poor countries than in rich countries. While this is qualitatively true, we did not find this nonlinearity to be statistically significant. Moreover, given our pattern of IV estimates that are larger than OLS estimates, and given the weaker performance of the instrument in the first-stage regression for the poorest half of the sample, we can also not discount the possibility that the difference in slopes in the two samples is simply driven by the problem of weak instruments (which would bias the IV estimates towards the OLS ones in the poor country sample).

Figure 3 plots the estimated effects of governance on per capita incomes (in the top panel) and the first-stage regression (in the bottom panel), with countries in LAC highlighted and labeled. When considering this causal channel from governance to per capita incomes, the striking feature of countries in LAC is that the majority of them lie above the instrumented regression line. In fact, we find only six out of 26 countries below the regression line (Chile, Uruguay, Belize, Costa Rica, Guyana, and the Dominican Republic). One interpretation of this is that most countries in LAC have been surprisingly successful in raising living standards without the benefit of good governance. Yet a less hopeful interpretation is that the (relatively) high income levels observed in many countries in LAC are inherently fragile because they are unsupported by sound institutions.¹⁴

The bottom panel of Figure 3 illustrates where countries in LAC fall in the first-stage regression of governance on “history”. Countries in LAC are clustered surprisingly tightly around the middle of the distribution of (in some cases imputed) settler mortality. Only four countries stand out as having particularly inhospitable climates for settlers – Jamaica, Haiti, Panama, and Nicaragua. Moreover, countries in LAC are scattered quite evenly above and below the first-stage regression line, suggesting that the effect of history on current institutions is not significantly different in LAC relative to the rest of the world. Taken together, these two observations suggest that “bad history” alone cannot account for the relatively low rule of law ratings for countries in LAC that we noted in the introduction.¹⁵

¹⁴ This interpretation is consistent with both anecdotal and more systematic evidence that countries that are hit by large adverse shocks suffer disproportionately more if the quality of their institutions is poor. See for example Boone, Breach, Friedman and Johnson (2000) who argue that declines in asset prices during the Asian crisis were larger in countries with weak corporate governance. In light of events of recent years, it is striking for example that both Argentina (shown) and Indonesia (not shown) are substantially above the instrumented regression line in 1995, the year to which this graph refers. More systematically, Rodrik (1999) has shown that countries lacking institutions to manage social conflict suffered deeper declines in output in response to the oil shocks of the 1970s.

¹⁵ For the region as a whole, this low explanatory power of history as a determinant of misgovernance is plausible, given that these countries already had attained independence almost two centuries ago, and on the whole the colonizers did not exert the same destructive institutional influence as in some other settings (as in some parts of Africa for instance). Poignantly illustrating the limits of history in explaining the quality of governance today are the contrasting cases of Argentina and Chile, neighboring countries with historical, cultural, location, climatic and linguistic commonalities that have taken such divergent paths in terms of institutional quality.

We now turn to our estimates of Equation (3.2), which captures the reverse causation from income to governance, as well as the effects of history on governance. Our estimates of the parameters of Equation (3.2) depend on our assumptions about the three additional pieces of non-sample information required to identify this equation. We find that our results are not very sensitive at all to our assumptions about the variance of measurement error in per capita incomes. We therefore just assume that $\sigma_w=0.2$ which implies that a 95% confidence interval for per capita income of a country runs from 50% to 150% of observed income. Given the difficulties in measuring GDP and purchasing power parity adjustments, this does not seem to be an implausible estimate of the extent of measurement error in this variable.

In contrast, our estimates of the effects of income on governance depend a great deal on our assumptions about measurement error in governance, σ_u , and the correlation between the error terms in Equations (3.1) and (3.2), ρ . Table 6 presents the range of estimates of the parameters of Equation (3.2) that we obtain, for a range of values σ_u and ρ . In the top panel, we set $\rho=0$, and consider a range of values of measurement error in governance. In the bottom panel, we fix the measurement error in governance and consider a range of values of ρ .

We use the information in the standard errors of the rule of law index described in the previous section to anchor the range of estimates for measurement error in governance. In particular, we begin with a value of $\sigma_u = 0.27$, which is the average across countries of the standard errors obtained from the unobserved components model used to construct the aggregate governance indicator. This captures the extent to which the governance measure is a noisy indicator of the “true” rule of law within a country. As we have discussed in the previous section, these estimated standard errors are already large relative to the units in which rule of law is measured.

We then consider several higher values up to a maximum of $\sigma_u = 0.54$, or twice the initial level. One way to rationalize substantially higher measurement error such as this is to note that good rule of law is just one of many dimensions of good governance or institutional quality. Thus, the extent to which rule of law is itself an imperfect indicator of broader notions of good governance that matter for economic growth in the very long

run can also be thought of as measurement error. A rough way to calibrate the importance of this type of measurement error is to consider at the simple correlations (r) of the rule of law indicator with the other five dimensions of governance discussed in the previous section, which range from $r = 0.76$ (Voice and Accountability) to $r = 0.93$ (Government Effectiveness), and average $r = 0.85$ across all governance components. Under the assumption that each of these indicators is a noisy measure of the broadest possible concept of good governance, a straightforward calculation shows that σ_u ranges from 0.27 to 0.48 under this interpretation.¹⁶

For the benchmark level of measurement error of $\sigma_u = 0.27$ (based on the actual rule of law standard errors discussed in Section 2) we find a surprisingly large *negative* effect of income on governance, with a coefficient of -1.28 . To put this figure in perspective, it implies that an exogenous doubling of per capita incomes in the very long run leads to an estimated decline in governance of $-1.28 \times 0.7 = 0.89$ or nearly one standard deviation of the governance index. Moving across the columns in Table 6, we see that the only way we can get an estimated positive feedback from per capita incomes to governance is if measurement error in governance is very high, for values of $\sigma_u \geq 0.5$. We also find that the effects of history on current institutions, δ , becomes smaller in absolute value, and the variance in the error term in Equation (3.2) becomes smaller, as measurement error in governance becomes larger. The lower panel of Table 6 shows the effects of assumptions regarding the correlation between the error terms in Equations (3.1) and (3.2). The larger is this correlation (as it moves from negative to positive values), the smaller (more negative) is the estimated magnitude of the reverse causation from income to governance, and the larger (in absolute value) are the effects of history and the variance of the error term.

¹⁶ Suppose that $g_i^* = g + u_i$, $i=1, \dots, N$ are N noisy indicators of g , with $E[u_i] = 0$, $E[u_i^2] = \sigma_i^2$, and $E[u_i \cdot u_j] = 0$ for all i and j . Then the correlation between any two indicators

is $r_{ij} = \sqrt{\frac{\sigma_g^2}{\sigma_g^2 + \sigma_i^2} \cdot \frac{\sigma_g^2}{\sigma_g^2 + \sigma_j^2}}$. One minus the minimum and maximum correlation across all pairs i and j provide upper and lower bounds respectively on the ratio of the variance of measurement error relative to the variance of the observed variable, $\frac{\sigma_i^2}{\sigma_g^2 + \sigma_i^2}$.

The main message from Table 6 is that measurement error in governance needs to be very large in order to admit the possibility of positive feedback from per capita incomes to governance. We have already seen the basic intuition for this result in the discussion of Equation (3.5) above. In the absence of measurement error in governance, the substantially larger IV estimates of Equation (3.1) relative to the OLS estimates must reflect the fact that the instrument is either (a) removing *negative* feedback from per capita incomes to governance, and/or (b) removing the effect of omitted variables that are uncorrelated with the instrument but that move governance and per capita incomes in *opposite* directions.

Table 6 adds to this basic intuition the quantitative observation that, for all but very high assumptions regarding measurement error in governance, there is insufficient attenuation bias in the OLS estimates to rule out negative feedback from per capita incomes to governance. In fact, the only way we can get positive feedback from per capita incomes to governance is if we assume that either (a) measurement error in governance is very large, and/or (b) there are some omitted variables that move governance and income strongly in opposite directions – and it is hard to think of plausible candidates for such omitted variables. Otherwise, this very standard empirical model, together with the data we use, is inconsistent with the notion that there is positive feedback from per capita incomes to governance. Rather, the model suggests that feedback from incomes to governance is if anything negative.

The estimates of the other two parameters of Equation (3.2) – the effects of history on governance, and the variance of the residual, also have interesting interpretations. Note first that the direct effects of history on governance in Equation (3.2) are smaller the larger we assume measurement error in governance to be. The reason for this is as follows. We have seen that as measurement error in governance becomes larger, the estimated feedback from per capita incomes to governance becomes less negative as well. If this feedback effect were to become positive and large, better values of the “history” variable only need to have small effects in order to trigger a very powerful virtuous circle of better governance leading to higher incomes leading to better governance, etc. Therefore, in order to match the observed correlation between history and per capita incomes today, the coefficient on the history variable in Equation (3.2) would not need to be very large. In contrast, is measurement error in

governance is small and feedback from incomes to governance is negative, then “history” needs to exert a large direct effect on governance in the absence of such virtuous circles.

Table 6 also shows that if we assume measurement error in governance to be very large, the variance of the error term in Equation (3.2) becomes small. This is because we choose this parameter to match the observed fit of the first-stage regression of governance on history. If we assume that there is very large measurement error in the dependent variable (governance) in Equation (3.2), then the only way we can match the good fit of the first-stage regression is if the variances of the errors in the two structural equations are small. Thus, if we assume that measurement error in governance is unrealistically very large, our estimates of Equation (3.2) tell us that most of the variation in governance is accounted for by only two variables – income and history. In contrast, for more reasonable values of measurement error in governance, we find that income and history play a smaller role in understanding cross-country differences in governance.

We illustrate the relative importance of income, history and other factors in determining institutions more systematically in Figure 4, for the countries in LAC, under the benchmark assumption that $\sigma_u=0.27$. Consider first the importance of history. We have already seen in Figure 3 that countries in LAC all fall close to the mean of the world distribution of the “history” instrument. As a result we find that the contribution of “history” to deviations between governance in LAC and the rest of the world are small. In contrast, the effects of income on institutions in LAC is large in absolute value for all countries. Given our finding of negative feedback, the contribution of income levels to governance tends to be positive in the poorer countries in LAC, and negative in the richer countries in LAC. Finally, under the realistic benchmark assumption of the measurement error in governance, we find a substantial unexplained component of governance in LAC, which is roughly evenly dispersed between positive and negative values.

This means that the fact that countries in LAC tended to fall below the OLS regression line of per capita incomes on rule of law (as discussed in the introduction) should not be necessarily interpreted as evidence that governance in LAC is surprisingly bad given its income level. In fact, according to this view, once we take into account the

negative effect of incomes on governance, as well as the (small) effects of history, countries in LAC do not appear to have systematically good or bad governance relative to the rest of the world. In fact, only if we assume that measurement error in governance is very large do we find sufficient evidence of positive feedback from per capita incomes to governance to justify the idea that governance in LAC is systematically worse than would be expected given its income levels.

III.3 – Interpreting Negative Feedback from Incomes to Governance

In the remainder of this section we provide some discussion and interpretation of the rather surprising finding of negative feedback from incomes to governance. The first point to notice is that the negative or zero feedback result is quite robust, in the sense that the degree of measurement error required to overturn it is very large indeed. One way to see this is to notice that if σ_u is equal to its high-end value of 0.54, this would imply that the 90% confidence intervals for governance are twice as large as those shown in Figure 2 (based on actual data). These confidence intervals based on the high-end value are so large as to make the aggregate rule of law indicator virtually meaningless. For example, this extent of measurement error implies that rule of law in Mexico (which ranks near the middle of countries in LAC) is not statistically significantly different from that in Haiti (the country with the lowest score in LAC), nor is it significantly different from Chile (the country with the highest score in LAC). Since we do think that the country rankings in the governance indicators are informative, we find this degree of measurement error to be implausibly high.

Even if we take the broader interpretation of measurement error which suggests that rule of law itself is only a proxy for more general notions of institutional quality, we would still be forced to the conclusion that the rule of law index we use would have to be virtually uninformative about cross-country differences in broader conceptions of governance – a conclusion we find extreme. Finally, it is important to note that if – as is plausible – there are omitted variables in Equations (3.1) and (3.2) which drive income and governance in the same direction, then even larger measurement error than the high-end ones suggested above would be needed in order to find positive feedback from per capita incomes to governance. Put together, all of this suggests that the extent of

measurement error required to deliver positive feedback from per capita incomes to governance is implausibly large.

The second point is that our cross-sectional empirical framework in *levels* of income and governance is designed to capture the interactions between these variables in the very long run. This means that our finding of negative feedback does not have a short-run time-series interpretation along the lines of “rapid growth in country X in the next 5 years is likely to worsen governance”. Nor does our finding of negative feedback imply a negative *unconditional* cross-sectional correlation between incomes and governance. After all, the observed *positive* cross-sectional correlation between levels of incomes and governance is dominated by the strong causal effects of governance on per capita incomes in the very long run. Rather, our finding of negative feedback says that we should only expect to find a negative *partial* correlation (controlling for history) between governance and purely exogenous factors that are associated with higher income levels in a cross-section of countries.

But this brings us to our third point: it is difficult to observe direct evidence of this negative feedback in the form of some variable that is positively correlated with incomes in a cross section of countries, but is negatively correlated with governance. This is because it is difficult to think of convincing examples of purely exogenous variables that would affect incomes and growth in the long run but have no direct effects on governance or institutional quality, so that their correlation with governance would purely reflect the negative feedback.

In fact, were such variables (affecting incomes but not governance) to exist, they would be natural instruments to use to directly identify the effects of per capita incomes on governance in Equation (3.2). But as we argued before, convincing instruments for income levels in a cross-section of countries are scarce, and this is what motivates our indirect approach to identifying feedback from incomes to governance. It is more likely that variables that matter for income levels in the long run (such as favorable geographical location, political stability, natural resource abundance, enlightened policymaking, etc.) are also positively correlated with institutional quality through a variety of other mechanisms. As long as these direct effects are sufficiently large, it will not be possible to observe a negative correlation between these variables and

governance driven by the indirect negative feedback that we have identified. All of this implies that, while the negative feedback we have identified is quite robust, it is also difficult to observe directly in the form of a positive cross-sectional correlation between some variable and income, and a negative correlation between that same variable and institutional quality.

What then should we make of this finding of negative feedback? We underscore two implications. The first is rather obvious: negative feedback implies that improvements in institutional quality or governance are unlikely to occur merely as a consequence of economic development. As countries become richer, it is important not to exaggerate the conventional wisdom that higher incomes lead to demands for better institutional quality. In fact, there are a variety of mechanisms through which just the opposite might occur. As elaborated further below, as long as established elites within a country reap private benefits from the *status quo* of poor institutions, there is little reason to expect that higher incomes will lead to demands for better governance. The phenomena of “crony capitalism” in East Asia, of elite influence, cronyism and regulatory capture in Latin America, and of “state capture” in transition economies provide vivid examples of conflict between the interests of the elite and the need for better institutional quality.

Second, negative feedback means that we should not expect to see “virtuous circles” from higher incomes to better institutions which in turn support higher incomes in the very long run. This means that “small” interventions to improve institutional quality are unlikely to be enough to make a major difference in the long run. Together, these two implications point to the urgency of steps to improve governance in countries where it is weak. But cross-country analysis such as this provides little guidance as to how this should be done, or regarding the possible explanations of results such as the negative feedback presented above. In the last section of this paper, we draw on experience with governance diagnostics within selected countries in Latin America to suggest such explanation and illustrate fronts upon which progress can be made.

IV. Improving Governance

The first result of this paper that governance matters significantly for growth in the very long run is not new and validates earlier such findings. The second result is new suggests that governance improvements will not take place automatically as the development process unfolds; no automatic virtuous circle can be counted upon. Together, these results suggest that interventions to improve governance are warranted. Unfortunately, however, the cross-country evidence we have seen so far is not very informative for policy-makers intent on formulating and implementing specific strategies to improve governance in their countries.

In contrast, detailed country diagnostic surveys designed by the World Bank in the past few years have begun to provide insights and helped to identify specific priorities for actions to improve governance. These Governance and Anticorruption diagnostics rely on in-depth, country-specific surveys of thousands of public service users, firms, and public officials, in order to gather specific information about institutional vulnerabilities within a country. These separate surveys permit triangulation and consistency checks for the results across respondent categories, while probing in more detail into a broad array of governance issues within countries. So far, these surveys have been applied to a score of countries worldwide.¹⁷

One of the key innovations in these surveys has been their emphasis on “unbundling” governance and corruption into more detailed and specific dimensions. This has helped to highlight how the causes, consequences, and costs of various forms of misgovernance, and has shown how there can be wide variation in institutional quality across institutions within a particular country.¹⁸ The results from three recent such

¹⁷ For details on governance diagnostic instruments and country reports, visit <http://www.worldbank.org/wbi/governance/tools.htm>.

¹⁸ In complementing the insights that can be gathered from composite governance indicators presented in earlier sections, these in-depth diagnostics can help provide specific inputs for action programs at the country level by: i) unbundling governance and corruption into more detailed and specific dimensions, and through their measurement assessing the relative importance and prevalence of the unbundled components; ii) assessing the quality of governance and performance of the key institutions within the country; iii) assessing the costs of various forms of misgovernance (such as through the link to poverty, quality and extent of service delivery, etc.); iv) identifying the most important factors affecting governance and performance (e.g. external vs. internal accountability mechanisms, as well as issues of undue influence by the elite and state capture), and, v) identifying priorities for action (based on the above items).

governance country studies in Latin America are indicative of the multiple dimensions of corruption worldwide. Figure 5 summarizes evidence on the prevalence of four distinct dimensions of corruption: the frequency of bribery i) in obtaining services, ii) in public procurement, iii) in the budget process, and iv) in the formation of the policy, legal and regulatory framework, for Peru, Colombia and Honduras.

In this section we focus on the last form of corruption, which we refer to as “state capture”. State capture is defined as the undue and illicit influence of the elite in shaping the laws, policies and regulations of the state. In its emphasis on the *formulation and shaping* of laws and regulations of the state, state capture departs from the conventional view of corruption which stresses bribery to influence the *implementation* of such laws and regulations. Recent research has identified state capture as a fundamental governance challenge in many transition economies, and emerging evidence from Latin America suggests the importance of capture in this region as well.¹⁹

IV.1 State Capture

One possible explanation for the negative feedback from per capita incomes to governance is the phenomenon of state capture. If the fruits of income growth largely accrue to an elite which benefits from misgovernance, then the otherwise possible positive impact of income growth on governance could be offset by the effect of the elite’s negative influence. Recent empirical research on transition economies has found that state capture is pervasive in many of these countries. But clearly state capture is not unique to this region in the past decade. From an historical perspective, many other countries have gone through periods of illicit influence by powerful elites in their past -- the influence of the “robber barons” in the United States at the turn of the 20th century is one such illustration. Other research has focused on crony capitalism in the Philippines under Marcos, and on Mexico during the long PRI era.²⁰ Often, such cronyism is a somewhat subtler form of the coarser manifestations of capture by oligarchs found in the early years of transition to market in the Former Soviet Union, but nevertheless is indicative of serious governance failures. Even the recent spate of scandals associated

¹⁹ For details on recent research on state capture, see Hellman, Jones, Kaufmann and Schankerman (2000) and Hellman, Jones and Kaufmann (2001), or visit <http://www.worldbank.org/wbi/governance/wp-statecapture.htm>.

²⁰ See Haber (2001).

with lax regulatory and legislative oversight of accounting practices by influential firms suggests yet another variant of this private-public misgovernance nexus.

The recent Business Environment and Enterprise Performance Survey (BEEPS) carried out in 1999 in 24 post-socialist economies has provided insights on the phenomenon of state capture.²¹ This survey measured state capture by asking firms about the prevalence of illicit private “purchases” of laws, decrees and regulations by firms, and about the impact of the purchase of such policies, laws and regulations by other firms on their own enterprise. The survey measured not only the conventional types of bureaucratic/administrative corruption related to the *implementation* of the laws and regulations, but also the undue and illegal influence in *shaping* such laws and regulations. The results from the BEEPS survey pointed to a high prevalence of state capture in the transition economies. In countries such as Moldova, Russia, Ukraine and Azerbaijan, well over 30 percent of the firms reported that they had been significantly or very significantly affected by the prevalence of state capture in their industry.²²

The econometric results based on this large multi-country enterprise survey indicated that ‘captor firms’ (which engage in illicit activities to shape the state laws and regulations) do in fact derive very large benefits from such strategies. Captor firms exhibited much higher output and investment growth than their non-captor counterparts, controlling for other factors. In contrast, firms which were coerced into paying bribes for administrative corruption derived little private benefit from these bribes. Yet while the captor firms benefit in terms of growth from their private purchase of law

²¹ The Business Environment and Enterprise Performance Survey (BEEPS), developed jointly by the World Bank and the EBRD, is a survey of over 4000 firms in 24 transition countries carried out in late 1999-2000 that examines a wide range of interactions between firms and the state. Based on face-to-face interviews with firm managers and owners, BEEPS was designed to generate comparative measurements inter alia on corruption, state capture, lobbying, rule of law, and the quality of the business environment, which was then related via statistical analysis to specific firm characteristics and firm performance. For details, visit <http://info.worldbank.org/governance/beeps/>.

²² The empirical analysis into this issue, made possible thanks to the BEEPS survey, admittedly came only after reports and statements already provided by the media and politicians on state capture. One notable illustration was the statement by Vladimir Putin, Russia’s President, in his opening remarks to a roundtable of 21 top Russian companies and banks, in July 2000: “I only want to draw your attention to the fact that you have yourselves formed this very state, to a large extent through political and quasi-political structures under your control. So what you should do least of all is blame the mirror”. (See <http://president.kremlin.ru/text/APPTemplAppearId10623.shtml>)

and order, the research found that public provision of rule of law is further undermined by these capture strategies. Indeed, the statistical evidence suggested that public protection of property rights for the overall enterprise sector was substantially lower in countries in which capture was prevalent. This evidence suggests a pattern in which the large private benefits derived from capture provide an insidious built-in incentive for the persistence of such capture, as the growing economic might of powerful captor firms supports even more capture and further deteriorations in overall governance (Hellman, Jones and Kaufmann (2001))

Do similar patterns apply to Latin American countries? In contrast with the work already undertaken in transition economies, a comprehensive cross-country empirical investigation of the phenomenon of state capture for the Latin America region has yet to take place, and is part of the upcoming research agenda. Thus, at this stage the empirical evidence is of a select nature, and derived from the recent country governance diagnostics in a small number of countries in the region. The results of these diagnostics do suggest however that the challenge of state capture is also present in Latin America.

The emerging results from diagnostics in Peru, Colombia and Honduras in Figure 5 point to capture by influential forces outside the state as a major governance challenge. Further details on the particular forms of state capture can be found in the responses of public officials and enterprise managers. For example, Figure 6 summarizes results for Peru and Colombia as reported by the public officials survey, with enterprise managers reporting similar results independently (not shown). Both enterprises and public officials consistently pointed to pervasive capture of legal and judiciary institutions. In Peru, survey data collected in early 2001 point to the importance of powerful groups outside of the public sector as having an undue influence in shaping the policies, laws and regulations of the state.

This incipient empirical evidence from some countries in Latin America, as well as the empirical results from other regions, permits us to speculate as to the role of capture in explaining the growth-without-governance puzzle. To the extent that state capture is important, higher incomes may be appropriated by the monopolistic captors or elite. This in turn can lead to additional demands for private 'purchase' of laws and regulations to ensure the continued dominance of the elite. The net effect is to erode

overall governance, especially the protection of property rights and the incidence of corruption.

This increasing *demand* for capture in settings that are growing may be further abetted by the fact that the ‘a la carte’ *supply* of laws, regulations and policies offered by politicians to powerful elites is less likely to be subject to checks and balances in a growing environment. This is because of widespread complacency about governance in economies with good performance (e.g., Indonesia under Suharto), when internal and external pressures to improve governance are likely to be laxer. While Indonesia may have particularly exemplified this phenomenon during the eighties and much of the nineties, it is not alone. Argentina is another extreme illustration during much of the nineties, while Mexico has been a more nuanced example during the previous ‘captured’ political era of crony capitalism.²³ Russia during different historical periods offers another example, and the recent events related to major failures in corporate governance and regulatory oversight of very powerful US companies are also suggestive in this context.

Thus far the links between state capture and the negative feedback between incomes and governance we have documented are quite speculative, and call for further research. As data becomes available in the future for a large number of countries in Latin America and other (non-transition) regions regarding the degree of capture by elite interests, it will be possible to put this preliminary hypothesis through further empirical tests. In particular, it will be possible to empirically investigate in more depth the socio-economic costs of various dimensions of capture in LAC, as has already been done among transition economies.²⁴

IV.2 Implications for Reform

At a general level of strategy design, the empirical analysis of the governance diagnostics provide important country-specific inputs for action and reform. In many

²³ Haber (2001), Haber, Maurer and Razo (2001). For a general treatment of the negative implications of crony capitalism for growth, see Krueger (2001).

²⁴ The media in LAC is also beginning to take a more active role on this issue of state capture (as has been the case for years now in the former soviet states). See for instance the editorial in the leading newspaper in Colombia, El Tiempo, on February 21st, 2002, entitled ‘El Estado Capturado’.

countries, these surveys have highlighted the variety of corruption and identified institutions in which corruption is particularly pervasive. Given the prominence we ascribe to state capture and related forms of influence by the elite in providing a plausible explanation of why growth may not translate into improved governance, then strategies to improve governance and combat corruption ought to specifically address such undue influence and capture. This implies a strategy departing from conventional public sector reform which typically focuses on internal functioning within government. Indeed, the research on state capture for transition economies, as well as analysis of governance diagnostics in some countries in Latin America, point to the importance of voice and external accountability mechanisms, political contestability, and transparency reforms (including media freedom, disclosure of votes by parliamentarians, declaration of assets by politicians, regular monitoring through surveys/report cards, etc.).²⁵

Similar lessons emerge from an earlier governance diagnostic survey carried in Bolivia, where over 1200 public officials working in over one hundred public agencies were interviewed in depth on diverse dimensions of institutional performance and governance vulnerabilities. From this Bolivia diagnostic, the three panels of Figure 8 show the relationship across government agencies between the reported prevalence of administrative forms of bribery as well as state capture manifestations (particularly legal capture and in each public agency and the reported standard of service performance (all on the vertical axis) and three possible reform dimensions: (i) transparency (with regard to budgets, personnel management and administration); (ii) the existence of citizen feedback mechanisms (which are acted upon by the agency), and, (iii) their own reported employee satisfaction with regard to pecuniary and non-pecuniary compensation. Each of these three possible reform dimensions are depicted in each panel in figure 8 on the horizontal axis.

The first two panels show a clear association between transparency and external feedback mechanisms on the one hand, and corruption and state capture, on the other (also controlling for other factors). In contrast, there is little if any association between the public officials' response on their perceived satisfaction with their pay and bribery

²⁵ While involvement by NGOs and related civil society segments has become more prominent in recent years as agents to improve governance, the role of the competitive private sector (including associations of traders, exporters and small and medium enterprises) has been under-emphasized.

and capture. While the structural relationship between determinants of corruption and capture and such governance outcomes is likely to vary some across different countries (as per evidence emerging from different governance diagnostics), this type of evidence casts doubt on the traditional “public sector management” approach to anticorruption, which focuses uniformly on issues of pay and internal monitoring and supervision. Rather, these findings point to the importance of open access to information and effective external monitoring as important in reducing corruption, improving governance, and, to mitigate state capture.²⁶

In sum, strategies to improve governance in LAC are of some urgency, given concerns about the quality of governance in many countries in the region. Furthermore, as this paper’s empirical model has suggested, even when growth resumes in these countries, one should not expect automatic improvements in governance. Instead substantial and ongoing interventions to improve governance are required. In order to design governance and institutional reform strategies it is important to rely on country-specific governance diagnostic tools to identify specific priorities. Understanding the political and economic forces shaping policy- and law-making (which will vary from setting to setting) is key to the identification of realistic and country-relevant strategic priorities.

Where state capture prevails, the ‘governance quality’ of the growth dividend may be rather low, and the vulnerability of sustained growth prospects is thus high, necessitating specific strategies to address such capture. Such strategies are likely to have to include political reforms (which have been under-emphasized in the past, yet without which conventional economic reforms may not be sustained), and furthermore the specific institutional reforms may need to depart from a narrow focus on traditional public sector management, or excessive focus on legal fiat or on rules-based measures. Instead, much further emphasis on promoting mechanisms of external accountability, participatory voice, and transparency mechanisms are required.

²⁶ Kaufmann, Mehrez and Gurgur (2002) provide a more systematic analysis of these points, and present the econometric results in detail.

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Appendix 1 – Details of Identification Procedure

The reduced-form of the system (3.1) and (3.2) in terms of observables is:

$$(A1) \quad g_j^* = (1 - \gamma \cdot \beta)^{-1} \cdot (\mu + \gamma \cdot \alpha + \delta \cdot x_j + \gamma \cdot e_j + v_j) + u_j$$

$$(A2) \quad y_j^* = (1 - \gamma \cdot \beta)^{-1} \cdot (\alpha + \beta \cdot \mu + \beta \cdot \delta \cdot x_j + e_j + \beta \cdot v_j) + w_j$$

and Equation (3.1) in terms of observables is:

$$(A3) \quad y_j^* = \alpha + \beta \cdot g_j^* + e_j - \beta \cdot u_j + w_j$$

The model in Equations (3.1)-(3.4) has 10 unknown parameters ($\alpha, \beta, \mu, \gamma, \delta, \rho, \sigma_e^2, \sigma_v^2, \sigma_u^2$, and σ_w^2). In the data we have 7 independent pieces of sample information. These are the estimated intercepts, slopes and variances of the residuals of the first- and second-stage regressions that deliver the two-stage least squares estimates of the effects of governance on income in Equation (1), and in addition the estimated OLS slope coefficient from a regression of per capita income on governance.

As discussed in the text, we augment this sample information with three assumptions which pin down the values of σ_u^2 (the variance of the measurement error in governance), σ_w^2 (the variance of the measurement error in log per capita GDP), and ρ (the correlation between the error terms in Equations (3.1) and (3.2)). We assume throughout that the stability condition $(1 - \gamma \cdot \beta) > 0$ holds. Note that this places an upper bound on the amount of feedback from per capita incomes to governance, i.e. $\gamma < \frac{1}{\beta}$

With these three assumptions in hand, we solve the remaining 7 equations linking the 7 pieces of sample information with the 7 remaining parameters as follows. The intercept and slope from the second-stage regression give us estimates of α and β . From Equation (A3), the variance of the residuals in the second-stage regression is $\sigma_e^2 + \beta^2 \cdot \sigma_u^2 + \sigma_w^2$, which gives us an estimate of σ_e^2 . Note that the restriction that $\sigma_e > 0$ places an upper bound on our assumptions regarding the variance of measurement error in per capita incomes and governance.

Finally, we (numerically) solve the following three equations for δ, γ , and σ_v^2 :

$$(A4) \quad \hat{\pi}_1 = \frac{\delta}{1 - \gamma \cdot \beta}$$

$$(A5) \quad \hat{\sigma}_2^2 = \frac{\gamma^2 \cdot \sigma_e^2 + 2 \cdot \gamma \cdot \rho \cdot \sigma_e \cdot \sigma_v + \sigma_v^2 + \sigma_u^2}{1 - \gamma \cdot \beta}$$

$$(A6) \quad \hat{\beta}_{OLS} = \frac{\delta^2 \cdot \beta \cdot \sigma_x^2 + \gamma \cdot \sigma_e^2 + \beta \cdot \sigma_v^2 + (1 + \gamma \cdot \beta) \cdot \rho \cdot \sigma_e \cdot \sigma_v}{\delta^2 \cdot \sigma_x^2 + \gamma^2 \cdot \sigma_e^2 + \sigma_v^2 + 2 \cdot \gamma \cdot \rho \cdot \sigma_e \cdot \sigma_v + (1 - \gamma \cdot \beta)^2 \cdot \sigma_u^2}$$

where $\hat{\pi}_1$ and $\hat{\sigma}_2^2$ denote the slope coefficient and estimated variance of the residuals in the first-stage regression of governance on the instrument x ; $\hat{\beta}_{OLS}$ denotes the slope coefficient from an OLS regression of log per capita GDP on governance; and σ_x^2 is just the variance of the instrument, x , which we estimate directly from the data. Finally, with these estimates in hand we obtain μ from the estimated intercept in the first-stage regression, $\hat{\pi}_0 = \frac{\mu + \gamma \cdot \alpha}{1 - \gamma \cdot \beta}$.

Table 1 – Governance and Per Capita Incomes in LAC

	Position Relative to OLS Regression Line:		<u>P-value</u>
	<u>Below</u>	<u>Above</u>	
Voice and Accountability	8	18	0.05
Political Stability	11	15	0.43
Government Effectiveness	19	7	0.02
Regulatory Quality	10	16	0.24
Rule of Law	20	6	0.01
Control of Corruption	20	6	0.01

Notes: The first two columns summarize the location of countries in LAC relative to the regression line in a simple OLS regression of the indicated measure of governance on log per capita GDP at PPP in 1995. The final column reports the p-value associated with a sign test of the hypothesis that the proportions of countries in LAC falling above and below the regression line are equal.

Table 2: Sources of Governance Data, 2000/01

<u>Source</u>	<u>Publication</u>	<u>Code</u>	<u>Type</u>	<u>Country Coverage</u>	<u>Repre- sentative</u>	<u>New in 2000/01</u>
Business Environment Risk Intelligence	Business Risk Service	BRI	Poll	50		
Columbia University	State Capacity Project	CUD	Poll	109	x	x
Economist Intelligence Unit	Country Risk Service	EIU	Poll	115	x	
European Bank for Reconstruction and Redevelopment	Transition Report	EBR	Poll	26		
Freedom House	Nations in Transition	FHT	Poll	27		
Freedom House	Freedom in the World	FRH	Poll	192	x	
Gallup International	Gallup Millennium Survey	GMS	Survey	60		
Heritage Foundation/Wallstreet Journal	Economic Freedom Index	HWJ	Poll	161	x	
Institute for Management and Development	World Competitiveness Yearbook	WCY	Survey	49		
Latinobarometro	Latinobarometro Surveys	LBO	Survey	17		x
Political Economic Risk Consultancy	Asia Intelligence	PRC	Survey	14		
Political Risk Services	International Country Risk Guide	PRS	Poll	140	x	
PriceWaterhouseCoopers	Opacity Index	PWC	Survey	35		x
Standard and Poor's DRI McGraw-Hill	Country Risk Review	DRI	Poll	111	x	
World Bank	Business Enterprise Environment Survey	BPS	Survey	18		x
World Bank	World Business Environment Survey	WBS	Survey	81	x	
World Economic Forum	Global Competitiveness Report	GCS	Survey	75		

Table 3: Estimates of Governance

		Voice and Accountability						Political Stability						Government Effectiveness					
		2000/01			1997/98			2000/01			1997/98			2000/01			1997/98		
		Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
AFG	AFGHANISTAN	-1.64	0.39	1	-1.62	0.36	1	-2.06	0.49	1	..	..	..	-1.23	0.43	1	..	..	..
ALB	ALBANIA	0.01	0.17	5	-0.13	0.21	4	-0.60	0.37	4	-1.00	0.25	4	-0.89	0.25	5	-0.65	0.29	4
DZA	ALGERIA	-1.19	0.24	4	-1.31	0.25	3	-1.27	0.28	4	-2.42	0.30	3	-0.81	0.24	4	-1.09	0.32	3
AGO	ANGOLA	-1.26	0.24	4	-1.00	0.25	3	-1.98	0.28	4	-1.78	0.28	4	-1.31	0.24	4	-1.39	0.24	5
ARG	ARGENTINA	0.57	0.23	7	0.49	0.25	4	0.55	0.22	9	0.51	0.26	5	0.18	0.18	10	0.26	0.25	6
ARM	ARMENIA	-0.22	0.17	5	-0.18	0.21	4	-0.84	0.41	4	-0.45	0.25	4	-1.03	0.27	5	-0.65	0.29	4
AUS	AUSTRALIA	1.70	0.24	5	1.63	0.25	4	1.26	0.23	7	1.18	0.26	5	1.58	0.19	7	1.46	0.25	6
AUT	AUSTRIA	1.34	0.24	5	1.45	0.25	5	1.27	0.23	7	1.38	0.25	6	1.51	0.20	7	1.22	0.23	7
AZE	AZERBAIJAN	-0.70	0.16	6	-0.81	0.19	5	-0.70	0.27	5	-0.36	0.23	5	-0.95	0.21	6	-0.83	0.24	5
BHS	BAHAMAS	1.15	0.28	2	1.13	0.29	2	0.68	0.65	1	0.37	0.41	1	1.04	0.53	1	0.47	0.77	1
BHR	BAHRAIN	-0.96	0.24	4	-1.04	0.25	3	-0.04	0.28	4	-0.08	0.30	3	0.62	0.24	4	0.24	0.32	3
BGD	BANGLADESH	-0.20	0.24	5	-0.01	0.25	3	-0.57	0.27	5	-0.40	0.30	3	-0.54	0.23	5	-0.56	0.32	3
BRB	BARBADOS	1.27	0.39	1	1.49	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
BLR	BELARUS	-1.04	0.17	5	-0.78	0.21	4	0.04	0.37	5	-0.37	0.25	4	-0.99	0.25	6	-0.66	0.29	4
BEL	BELGIUM	1.24	0.24	5	1.41	0.25	4	0.87	0.23	7	0.82	0.26	5	1.29	0.20	7	0.88	0.25	6
BLZ	BELIZE	1.01	0.39	2	1.23	0.36	1	0.32	0.90	1	..	..	..	0.55	0.70	1	..	..	..
BEN	BENIN	0.47	0.36	2	0.69	0.35	2	-0.72	0.63	1	-0.94	0.66	1	0.12	0.52	1	-0.07	0.56	1
BTN	BHUTAN	-1.27	0.39	1	-1.25	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
BOL	BOLIVIA	0.27	0.24	5	0.39	0.25	4	-0.61	0.28	6	-0.14	0.28	4	-0.47	0.22	6	-0.22	0.26	5
BIH	BOSNIA-HERZEGOVINA	-0.29	0.19	4	-1.00	0.23	2	-0.01	0.84	2	-1.16	0.39	1	-0.92	0.39	3	-1.11	0.41	1
BWA	BOTSWANA	0.80	0.24	5	0.78	0.25	3	0.71	0.27	5	0.74	0.28	4	0.83	0.23	5	0.22	0.26	4
BRA	BRAZIL	0.53	0.24	6	0.58	0.25	5	0.47	0.22	8	-0.32	0.25	6	-0.27	0.18	9	-0.22	0.23	7
BRN	BRUNEI	-0.93	0.28	2	-0.92	0.29	2	0.86	0.65	1	1.32	0.41	1	0.88	0.53	1	0.01	0.77	1
BGR	BULGARIA	0.59	0.16	7	0.47	0.19	5	0.37	0.26	7	0.43	0.23	5	-0.26	0.19	8	-0.81	0.24	5
BFA	BURKINA FASO	-0.26	0.27	3	-0.21	0.29	2	-0.54	0.51	2	-0.52	0.36	2	-0.02	0.40	2	-0.06	0.32	3
BDI	BURUNDI	-1.35	0.36	2	-1.29	0.36	1	-1.54	0.54	2	..	..	..	-1.14	0.37	2	..	..	..
KHM	CAMBODIA	-0.77	0.39	2	-0.91	0.36	1	-0.13	0.90	1	..	..	..	0.34	0.70	1	..	..	..
CMR	CAMEROON	-0.82	0.24	5	-0.70	0.25	4	-0.13	0.29	5	-0.72	0.27	5	-0.40	0.25	5	-0.64	0.24	5
CAN	CANADA	1.33	0.23	7	1.39	0.25	5	1.24	0.22	9	1.03	0.25	6	1.71	0.19	9	1.72	0.23	7
CPV	CAPE VERDE	0.92	0.39	1	0.99	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
CAF	CENTRAL AFRICAN REPUBLIC	-0.59	0.39	1	-0.05	0.36	1	..	..	..	..	..	..	..	..	..	-0.75	0.51	1
TCD	CHAD	-0.88	0.39	1	-0.85	0.35	2	..	..	..	-0.74	0.66	1	..	..	..	-0.71	0.56	1
CHL	CHILE	0.63	0.23	7	0.62	0.25	4	0.87	0.22	9	0.45	0.26	5	1.13	0.18	10	1.17	0.25	6
CHN	CHINA	-1.11	0.24	6	-1.29	0.25	5	0.39	0.22	8	0.48	0.26	5	0.14	0.18	9	0.02	0.25	6
COL	COLOMBIA	-0.41	0.23	7	-0.15	0.25	5	-1.36	0.22	9	-1.29	0.25	6	-0.38	0.18	10	-0.06	0.23	7
COM	COMOROS	-0.35	0.39	1	0.06	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
COG	CONGO	-1.38	0.27	3	-0.77	0.29	3	-1.36	0.51	2	-1.83	0.37	2	-1.58	0.40	2	-0.58	0.39	3
CRI	COSTA RICA	1.37	0.24	5	1.35	0.25	4	1.08	0.26	6	0.91	0.27	5	0.74	0.21	6	0.55	0.29	4
CIV	IVORY COAST	-1.19	0.25	4	-0.57	0.25	4	-0.95	0.29	4	-0.14	0.27	5	-0.81	0.25	4	-0.18	0.24	5
HRV	CROATIA	0.48	0.16	6	-0.23	0.19	4	0.18	0.29	5	0.41	0.24	4	0.10	0.22	6	0.15	0.26	4
CUB	CUBA	-1.49	0.25	3	-1.46	0.25	3	0.07	0.28	4	0.19	0.30	3	-0.22	0.24	4	-0.50	0.32	3
CYP	CYPRUS	1.28	0.25	3	1.11	0.25	3	0.48	0.29	3	0.38	0.30	3	0.91	0.26	3	1.04	0.32	3
CZE	CZECH REPUBLIC	1.04	0.16	7	1.20	0.19	6	0.74	0.23	8	0.81	0.22	7	0.58	0.18	10	0.59	0.21	8
DNK	DENMARK	1.60	0.23	6	1.63	0.25	4	1.34	0.23	8	1.29	0.26	5	1.62	0.19	8	1.72	0.25	6
DJI	DJIBOUTI	-0.44	0.39	1	-0.60	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
DOM	DOMINICAN REPUBLIC	0.42	0.24	5	-0.08	0.25	3	0.46	0.28	6	0.12	0.34	2	-0.24	0.22	6	-0.83	0.37	2
ECU	ECUADOR	-0.14	0.24	5	0.27	0.25	4	-0.80	0.25	7	-0.47	0.26	5	-0.94	0.20	8	-0.56	0.27	5
EGY	EGYPT	-0.65	0.24	5	-0.67	0.25	3	0.21	0.24	7	-0.07	0.25	6	0.27	0.19	8	-0.14	0.22	6
SLV	EL SALVADOR	0.21	0.24	5	-0.10	0.25	3	0.62	0.30	5	-0.02	0.32	3	-0.25	0.23	5	-0.26	0.37	2
GNQ	EQUATORIAL GUINEA	-1.30	0.39	1	-1.39	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
ERI	ERITREA	-1.04	0.36	2	-0.59	0.36	1	-0.38	0.63	1	..	..	..	..	..	..	..	..	..
EST	ESTONIA	0.94	0.16	8	0.86	0.19	5	0.73	0.24	8	0.79	0.23	5	0.86	0.18	9	0.26	0.24	5
ETH	ETHIOPIA	-0.85	0.27	4	-0.50	0.29	2	-0.55	0.49	3	0.14	0.36	2	-1.01	0.37	3	-0.15	0.32	3
FJI	FIJI	0.05	0.36	2	0.01	0.35	2	0.39	0.63	1	0.01	0.66	1	0.38	0.52	1	0.63	0.56	1
FIN	FINLAND	1.69	0.23	6	1.63	0.25	4	1.61	0.23	8	1.51	0.26	5	1.67	0.19	8	1.63	0.25	6
FRA	FRANCE	1.11	0.23	7	1.15	0.25	5	1.04	0.22	9	0.65	0.25	6	1.24	0.19	8	1.28	0.23	7
GAB	GABON	-0.40	0.24	4	-0.31	0.25	3	-0.44	0.28	4	-0.56	0.34	2	-0.45	0.24	4	-1.13	0.37	2
GMB	GAMBIA	-0.73	0.28	2	-0.97	0.29	2	0.49	0.65	1	0.56	0.41	1	0.41	0.53	1	0.16	0.77	1
GEO	GEORGIA	-0.07	0.19	5	-0.25	0.23	3	-1.00	0.41	4	-0.76	0.31	3	-0.72	0.27	5	-0.51	0.30	3
DEU	GERMANY	1.42	0.23	7	1.46	0.25	5	1.21	0.22	9	1.32	0.25	6	1.67	0.19	8	1.41	0.23	7
GHA	GHANA	0.02	0.24	5	-0.43	0.25	4	-0.11	0.29	5	-0.10	0.27	5	-0.06	0.25	5	-0.29	0.22	6

Note: "Est" refers to the point estimate of governance. "S.E." refers to the standard error. "N" refers to the number of sources in which the country appears. Governance indicators are oriented so that higher values correspond to better outcomes, on a scale from -2.5 to 2.5. These ratings are based on subjective assessments from a variety of sources, are subject to substantial margins of error as indicated, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Table 3: Estimates of Governance, Cont'd

		Voice and Accountability						Political Stability						Government Effectiveness					
		2000/01			1997/98			2000/01			1997/98			2000/01			1997/98		
		Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
GRC	GREECE	1.12	0.24	4	1.05	0.25	4	0.79	0.24	6	0.21	0.26	5	0.65	0.20	7	0.56	0.25	6
GTM	GUATEMALA	-0.33	0.24	5	-0.56	0.25	3	-0.77	0.30	5	-0.75	0.32	3	-0.63	0.22	6	-0.23	0.37	2
GIN	GUINEA	-0.98	0.28	2	-0.87	0.29	3	-0.99	0.65	1	-1.03	0.37	2	0.41	0.53	1	-0.03	0.51	2
GNB	GUINEA-BISSAU	-0.87	0.27	3	-0.45	0.29	3	-1.21	0.51	2	-1.20	0.37	2	-1.48	0.40	2	-0.33	0.51	2
GUY	GUYANA	0.94	0.27	3	1.01	0.29	2	-0.70	0.51	2	-0.20	0.41	1	0.02	0.40	2	0.01	0.77	1
HTI	HAITI	-0.80	0.27	4	-0.71	0.29	2	-0.38	0.49	3	-1.71	0.41	1	-1.32	0.37	3	-1.23	0.77	1
HND	HONDURAS	-0.04	0.24	5	-0.06	0.25	3	0.25	0.30	5	-0.33	0.32	3	-0.58	0.23	5	-0.41	0.37	2
HKG	HONG KONG	-0.33	0.24	5	0.01	0.25	6	1.13	0.25	6	0.92	0.27	5	1.10	0.21	7	1.25	0.25	6
HUN	HUNGARY	1.19	0.16	8	1.22	0.19	6	0.75	0.22	9	1.25	0.22	7	0.60	0.17	11	0.61	0.21	8
ISL	ICELAND	1.53	0.27	4	1.47	0.29	3	1.57	0.40	4	1.25	0.37	2	1.93	0.33	4	1.50	0.41	3
IND	INDIA	0.66	0.24	6	0.36	0.25	6	-0.05	0.22	8	-0.04	0.25	6	-0.17	0.18	9	-0.26	0.23	7
IDN	INDONESIA	-0.40	0.24	6	-1.13	0.25	5	-1.56	0.22	8	-1.29	0.26	5	-0.50	0.18	9	-0.53	0.25	6
IRN	IRAN	-0.36	0.24	4	-0.56	0.25	3	0.02	0.25	5	0.13	0.28	4	-0.21	0.22	5	-0.34	0.29	4
IRQ	IRAQ	-1.93	0.24	4	-1.75	0.25	3	-1.57	0.28	4	-2.24	0.30	3	-1.41	0.24	4	-1.88	0.32	3
IRL	IRELAND	1.57	0.23	6	1.53	0.25	5	1.24	0.23	8	1.43	0.25	6	1.79	0.19	8	1.36	0.23	7
ISR	ISRAEL	0.98	0.24	5	1.06	0.25	4	-0.54	0.24	6	-0.46	0.28	4	0.87	0.20	7	0.69	0.27	5
ITA	ITALY	1.10	0.23	7	1.28	0.25	5	0.82	0.22	9	1.16	0.25	6	0.68	0.18	10	0.77	0.23	7
JAM	JAMAICA	0.78	0.25	3	0.75	0.25	4	0.35	0.33	3	-0.34	0.32	3	-0.30	0.26	3	-0.48	0.33	3
JPN	JAPAN	1.03	0.23	6	1.14	0.28	4	1.20	0.23	8	1.15	0.29	4	0.93	0.19	9	0.84	0.31	5
JOR	JORDAN	0.10	0.24	4	0.15	0.25	4	0.13	0.27	5	-0.06	0.27	5	0.42	0.22	5	0.63	0.26	5
KAZ	KAZAKHSTAN	-0.80	0.16	7	-0.69	0.19	5	0.29	0.25	7	0.22	0.22	6	-0.61	0.19	8	-0.82	0.23	6
KEN	KENYA	-0.68	0.24	5	-0.70	0.25	4	-0.83	0.27	5	-1.10	0.27	5	-0.76	0.22	6	-0.90	0.22	6
PRK	KOREA, NORTH	-1.82	0.28	2	-1.79	0.29	2	0.79	0.51	2	0.37	0.41	1	-1.06	0.40	2	-0.30	0.77	1
KOR	KOREA, SOUTH	0.98	0.23	6	0.91	0.25	6	0.50	0.23	8	0.16	0.25	6	0.44	0.19	9	0.41	0.23	7
KWT	KUWAIT	0.08	0.25	3	0.00	0.25	3	0.64	0.29	3	0.68	0.30	3	0.13	0.26	3	-0.06	0.32	3
KGZ	KYRGYZ REPUBLIC	-0.57	0.19	3	-0.35	0.23	3	-0.32	0.48	2	0.32	0.31	3	-0.61	0.31	3	-0.58	0.30	3
LAO	LAOS	-1.05	0.36	2	-1.05	0.36	1	0.00	0.63	1	..	..	..	-0.39	0.52	1	..	..	..
LVA	LATVIA	0.81	0.16	5	0.75	0.19	5	0.50	0.28	5	0.46	0.23	5	0.22	0.21	6	0.07	0.24	5
LBN	LEBANON	-0.32	0.24	4	-0.40	0.25	3	-0.55	0.28	4	-0.25	0.30	3	-0.02	0.24	4	0.17	0.32	3
LSO	LESOTHO	-0.15	0.39	1	-0.15	0.36	1	..	..	..	-0.82	0.61	1	..	..	..	-0.46	0.33	2
LBR	LIBERIA	-1.04	0.27	3	-0.89	0.29	2	-0.65	0.51	2	-0.95	0.41	1	-0.94	0.40	2	-0.92	0.77	1
LBY	LIBYA	-1.35	0.25	3	-1.35	0.25	3	-0.38	0.29	3	-1.17	0.30	3	-1.12	0.26	3	-1.32	0.32	3
LTU	LITHUANIA	1.00	0.16	7	0.88	0.19	5	0.29	0.26	7	0.35	0.23	5	0.26	0.19	9	0.13	0.24	5
LUX	LUXEMBOURG	1.41	0.27	4	1.49	0.29	3	1.48	0.43	3	1.40	0.37	2	1.86	0.41	3	1.67	0.41	3
MKD	MACEDONIA, FORMER YUGOS	0.03	0.18	4	0.09	0.21	4	-1.45	0.37	2	-0.40	0.31	3	-0.63	0.28	3	-0.58	0.27	3
MDG	MADAGASCAR	0.28	0.27	4	0.31	0.29	3	-0.34	0.49	3	-0.79	0.37	2	-0.35	0.37	3	-0.29	0.39	3
MWI	MALAWI	-0.14	0.24	5	0.06	0.25	4	0.03	0.31	4	0.04	0.29	4	-0.77	0.26	4	-0.62	0.24	5
MYS	MALAYSIA	-0.13	0.23	7	-0.09	0.25	6	0.31	0.22	9	0.55	0.25	6	0.53	0.19	9	0.71	0.23	7
MDV	MALDIVES	-0.81	0.39	1	-0.91	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
MLI	MALI	0.32	0.27	3	0.42	0.29	3	-0.13	0.51	2	-0.29	0.37	2	-1.44	0.40	2	-0.05	0.51	2
MLT	MALTA	1.43	0.28	2	1.41	0.29	2	1.05	0.65	1	1.32	0.41	1	0.73	0.53	1	0.63	0.77	1
MRT	MAURITANIA	-0.59	0.36	2	-0.97	0.36	1	-0.87	0.63	1	..	..	..	-0.66	0.52	1	..	..	..
MUS	MAURITIUS	1.27	0.29	3	1.01	0.29	3	1.12	0.32	3	1.14	0.39	3	0.76	0.26	3	0.17	0.27	3
MEX	MEXICO	0.12	0.23	7	-0.11	0.25	5	0.06	0.22	9	-0.35	0.25	6	0.28	0.18	10	0.18	0.23	7
MDA	MOLDOVA	0.12	0.16	6	0.11	0.19	5	-0.29	0.27	5	-0.20	0.23	5	-1.10	0.21	6	-0.46	0.24	5
MNG	MONGOLIA	0.73	0.27	3	0.63	0.21	3	0.72	0.51	2	0.37	0.41	1	0.39	0.40	2	0.02	0.39	2
MAR	MOROCCO	-0.23	0.25	3	-0.24	0.25	4	0.16	0.29	3	0.09	0.27	5	0.10	0.26	3	0.27	0.22	6
MOZ	MOZAMBIQUE	-0.22	0.27	3	-0.17	0.29	3	0.20	0.51	2	-0.53	0.34	3	-0.49	0.40	2	-0.33	0.29	4
MMR	MYANMAR	-1.93	0.24	4	-1.75	0.25	3	-1.20	0.28	4	-0.97	0.30	3	-1.25	0.24	4	-1.46	0.32	3
NAM	NAMIBIA	0.32	0.24	5	0.47	0.25	3	-0.52	0.31	4	0.71	0.31	3	0.60	0.26	4	0.04	0.26	4
NPL	NEPAL	-0.06	0.36	2	0.05	0.36	1	-0.26	0.63	1	..	..	..	-1.04	0.52	1	..	..	..
NLD	NETHERLANDS	1.61	0.23	6	1.64	0.25	4	1.48	0.23	8	1.48	0.26	5	1.84	0.19	8	2.03	0.25	6
NZL	NEW ZEALAND	1.59	0.24	5	1.47	0.25	4	1.21	0.24	6	1.42	0.28	4	1.27	0.21	6	1.57	0.27	5
NIC	NICARAGUA	-0.06	0.24	5	0.07	0.25	3	0.31	0.30	5	-0.32	0.32	3	-0.73	0.23	5	-0.55	0.37	2
NER	NIGER	0.11	0.27	3	-0.74	0.29	2	-0.61	0.51	2	-0.76	0.41	1	-1.16	0.40	2	-1.39	0.77	1
NGA	NIGERIA	-0.44	0.23	6	-1.23	0.25	4	-1.36	0.26	7	-1.05	0.27	5	-1.00	0.21	7	-1.32	0.22	6
NOR	NORWAY	1.58	0.24	5	1.67	0.25	4	1.32	0.23	7	1.41	0.26	5	1.35	0.20	7	1.67	0.25	6
OMN	OMAN	-0.50	0.25	3	-0.57	0.25	3	1.00	0.28	4	0.91	0.30	3	0.85	0.24	4	0.90	0.32	3
PAK	PAKISTAN	-1.43	0.24	5	-0.44	0.25	3	-0.39	0.26	6	-0.65	0.26	5	-0.48	0.22	6	-0.74	0.26	5
PAN	PANAMA	0.77	0.24	5	0.66	0.25	3	0.57	0.26	6	0.15	0.30	3	-0.14	0.21	6	-0.28	0.32	3
PNG	PAPUA NEW GUINEA	-0.03	0.24	4	0.12	0.25	3	-0.48	0.28	4	-0.40	0.34	2	-0.67	0.24	4	-0.69	0.37	2

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		2000/01			1997/98			2000/01			1997/98			2000/01			1997/98		
		Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
PRY	PARAGUAY	-0.70	0.24	4	-0.42	0.25	4	-0.87	0.32	4	-0.57	0.32	3	-1.20	0.26	4	-1.10	0.33	3
PER	PERU	0.15	0.23	6	-0.69	0.25	4	-0.23	0.24	8	-0.53	0.25	6	-0.35	0.19	9	0.17	0.24	6
PHL	PHILIPPINES	0.53	0.23	7	0.63	0.25	5	-0.21	0.22	9	0.27	0.26	5	0.03	0.19	9	0.13	0.25	6
POL	POLAND	1.21	0.16	8	1.12	0.19	6	0.69	0.22	9	0.84	0.22	7	0.27	0.17	11	0.67	0.21	8
PRT	PORTUGAL	1.42	0.24	5	1.48	0.25	5	1.41	0.23	7	1.39	0.25	6	0.91	0.20	7	1.15	0.23	7
PRI	PUERTO RICO	..	..	..	..	..	..	0.83	0.49	1	0.76	0.53	1	1.38	0.43	1	1.26	0.52	1
QAT	QATAR	-0.54	0.25	3	-0.78	0.25	3	1.40	0.28	4	1.38	0.30	3	0.82	0.24	4	0.48	0.32	3
ROM	ROMANIA	0.50	0.16	7	0.29	0.19	4	-0.08	0.26	7	0.02	0.24	4	-0.54	0.19	9	-0.57	0.26	4
RUS	RUSSIA	-0.35	0.16	8	-0.19	0.19	6	-0.41	0.22	9	-0.69	0.22	7	-0.57	0.17	11	-0.59	0.21	8
RWA	RWANDA	-1.42	0.36	2	-1.17	0.36	1	-1.16	0.63	1	..	..	..	..	..	..	..	..	..
STP	SAO TOME AND PRINCIPE	1.00	0.39	1	0.82	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
SAU	SAUDI ARABIA	-1.07	0.24	4	-1.10	0.25	3	0.51	0.25	5	0.24	0.28	4	0.00	0.22	5	-0.35	0.29	4
SEN	SENEGAL	0.12	0.24	5	-0.29	0.25	4	-0.68	0.31	4	-0.87	0.32	3	0.16	0.26	4	0.05	0.29	4
SLE	SIERRA LEONE	-1.35	0.27	3	-1.62	0.29	2	-1.26	0.51	2	-1.52	0.41	1	-1.60	0.40	2	0.01	0.77	1
SGP	SINGAPORE	0.11	0.24	6	0.13	0.25	6	1.44	0.23	8	1.39	0.25	6	2.16	0.19	9	2.08	0.23	7
SVK	SLOVAK REPUBLIC	0.99	0.16	7	0.52	0.19	5	0.62	0.25	7	0.65	0.23	6	0.23	0.19	8	-0.03	0.22	6
SVN	SLOVENIA	1.07	0.16	7	1.03	0.19	4	0.87	0.24	7	1.09	0.24	4	0.70	0.19	8	0.57	0.26	4
SLB	SOLOMON ISLANDS	0.16	0.39	1	1.17	0.36	1	..	..	..	..	..	..	..	..	..	..	..	..
SOM	SOMALIA	-1.45	0.27	3	-1.69	0.29	2	-1.55	0.51	2	-1.71	0.41	1	-2.34	0.40	2	-1.70	0.77	1
ZAF	SOUTH AFRICA	1.17	0.23	7	0.99	0.25	5	0.07	0.22	9	-0.53	0.24	7	0.25	0.18	10	-0.01	0.21	8
ESP	SPAIN	1.15	0.23	7	1.36	0.25	5	1.01	0.22	9	0.58	0.25	6	1.57	0.19	9	1.60	0.23	7
LKA	SRI LANKA	-0.23	0.24	4	-0.16	0.25	3	-1.63	0.27	5	-1.63	0.30	3	-0.44	0.22	5	-0.61	0.32	3
SDN	SUDAN	-1.53	0.24	4	-1.50	0.25	3	-2.01	0.28	4	-1.73	0.34	2	-1.34	0.24	4	-1.70	0.37	2
SUR	SURINAME	0.63	0.28	2	0.28	0.29	2	0.12	0.65	1	-0.20	0.41	1	0.10	0.53	1	-0.15	0.77	1
SWZ	SWAZILAND	-0.93	0.39	1	-0.78	0.36	1	..	..	..	-1.69	0.61	1	..	..	..	-0.47	0.33	2
SWE	SWEDEN	1.65	0.23	7	1.60	0.25	4	1.38	0.22	9	1.41	0.26	5	1.51	0.19	9	1.57	0.25	6
CHE	SWITZERLAND	1.73	0.23	6	1.68	0.25	5	1.61	0.23	8	1.69	0.25	6	1.93	0.19	8	1.99	0.23	7
SYR	SYRIA	-1.40	0.25	3	-1.36	0.25	3	-0.28	0.28	4	0.08	0.30	3	-0.81	0.24	4	-1.18	0.32	3
TWN	TAIWAN	0.83	0.23	6	0.71	0.25	5	0.70	0.23	8	0.94	0.26	5	0.91	0.19	9	1.29	0.25	6
TJK	TAJIKISTAN	-0.69	0.19	3	-1.13	0.23	2	-1.77	0.42	2	-1.86	0.33	2	-1.31	0.28	3	-1.42	0.34	2
TZA	TANZANIA	-0.07	0.24	5	-0.28	0.25	4	-0.34	0.27	5	0.57	0.27	5	-0.43	0.23	5	-0.49	0.22	6
THA	THAILAND	0.37	0.24	6	0.22	0.25	6	0.21	0.23	8	0.25	0.25	6	0.10	0.19	9	0.01	0.23	7
TGO	TOGO	-1.06	0.28	2	-1.05	0.29	3	-0.62	0.65	1	-0.91	0.37	2	-1.32	0.53	1	-0.37	0.51	2
TTO	TRINIDAD AND TOBAGO	0.61	0.25	4	0.95	0.25	3	0.27	0.32	4	0.32	0.34	2	0.62	0.25	4	0.52	0.37	2
TUN	TUNISIA	-0.61	0.25	4	-0.59	0.25	3	0.82	0.27	5	0.66	0.28	4	1.30	0.23	5	0.63	0.24	5
TUR	TURKEY	-0.55	0.23	7	-0.88	0.25	5	-0.75	0.22	9	-0.94	0.25	6	-0.15	0.18	10	-0.41	0.23	7
TKM	TURKMENISTAN	-1.42	0.19	2	-1.45	0.23	2	0.11	0.49	1	0.00	0.33	2	-1.23	0.32	2	-1.25	0.34	2
UGA	UGANDA	-0.79	0.24	5	-0.52	0.25	4	-1.31	0.27	5	-0.98	0.27	5	-0.32	0.23	5	-0.25	0.22	6
UKR	UKRAINE	-0.31	0.16	6	-0.05	0.19	5	-0.59	0.25	7	-0.24	0.22	7	-0.75	0.19	8	-0.89	0.21	7
ARE	UNITED ARAB EMIRATES	-0.51	0.25	3	-0.54	0.25	3	1.09	0.29	3	0.82	0.30	3	0.60	0.26	3	0.14	0.32	3
GBR	UNITED KINGDOM	1.46	0.23	7	1.51	0.25	5	1.10	0.22	9	0.92	0.25	6	1.77	0.18	10	1.97	0.23	7
USA	UNITED STATES	1.24	0.24	6	1.52	0.25	6	1.18	0.23	8	1.10	0.25	6	1.58	0.19	9	1.37	0.23	7
URY	URUGUAY	1.08	0.24	5	0.77	0.25	3	1.05	0.28	6	0.35	0.30	3	0.61	0.21	7	0.62	0.32	3
UZB	UZBEKISTAN	-1.18	0.18	5	-1.28	0.21	4	-1.17	0.29	4	-0.33	0.27	4	-0.86	0.22	5	-1.30	0.25	4
VEN	VENEZUELA	-0.34	0.24	5	0.15	0.25	5	-0.33	0.23	7	-0.25	0.25	6	-0.81	0.19	8	-0.85	0.23	7
VNM	VIETNAM	-1.29	0.24	4	-1.45	0.25	4	0.44	0.24	6	0.65	0.26	5	-0.30	0.20	6	-0.30	0.26	5
WTB	WEST BANK	0.00	1.00	1	-0.13	0.86	1	-0.39	0.90	1	0.11	0.66	1	0.37	0.70	1	-0.09	0.56	1
WSM	WESTERN SAMOA	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
YEM	YEMEN	-0.63	0.24	4	-0.41	0.25	3	-1.07	0.31	3	-1.47	0.34	2	-0.77	0.27	3	-0.62	0.37	2
YUG	YUGOSLAVIA, FEDERAL REPUBLIC	-0.09	0.17	4	-0.71	0.19	4	-0.48	0.34	2	-1.42	0.26	3	-0.97	0.25	3	-0.95	0.29	3
ZAR	Congo, Dem. Rep. (Zaire)	-1.70	0.27	3	-1.57	0.29	2	-2.59	0.38	3	-2.59	0.34	2	-1.38	0.31	3	-1.77	0.48	2
ZMB	ZAMBIA	-0.17	0.24	5	-0.05	0.25	4	-0.42	0.27	5	0.00	0.27	5	-0.75	0.23	5	-0.40	0.22	6
ZWE	ZIMBABWE	-0.90	0.25	4	-0.67	0.25	4	-1.25	0.28	5	-0.54	0.27	5	-1.03	0.22	5	-1.13	0.22	6

Note: "Est" refers to the point estimate of governance. "S.E." refers to the standard error. "N" refers to the number of sources in which the country appears. Governance indicators are oriented so that higher values correspond to better outcomes, on a scale from -2.5 to 2.5. These ratings are based on subjective assessments from a variety of sources, are subject to substantial margins of error as indicated, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Table 3: Estimates of Governance, Cont'd

	Regulatory Quality						Rule of Law						Control of Corruption					
	2000/01			1997/98			2000/01			1997/98			2000/01			1997/98		
	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
AFG AFGHANISTAN	-2.95	0.46	1	..	..	..	-2.17	0.37	1	..	..	..	-1.47	0.47	1	..	..	..
ALB ALBANIA	-0.21	0.35	5	-0.70	0.26	5	-0.71	0.20	6	-0.92	0.20	6	-0.60	0.20	6	-0.99	0.23	5
DZA ALGERIA	-0.79	0.37	3	-1.17	0.40	3	-0.97	0.24	5	-1.10	0.28	4	-0.62	0.25	4	-0.88	0.27	3
AGO ANGOLA	-1.39	0.37	3	-0.71	0.29	4	-1.49	0.24	5	-1.23	0.27	5	-1.14	0.25	4	-0.86	0.22	4
ARG ARGENTINA	0.25	0.27	7	0.67	0.23	5	0.22	0.18	11	0.32	0.22	7	-0.36	0.17	11	-0.27	0.20	7
ARM ARMENIA	-0.53	0.35	5	-0.57	0.26	5	-0.35	0.21	6	-0.15	0.20	6	-0.80	0.23	5	-0.80	0.23	5
AUS AUSTRALIA	1.18	0.29	5	0.96	0.23	5	1.69	0.18	8	1.60	0.22	7	1.75	0.20	7	1.60	0.21	6
AUT AUSTRIA	1.19	0.29	5	0.90	0.23	6	1.86	0.19	8	1.81	0.21	8	1.56	0.22	7	1.46	0.19	8
AZE AZERBAIJAN	-0.14	0.35	5	-1.00	0.26	5	-0.78	0.19	7	-0.56	0.18	7	-1.05	0.18	7	-1.00	0.19	6
BHS BAHAMAS	0.73	0.54	2	0.87	0.52	2	0.85	0.43	2	0.56	0.44	2	0.74	0.65	1	0.50	0.75	1
BHR BAHRAIN	0.78	0.37	3	0.75	0.40	3	0.42	0.24	5	0.66	0.28	4	0.04	0.25	4	-0.21	0.27	3
BGD BANGLADESH	0.01	0.37	4	-0.16	0.40	3	-0.76	0.24	6	-0.93	0.28	4	-0.64	0.23	5	-0.29	0.27	3
BRB BARBADOS	0.39	0.64	1	0.61	0.60	1	1.16	0.52	1	0.41	0.60	1	..	..	..	..	..	..
BLR BELARUS	-2.28	0.37	4	-1.47	0.26	5	-0.81	0.20	7	-0.88	0.20	6	-0.06	0.21	6	-0.65	0.22	6
BEL BELGIUM	0.58	0.28	6	0.79	0.23	5	1.34	0.19	8	0.80	0.22	7	1.05	0.22	7	0.67	0.20	7
BLZ BELIZE	0.03	0.63	2	0.29	0.60	1	0.74	0.45	2	0.09	0.60	1	0.48	0.48	1	..	..	..
BEN BENIN	0.07	0.64	1	-0.08	0.60	2	-0.57	0.43	2	-0.42	0.45	2	..	..	..	-0.78	0.54	1
BTN BHUTAN	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BOL BOLIVIA	0.66	0.34	5	0.88	0.39	4	-0.41	0.21	8	-0.35	0.26	5	-0.72	0.21	7	-0.44	0.23	5
BIH BOSNIA-HERZEGOVINA	-1.18	0.54	3	-1.26	0.30	2	-0.75	0.26	4	-1.11	0.23	3	-0.49	0.26	3	-0.35	0.46	1
BWA BOTSWANA	1.02	0.37	4	0.57	0.29	4	0.68	0.24	6	0.50	0.27	5	0.89	0.23	5	0.54	0.22	4
BRA BRAZIL	0.13	0.27	7	0.13	0.23	6	-0.26	0.18	10	-0.22	0.21	8	-0.02	0.17	10	0.06	0.19	8
BRN BRUNEI	0.19	0.71	1	-0.08	0.72	1	1.29	0.60	1	1.25	0.55	1	-0.17	0.65	1	-0.02	0.75	1
BGR BULGARIA	0.16	0.32	6	0.52	0.26	5	0.02	0.17	9	-0.15	0.18	7	-0.16	0.17	9	-0.56	0.18	7
BFA BURKINA FASO	0.04	0.54	2	-0.04	0.33	3	-0.79	0.37	3	-0.35	0.43	3	-0.93	0.39	2	-0.37	0.36	2
BDI BURUNDI	-0.59	0.50	2	-0.85	0.60	1	-1.07	0.29	3	-0.88	0.60	1	-1.40	0.33	2	..	..	..
KHM CAMBODIA	0.24	0.63	2	-0.04	0.60	1	-0.38	0.45	2	-0.23	0.60	1	0.34	0.48	1	..	..	..
CMR CAMEROON	0.05	0.37	4	-0.16	0.29	5	-1.02	0.25	6	-1.02	0.25	6	-1.11	0.25	5	-1.10	0.21	5
CAN CANADA	1.07	0.29	6	0.87	0.23	6	1.70	0.18	10	1.55	0.21	8	2.05	0.19	9	2.06	0.20	7
CPV CAPE VERDE	-0.41	0.64	1	-1.01	0.60	1	0.15	0.52	1	0.09	0.60	1	..	..	..	..	..	..
CAF CENTRAL AFRICAN REPUBLIC	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TCD CHAD	-0.57	0.64	1	-0.74	0.60	2	-0.86	0.52	1	-0.83	0.45	2	..	..	..	-0.59	0.54	1
CHL CHILE	1.10	0.27	7	0.90	0.23	5	1.19	0.18	11	1.09	0.22	7	1.40	0.17	11	1.03	0.20	7
CHN CHINA	-0.13	0.27	7	-0.07	0.23	5	-0.19	0.18	9	-0.04	0.22	7	-0.30	0.16	10	-0.29	0.16	7
COL COLOMBIA	0.02	0.27	7	0.29	0.23	6	-0.77	0.18	11	-0.78	0.21	8	-0.39	0.17	11	-0.49	0.19	8
COM COMOROS	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
COG CONGO	-0.76	0.54	2	-0.99	0.52	3	-1.11	0.37	3	-1.44	0.37	3	-0.49	0.39	2	-0.60	0.48	2
CRI COSTA RICA	0.88	0.34	5	0.93	0.39	4	0.61	0.20	8	0.55	0.24	6	0.87	0.19	7	0.58	0.21	6
CIV IVORY COAST	-0.30	0.37	4	0.15	0.29	5	-0.54	0.25	5	-0.33	0.25	6	-0.71	0.26	4	-0.08	0.21	5
HRV CROATIA	0.20	0.35	5	0.24	0.26	4	0.29	0.20	7	0.15	0.19	6	0.02	0.19	7	-0.46	0.20	5
CUB CUBA	-1.23	0.37	3	-0.87	0.40	3	-0.32	0.24	5	0.11	0.28	4	-0.12	0.25	4	0.27	0.27	3
CYP CYPRUS	0.83	0.37	3	0.84	0.40	3	0.96	0.26	4	0.93	0.28	4	1.24	0.30	3	1.81	0.27	3
CZE CZECH REPUBLIC	0.54	0.26	8	0.57	0.19	7	0.64	0.16	10	0.54	0.16	10	0.31	0.16	11	0.38	0.16	9
DNK DENMARK	1.09	0.29	5	1.05	0.23	5	1.71	0.18	9	1.69	0.22	7	2.09	0.20	8	2.13	0.20	7
DJI DJIBOUTI	-0.41	0.64	1	-0.52	0.60	1	-0.19	0.52	1	-0.23	0.60	1	..	..	..	..	..	..
DOM DOMINICAN REPUBLIC	0.60	0.34	5	0.54	0.52	2	0.01	0.21	7	0.38	0.31	3	-0.20	0.22	6	-0.77	0.30	2
ECU ECUADOR	0.00	0.31	6	0.38	0.39	4	-0.76	0.19	9	-0.72	0.24	6	-0.98	0.19	9	-0.82	0.24	5
EGY EGYPT	0.13	0.31	6	0.12	0.23	5	0.21	0.19	8	0.13	0.23	7	-0.16	0.20	8	-0.27	0.20	6
SLV EL SALVADOR	0.94	0.44	4	1.23	0.52	2	-0.65	0.24	7	-0.66	0.28	4	-0.33	0.21	6	-0.35	0.22	4
GNQ EQUATORIAL GUINEA	-0.90	0.64	1	-1.33	0.60	1	-1.20	0.52	1	-1.20	0.60	1	..	..	..	..	..	..
ERI ERITREA	..	..	..	..	..	..	-0.43	0.60	1	..	..	..	-0.97	0.44	1	..	..	..
EST ESTONIA	1.09	0.28	7	0.74	0.26	5	0.78	0.16	10	0.51	0.18	7	0.73	0.16	10	0.59	0.18	7
ETH ETHIOPIA	-0.71	0.53	3	-0.03	0.33	3	-0.24	0.34	4	0.27	0.43	3	-0.40	0.32	3	-0.44	0.36	2
FJI FIJI	-0.41	0.64	1	-0.37	0.60	2	-0.52	0.52	1	-0.50	0.45	2	1.01	0.44	1	0.81	0.54	1
FIN FINLAND	1.42	0.29	5	1.14	0.23	5	1.83	0.18	9	1.74	0.22	7	2.25	0.20	8	2.08	0.20	7
FRA FRANCE	0.59	0.29	6	0.71	0.23	6	1.22	0.18	10	1.08	0.21	8	1.15	0.19	8	1.28	0.20	7
GAB GABON	-0.12	0.37	3	0.35	0.52	2	-0.44	0.24	5	-0.53	0.31	3	-0.58	0.25	4	-1.02	0.30	2
GMB GAMBIA	-0.01	0.54	2	-0.25	0.52	2	0.00	0.43	2	0.27	0.44	2	0.13	0.65	1	-0.02	0.75	1
GEO GEORGIA	-0.75	0.37	4	-0.85	0.27	4	-0.43	0.21	6	-0.49	0.21	5	-0.69	0.20	6	-0.74	0.24	4
DEU GERMANY	1.08	0.29	6	0.89	0.23	6	1.57	0.18	10	1.48	0.21	8	1.38	0.19	8	1.62	0.19	8
GHA GHANA	0.24	0.37	4	0.28	0.29	5	-0.08	0.25	6	-0.01	0.25	6	-0.28	0.25	5	-0.30	0.21	5

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	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
GRC GREECE	0.71	0.27	6	0.60	0.23	5	0.62	0.19	7	0.50	0.22	7	0.73	0.21	7	0.82	0.20	7
GTM GUATEMALA	0.16	0.40	5	0.44	0.52	2	-1.00	0.24	7	-1.11	0.28	4	-0.69	0.20	7	-0.82	0.25	3
GIN GUINEA	0.16	0.54	2	0.20	0.52	3	-0.59	0.43	2	-0.76	0.37	3	0.13	0.65	1	-0.85	0.48	2
GNB GUINEA-BISSAU	-1.04	0.54	2	-1.35	0.52	3	-1.50	0.37	3	-1.61	0.37	3	0.10	0.39	2	-0.18	0.48	2
GUY GUYANA	0.04	0.54	2	0.23	0.52	2	0.13	0.37	3	-0.14	0.44	2	-0.45	0.39	2	-0.02	0.75	1
HTI HAITI	-1.29	0.53	3	-1.13	0.52	2	-1.45	0.34	4	-1.50	0.44	2	-0.84	0.32	3	-0.53	0.75	1
HND HONDURAS	-0.16	0.44	4	0.08	0.52	2	-1.06	0.24	7	-0.90	0.28	4	-0.63	0.21	6	-0.94	0.25	3
HKG HONG KONG	1.44	0.27	6	1.21	0.23	6	1.37	0.20	7	1.33	0.22	7	1.16	0.18	8	1.31	0.16	8
HUN HUNGARY	0.88	0.26	8	0.85	0.19	7	0.76	0.15	11	0.71	0.16	10	0.65	0.15	12	0.61	0.16	10
ISL ICELAND	1.08	0.35	4	0.61	0.25	4	1.77	0.26	5	1.47	0.30	4	2.16	0.30	4	1.83	0.31	3
IND INDIA	-0.16	0.27	7	-0.04	0.23	6	0.23	0.18	9	0.16	0.21	8	-0.39	0.16	10	-0.31	0.15	9
IDN INDONESIA	-0.43	0.27	7	0.12	0.23	5	-0.87	0.18	9	-0.92	0.22	7	-1.01	0.16	10	-0.80	0.16	7
IRN IRAN	-1.07	0.37	3	-1.25	0.40	3	-0.39	0.22	6	-0.36	0.26	5	-0.64	0.25	5	-0.85	0.26	4
IRQ IRAQ	-2.78	0.37	3	-3.14	0.40	3	-1.64	0.24	5	-1.84	0.28	4	-1.15	0.25	4	-1.26	0.27	3
IRL IRELAND	1.33	0.29	5	1.16	0.23	6	1.54	0.18	9	1.39	0.21	8	1.16	0.20	8	1.57	0.19	8
ISR ISRAEL	0.73	0.27	6	0.53	0.23	5	0.94	0.19	7	0.97	0.23	6	1.12	0.20	7	1.28	0.20	6
ITA ITALY	0.59	0.27	7	0.59	0.23	6	0.72	0.18	10	0.86	0.21	8	0.63	0.18	10	0.80	0.19	8
JAM JAMAICA	0.42	0.45	3	0.76	0.52	3	-0.38	0.26	4	-0.73	0.29	4	-0.06	0.29	3	-0.12	0.27	3
JPN JAPAN	0.64	0.27	6	0.39	0.23	5	1.59	0.18	9	1.42	0.25	6	1.20	0.17	10	0.72	0.16	8
JOR JORDAN	0.73	0.34	4	0.42	0.27	5	0.66	0.21	6	0.71	0.24	6	0.09	0.23	5	0.14	0.22	5
KAZ KAZAKHSTAN	-0.51	0.35	5	-0.40	0.26	5	-0.60	0.18	9	-0.59	0.17	8	-0.83	0.18	8	-0.87	0.19	7
KEN KENYA	-0.26	0.34	5	-0.13	0.29	5	-1.21	0.24	6	-1.22	0.25	6	-1.11	0.22	6	-0.65	0.21	5
PRK KOREA, NORTH	-1.39	0.54	2	-1.40	0.52	2	-0.74	0.37	3	-0.67	0.44	2	-0.90	0.39	2	-0.53	0.75	1
KOR KOREA, SOUTH	0.30	0.27	6	0.22	0.23	6	0.55	0.18	9	0.94	0.21	8	0.37	0.17	10	0.16	0.15	9
KWT KUWAIT	-0.13	0.37	3	-0.09	0.40	3	1.10	0.26	4	0.91	0.28	4	0.59	0.30	3	0.62	0.27	3
KGZ KYRGYZ REPUBLIC	-0.63	0.37	4	-0.76	0.27	4	-0.72	0.22	4	-0.47	0.21	5	-0.85	0.23	4	-0.76	0.24	4
LAO LAOS	-1.54	0.64	1	-1.82	0.60	1	-0.72	0.43	2	-1.20	0.60	1	-0.31	0.44	1	..	..	..
LVA LATVIA	0.30	0.32	5	0.51	0.26	5	0.36	0.18	7	0.15	0.18	7	-0.03	0.19	7	-0.26	0.18	7
LBN LEBANON	0.30	0.37	3	0.10	0.40	3	-0.05	0.24	5	0.26	0.28	4	-0.63	0.25	4	-0.40	0.27	3
LSO LESOTHO	-0.17	0.64	1	-0.06	0.35	2	-0.19	0.52	1	-0.24	0.57	2	..	..	..	0.19	0.38	1
LBR LIBERIA	-1.29	0.71	1	-1.25	0.72	1	-1.03	0.47	2	-1.29	0.55	1	-0.59	0.39	2	-1.05	0.75	1
LBY LIBYA	-1.64	0.37	3	-2.38	0.40	3	-0.89	0.26	4	-1.11	0.28	4	-0.90	0.30	3	-0.88	0.27	3
LTU LITHUANIA	0.30	0.30	7	0.09	0.26	5	0.29	0.17	9	0.18	0.18	7	0.20	0.16	10	0.03	0.19	6
LUX LUXEMBOURG	1.49	0.38	3	0.95	0.25	4	1.86	0.33	4	1.62	0.30	4	1.78	0.37	3	1.67	0.28	4
MKD MACEDONIA, FORMER YUGOSLAVIA	-0.23	0.72	1	-0.31	0.33	2	-0.33	0.27	3	-0.26	0.20	4	-0.51	0.25	3	-0.52	0.20	4
MDG MADAGASCAR	-0.05	0.53	3	-0.21	0.52	3	-0.68	0.34	4	-0.82	0.37	3	-0.93	0.32	3	-0.47	0.48	2
MWI MALAWI	0.28	0.53	3	0.08	0.33	4	-0.36	0.29	5	-0.41	0.28	5	0.10	0.26	4	-0.19	0.22	4
MYS MALAYSIA	0.22	0.29	6	0.48	0.23	6	0.34	0.18	10	0.83	0.21	8	0.13	0.18	9	0.63	0.16	8
MDV MALDIVES	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MLI MALI	0.27	0.54	2	0.29	0.52	3	-0.66	0.37	3	-0.47	0.37	3	-0.41	0.39	2	-0.48	0.48	2
MLT MALTA	0.33	0.54	2	0.39	0.52	2	0.68	0.43	2	0.86	0.44	2	0.13	0.65	1	0.50	0.75	1
MRT MAURITANIA	-0.57	0.64	1	-0.85	0.60	1	-0.57	0.43	2	-0.56	0.60	1	-0.97	0.44	1	..	..	..
MUS MAURITIUS	0.41	0.50	2	0.22	0.35	3	1.00	0.26	4	1.28	0.31	4	0.49	0.26	3	0.34	0.23	3
MEX MEXICO	0.58	0.27	7	0.61	0.23	6	-0.41	0.18	11	-0.47	0.21	8	-0.28	0.17	11	-0.28	0.20	7
MDA MOLDOVA	-1.11	0.35	5	-0.28	0.26	5	-0.42	0.19	7	-0.02	0.18	7	-0.83	0.18	7	-0.39	0.19	6
MNG MONGOLIA	0.16	0.54	2	0.17	0.52	2	0.42	0.37	3	0.04	0.32	3	-0.19	0.39	2	-0.15	0.42	2
MAR MOROCCO	0.54	0.37	3	0.22	0.29	5	0.46	0.26	4	0.68	0.25	6	0.44	0.30	3	0.13	0.21	5
MOZ MOZAMBIQUE	0.16	0.54	2	-0.23	0.33	4	-0.32	0.37	3	-1.05	0.36	4	0.10	0.39	2	-0.53	0.31	3
MMR MYANMAR	-1.15	0.37	3	-1.01	0.40	3	-1.02	0.24	5	-0.84	0.28	4	-1.18	0.25	4	-1.10	0.27	3
NAM NAMIBIA	0.53	0.53	3	0.27	0.33	3	1.24	0.29	5	0.95	0.31	4	1.25	0.26	4	0.38	0.24	3
NPL NEPAL	-0.41	0.64	1	-0.36	0.60	1	-0.65	0.43	2	-0.56	0.60	1	-0.31	0.44	1	..	..	..
NLD NETHERLANDS	1.50	0.29	5	1.14	0.23	5	1.67	0.18	9	1.58	0.22	7	2.09	0.20	8	2.03	0.20	7
NZL NEW ZEALAND	1.13	0.29	5	1.20	0.23	5	1.71	0.19	7	1.82	0.23	6	2.09	0.21	6	2.07	0.20	6
NIC NICARAGUA	-0.16	0.44	4	-0.10	0.52	2	-0.79	0.24	7	-0.73	0.28	4	-0.80	0.21	6	-0.84	0.25	3
NER NIGER	-0.30	0.54	2	-0.52	0.52	2	-1.17	0.37	3	-1.14	0.44	2	-1.09	0.65	1	-1.57	0.75	1
NGA NIGERIA	-0.39	0.34	5	-0.35	0.29	5	-1.13	0.20	8	-1.10	0.25	6	-1.05	0.20	7	-0.95	0.20	6
NOR NORWAY	0.73	0.29	5	0.93	0.23	5	1.70	0.19	8	1.83	0.22	7	1.76	0.22	7	1.69	0.20	7
OMN OMAN	0.60	0.37	3	0.30	0.40	3	1.06	0.24	5	1.08	0.28	4	0.44	0.25	4	0.48	0.27	3
PAK PAKISTAN	-0.38	0.34	5	-0.20	0.27	4	-0.74	0.22	7	-0.76	0.24	6	-0.79	0.24	6	-0.77	0.22	6
PAN PANAMA	0.91	0.34	5	1.00	0.40	3	-0.12	0.20	8	-0.39	0.28	4	-0.45	0.19	7	-0.46	0.27	3
PNG PAPUA NEW GUINEA	-0.38	0.37	3	-0.13	0.52	2	-0.28	0.24	5	-0.31	0.31	3	-1.21	0.25	4	-0.85	0.30	2

Note: "Est" refers to the point estimate of governance. "S.E." refers to the standard error. "N" refers to the number of sources in which the country appears. Governance indicators are oriented so that higher values correspond to better outcomes, on a scale from -2.5 to 2.5. These ratings are based on subjective assessments from a variety of sources, are subject to substantial margins of error as indicated, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Table 3: Estimates of Governance, Cont'd

	Regulatory Quality						Rule of Law						Control of Corruption					
	2000/01			1997/98			2000/01			1997/98			2000/01			1997/98		
	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N	Est.	S.E.	N
PRY PARAGUAY	-0.43	0.45	3	0.37	0.52	3	-0.83	0.26	6	-0.70	0.29	4	-0.97	0.24	5	-0.96	0.27	3
PER PERU	0.36	0.31	6	0.67	0.27	5	-0.53	0.19	10	-0.52	0.22	7	-0.04	0.18	10	-0.20	0.21	6
PHL PHILIPPINES	0.21	0.29	6	0.57	0.23	5	-0.49	0.18	10	-0.08	0.22	7	-0.49	0.17	10	-0.23	0.16	7
POL POLAND	0.41	0.26	8	0.56	0.19	7	0.55	0.15	11	0.54	0.16	10	0.43	0.15	12	0.49	0.16	9
PRT PORTUGAL	0.81	0.29	6	0.89	0.23	6	0.94	0.18	8	1.08	0.21	8	1.21	0.21	7	1.22	0.19	8
PRI PUERTO RICO	0.93	0.46	1	0.84	0.52	1	0.99	0.37	1	0.77	0.50	1	1.18	0.47	1	1.12	0.53	1
QAT QATAR	0.38	0.37	3	0.33	0.40	3	1.00	0.24	5	1.27	0.28	4	0.57	0.25	4	0.57	0.27	3
ROM ROMANIA	-0.28	0.30	7	0.20	0.26	4	-0.02	0.17	9	-0.09	0.19	6	-0.51	0.16	10	-0.46	0.19	6
RUS RUSSIA	-1.40	0.26	8	-0.30	0.19	7	-0.87	0.15	11	-0.72	0.16	10	-1.01	0.15	12	-0.62	0.16	10
RWA RWANDA	-0.73	0.64	1	-1.17	0.60	1	-1.17	0.43	2	-1.20	0.60	1	0.35	0.44	1	..	..	..
STP SAO TOME AND PRINCIPE	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SAU SAUDI ARABIA	-0.11	0.37	3	-0.15	0.40	3	0.19	0.22	6	0.49	0.26	5	-0.35	0.25	5	-0.58	0.26	4
SEN SENEGAL	-0.38	0.53	3	-0.34	0.52	3	-0.13	0.29	5	-0.10	0.29	4	-0.39	0.26	4	-0.24	0.27	3
SLE SIERRA LEONE	-1.21	0.54	2	-1.50	0.52	2	-0.38	0.37	3	-0.91	0.44	2	-0.45	0.39	2	-0.02	0.75	1
SGP SINGAPORE	1.82	0.27	7	1.24	0.23	6	1.85	0.18	9	1.94	0.21	8	2.13	0.17	10	1.95	0.16	8
SVK SLOVAK REPUBLIC	0.27	0.28	7	0.17	0.22	6	0.36	0.17	9	0.13	0.17	8	0.23	0.17	9	0.03	0.17	7
SVN SLOVENIA	0.52	0.28	7	0.53	0.26	4	0.89	0.16	9	0.83	0.19	6	1.09	0.16	9	1.02	0.21	4
SLB SOLOMON ISLANDS	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOM SOMALIA	-1.50	0.54	2	-1.77	0.52	2	-1.29	0.37	3	-1.50	0.44	2	-1.16	0.39	2	-1.05	0.75	1
ZAF SOUTH AFRICA	0.07	0.27	7	0.24	0.20	7	-0.05	0.18	10	-0.35	0.21	9	0.35	0.18	10	0.30	0.17	9
ESP SPAIN	1.08	0.29	6	0.86	0.23	6	1.12	0.18	10	1.03	0.21	8	1.45	0.19	9	1.21	0.19	8
LKA SRI LANKA	0.38	0.34	4	0.62	0.40	3	-0.31	0.21	6	-0.36	0.28	4	0.00	0.23	5	-0.12	0.27	3
SDN SUDAN	-0.41	0.37	3	-0.83	0.52	2	-1.04	0.24	5	-1.35	0.31	3	-1.24	0.25	4	-1.02	0.30	2
SUR SURINAME	-0.81	0.54	2	-0.59	0.52	2	-0.59	0.43	2	-0.73	0.44	2	0.13	0.65	1	-0.02	0.75	1
SWZ SWAZILAND	0.23	0.64	1	0.29	0.35	2	0.15	0.52	1	-0.06	0.57	2	..	..	..	0.01	0.38	1
SWE SWEDEN	1.08	0.29	6	0.85	0.23	5	1.70	0.18	10	1.62	0.22	7	2.21	0.19	9	2.09	0.20	7
CHE SWITZERLAND	1.21	0.29	5	0.88	0.23	6	1.91	0.18	9	2.00	0.21	8	1.91	0.20	8	2.07	0.19	8
SYR SYRIA	-0.66	0.37	3	-0.92	0.40	3	-0.52	0.24	5	-0.29	0.28	4	-0.83	0.25	4	-0.79	0.27	3
TWN TAIWAN	0.73	0.27	6	0.83	0.23	5	0.75	0.18	9	0.93	0.22	7	0.53	0.17	10	0.63	0.16	8
TJK TAJIKISTAN	-1.46	0.38	3	-1.52	0.27	3	-1.25	0.22	4	-1.33	0.22	4	-1.08	0.24	3	-1.32	0.26	3
TZA TANZANIA	-0.02	0.37	4	0.18	0.29	5	0.16	0.24	6	0.16	0.25	6	-0.92	0.23	5	-0.92	0.21	5
THA THAILAND	0.56	0.27	7	0.19	0.23	6	0.44	0.18	9	0.41	0.21	8	-0.46	0.17	10	-0.16	0.16	8
TGO TOGO	-0.99	0.54	2	-0.85	0.52	3	-0.82	0.43	2	-0.80	0.37	3	-0.48	0.65	1	-0.24	0.48	2
TTO TRINIDAD AND TOBAGO	0.86	0.44	4	0.72	0.52	2	0.41	0.25	5	0.51	0.31	3	0.49	0.26	4	0.51	0.30	2
TUN TUNISIA	0.81	0.37	4	0.43	0.29	4	0.81	0.24	6	0.65	0.27	5	0.86	0.23	5	0.02	0.22	4
TUR TURKEY	0.04	0.27	7	0.59	0.23	6	-0.16	0.18	10	-0.01	0.21	8	-0.48	0.18	10	-0.35	0.19	8
TKM TURKMENISTAN	-1.73	0.38	3	-1.93	0.27	3	-1.02	0.23	3	-0.97	0.22	4	-1.12	0.27	2	-1.29	0.26	3
UGA UGANDA	-0.20	0.37	4	0.18	0.29	5	-0.65	0.24	6	-0.01	0.25	6	-0.92	0.23	5	-0.47	0.21	5
UKR UKRAINE	-1.05	0.32	6	-0.72	0.22	6	-0.63	0.17	9	-0.71	0.17	9	-0.90	0.18	9	-0.89	0.17	9
ARE UNITED ARAB EMIRATES	0.39	0.37	3	0.30	0.40	3	1.12	0.26	4	0.77	0.28	4	0.13	0.30	3	-0.03	0.27	3
GBR UNITED KINGDOM	1.32	0.27	7	1.21	0.23	6	1.61	0.18	10	1.69	0.21	8	1.86	0.18	10	1.71	0.19	8
USA UNITED STATES	1.19	0.27	7	1.14	0.23	6	1.58	0.18	9	1.25	0.21	8	1.45	0.19	9	1.41	0.20	7
URY URUGUAY	0.95	0.31	6	0.95	0.40	3	0.63	0.21	8	0.27	0.28	4	0.71	0.20	8	0.43	0.25	4
UZB UZBEKISTAN	-1.17	0.37	4	-1.40	0.27	4	-0.71	0.20	6	-0.87	0.19	6	-0.66	0.20	5	-0.96	0.19	5
VEN VENEZUELA	-0.30	0.27	7	0.09	0.23	6	-0.81	0.18	9	-0.66	0.21	8	-0.59	0.19	9	-0.72	0.20	7
VNM VIETNAM	-0.50	0.34	4	-0.46	0.27	4	-0.57	0.19	7	-0.44	0.24	6	-0.76	0.19	7	-0.33	0.17	6
WTB WEST BANK	0.49	0.96	1	-0.16	0.98	1	0.30	0.68	1	1.22	0.56	1	0.68	0.48	1	0.36	0.54	1
WSM WESTERN SAMOA	0.23	0.64	1	..	..	..	0.49	0.52	1	..	..	..	..	..	..	..	..	..
YEM YEMEN	-0.30	0.54	2	-0.52	0.52	2	-1.12	0.31	4	-1.01	0.31	3	-0.70	0.29	3	-0.85	0.30	2
YUG YUGOSLAVIA, FEDERAL REPUBLI	-0.70	0.71	1	-1.54	0.72	1	-0.94	0.25	3	-0.81	0.20	4	-1.04	0.24	3	-0.99	0.20	5
ZAR Congo, Dem. Rep. (Zaire)	-2.87	0.37	3	-2.34	0.40	3	-2.09	0.27	4	-2.15	0.35	3	-1.24	0.32	3	-1.56	0.48	2
ZMB ZAMBIA	0.49	0.37	4	0.25	0.29	5	-0.39	0.24	6	-0.40	0.25	6	-0.87	0.23	5	-0.61	0.21	5
ZWE ZIMBABWE	-1.66	0.34	5	-0.34	0.23	6	-0.94	0.21	6	-0.15	0.23	7	-1.08	0.23	5	-0.32	0.18	7

Note: "Est" refers to the point estimate of governance. "S.E." refers to the standard error. "N" refers to the number of sources in which the country appears. Governance indicators are oriented so that higher values correspond to better outcomes, on a scale from -2.5 to 2.5. These ratings are based on subjective assessments from a variety of sources, are subject to substantial margins of error as indicated, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Table 4 – Regression Results

	<u>OLS</u>	<u>IV</u>	<u>First-Stage</u>
Dependent Variable	In(Per Capita GDP)	In(Per Capita GDP)	Governance
Intercept	7.867 (0.051)	7.845 (0.058)	2.445 (0.284)
Governance	0.999 (0.055)	1.370 (0.095)	
Imputed Settler Mortality			-0.547 (0.064)
SD(Residuals)	0.630	0.820	0.741
# Observations	153	153	153
R-Squared	0.69	0.69	0.37

Notes: This table summarizes the results of estimating Equation (3.1) by OLS and IV (columns 1 and 2), and the corresponding first-stage regression (column 3).

Table 5 -- Regression Results Using Other Dimensions of Governance

	<u>OLS</u>	<u>IV</u>	<u># Observations</u>
Voice and Accountability	0.806 (0.074)	1.495 (0.151)	158
Political Stability	0.951 (0.068)	1.546 (0.156)	146
Government Effectiveness	0.978 (0.058)	1.389 (0.121)	144
Regulatory Quality	0.966 (0.084)	2.242 (0.301)	152
Control of Corruption	0.920 (0.063)	1.412 (0.139)	145

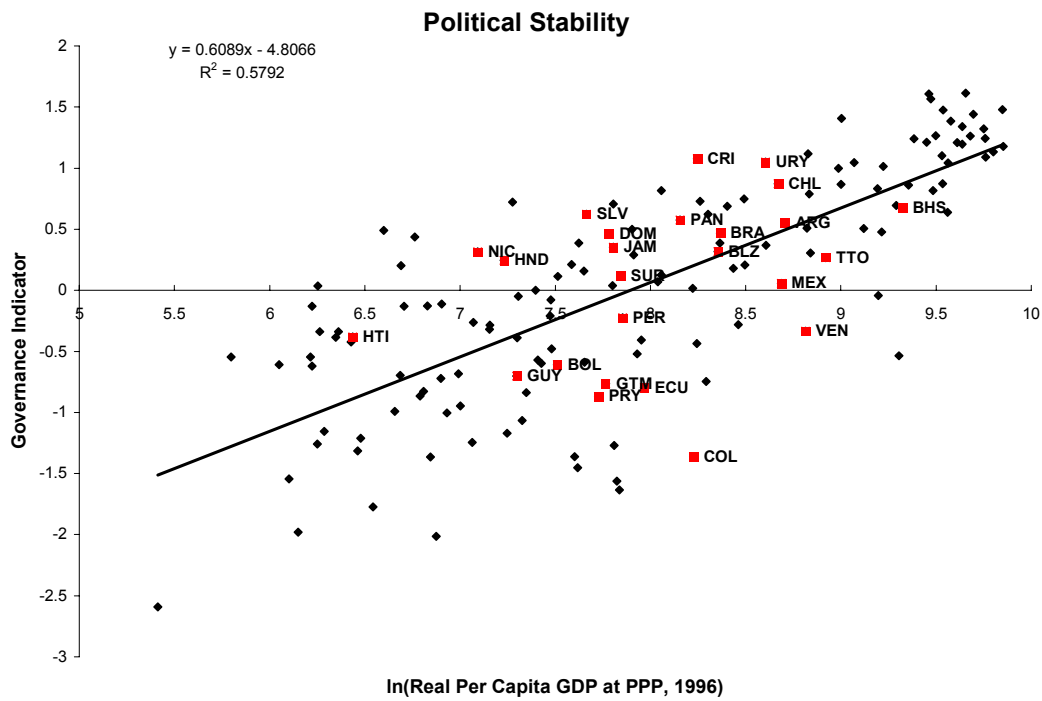
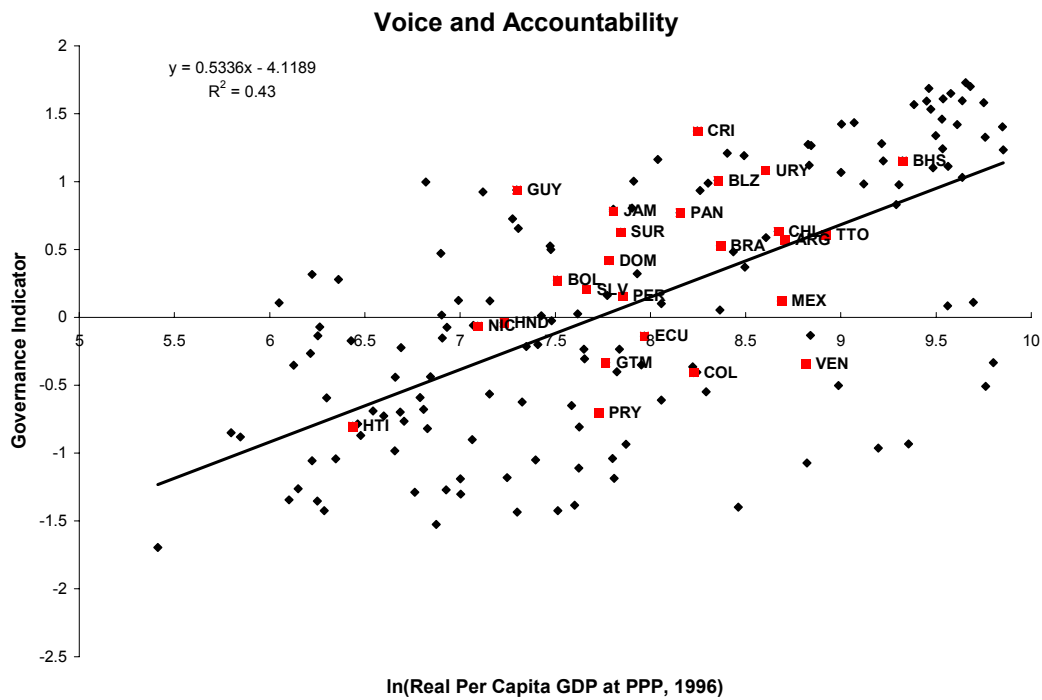
Notes: This table summarizes the results of estimating Equation (3.1) by OLS and IV for five other dimensions of governance. For reasons of space only the estimated slope coefficients and the number of observations are reported.

Table 6 – Identifying the Effects of Income on Governance

$\rho=0$							
$\sigma_u=$	0.27	0.30	0.35	0.40	0.45	0.50	0.54
γ	-1.28	-1.15	-0.90	-0.62	-0.29	0.07	0.39
δ	-1.51	-1.41	-1.22	-1.01	-0.77	-0.49	-0.25
σ_v	1.68	1.56	1.35	1.10	0.81	0.49	0.21
$\sigma_u=0.27$							
$\rho=$	-0.20	-0.10	0.00	0.10	0.20		
γ	-0.48	-0.78	-1.28	-2.27	-5.32		
δ	-0.90	-1.14	-1.51	-2.25	-4.54		
σ_v	1.03	1.27	1.68	2.51	5.14		

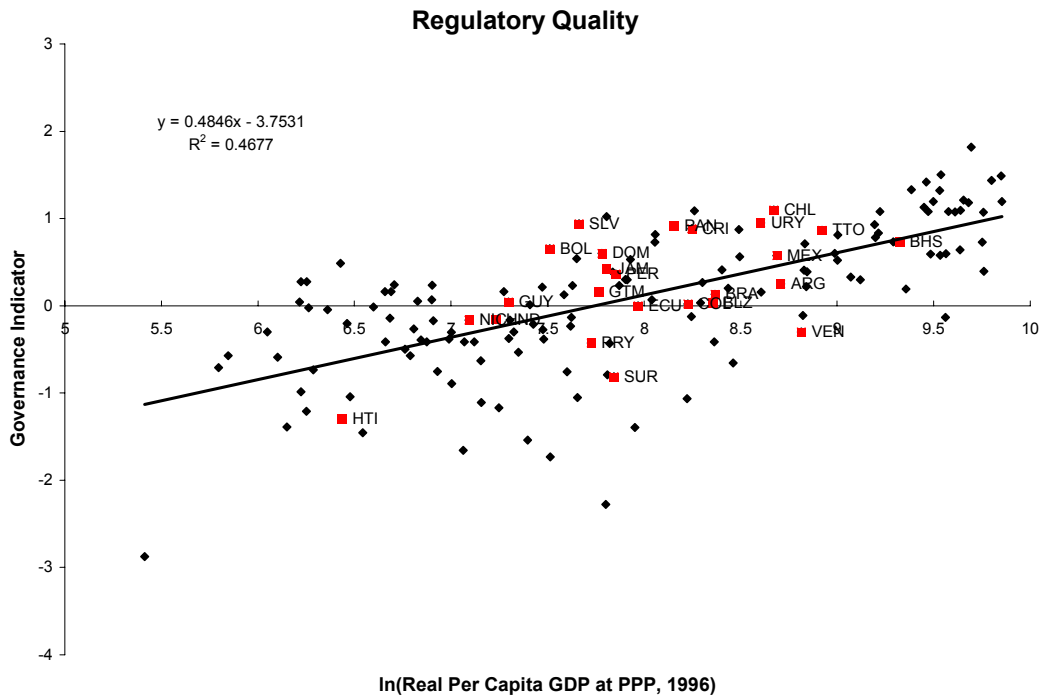
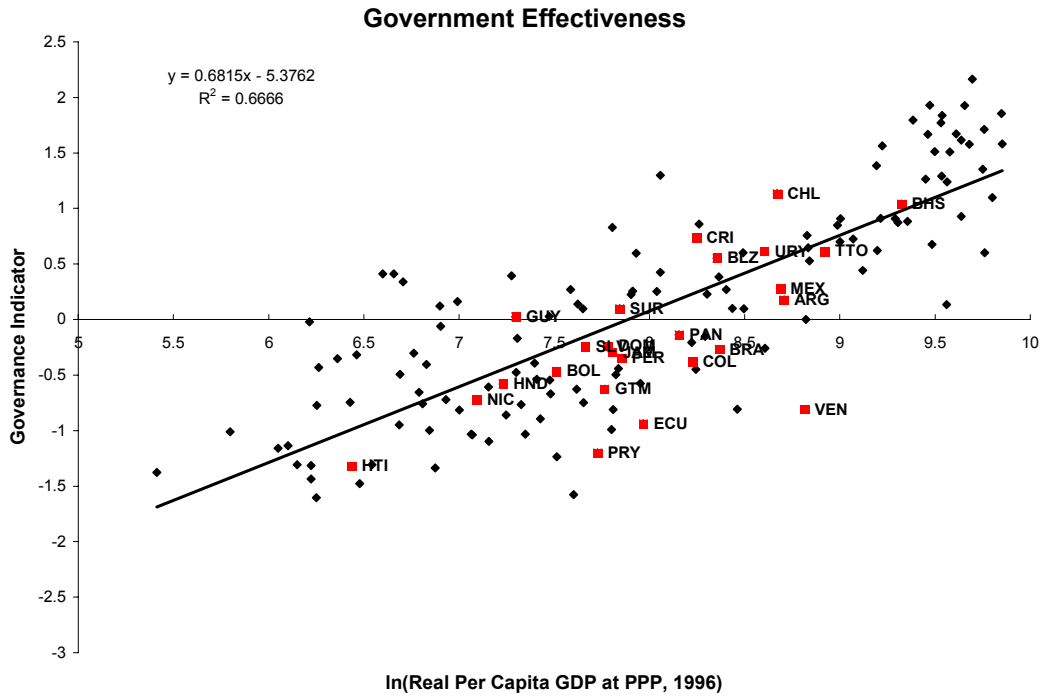
Notes: This table reports estimates of the effect of per capita incomes and history on governance (γ and δ respectively), and the variance of the error term in Equation (3.2) (σ_v), for the indicated assumptions on measurement error in governance (σ_u) and the correlation between the errors in Equations (3.1) and (3.2) (ρ).

Figure 1 – Governance and Per Capita Incomes in LAC



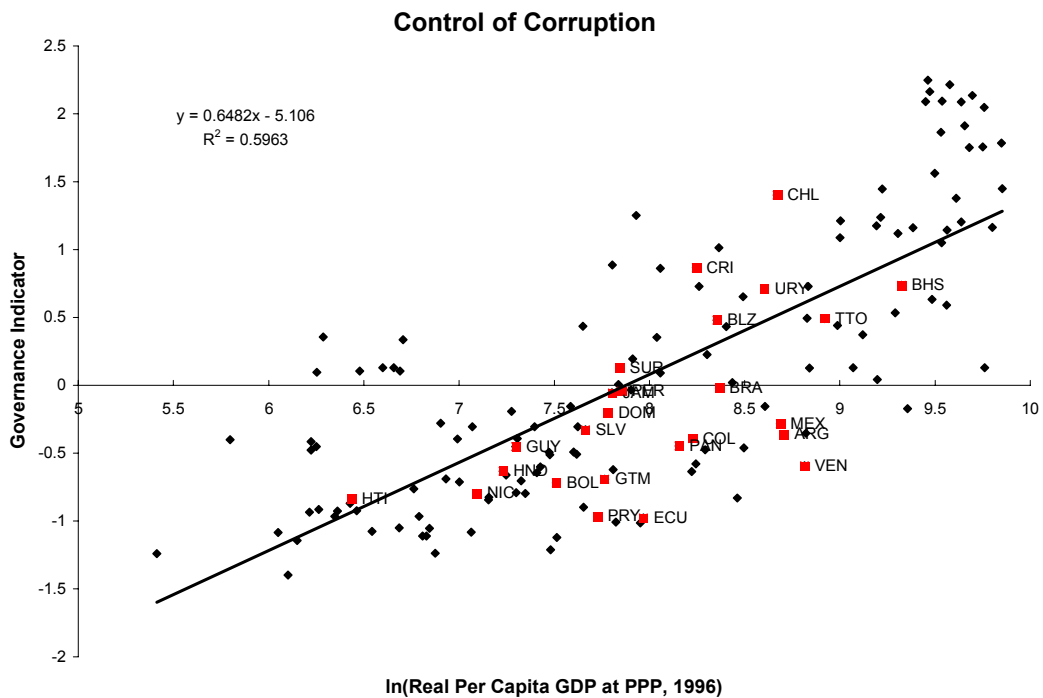
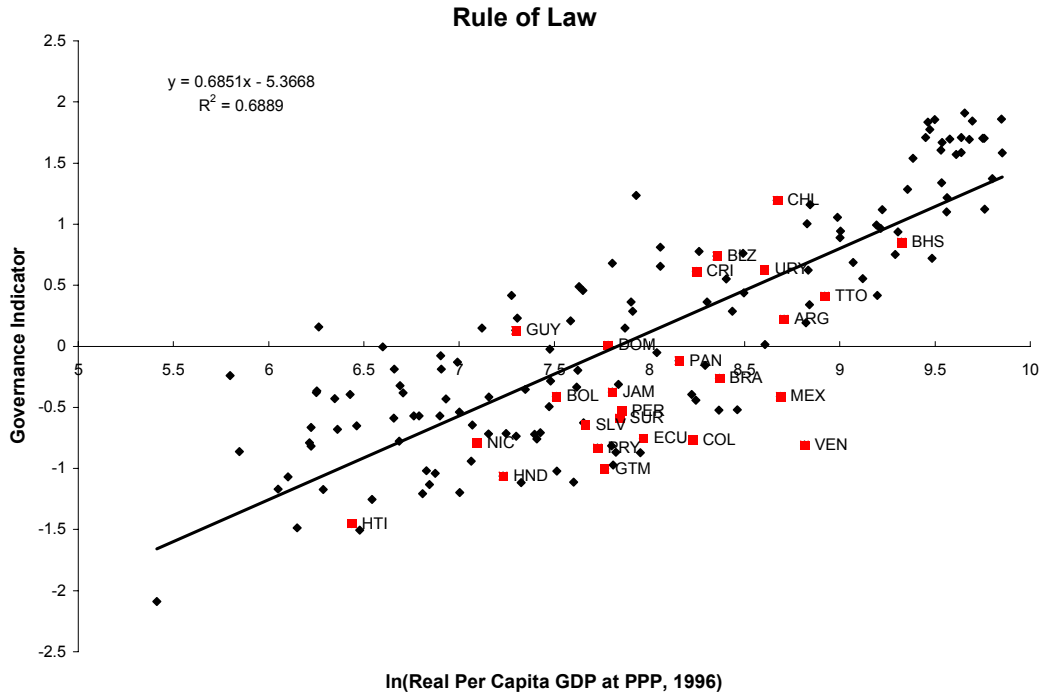
Note: The governance ratings on the vertical axis are based on subjective assessments from a variety of sources, are subject to substantial margins of error, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Figure 1, cont'd – Governance and Per Capita Incomes in LAC



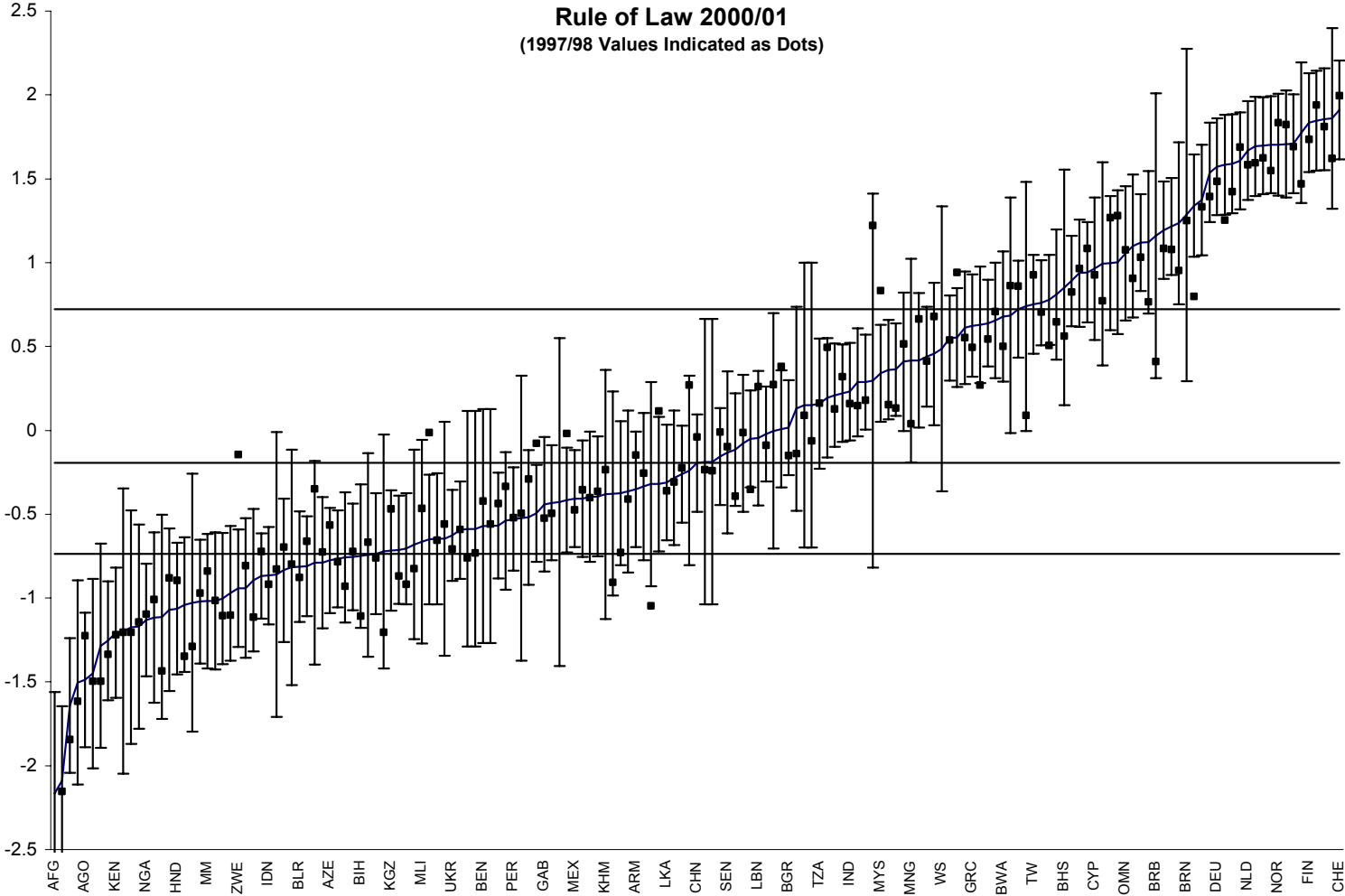
Note: The governance ratings on the vertical axis are based on subjective assessments from a variety of sources, are subject to substantial margins of error, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Figure 1, cont'd – Governance and Per Capita Incomes in LAC



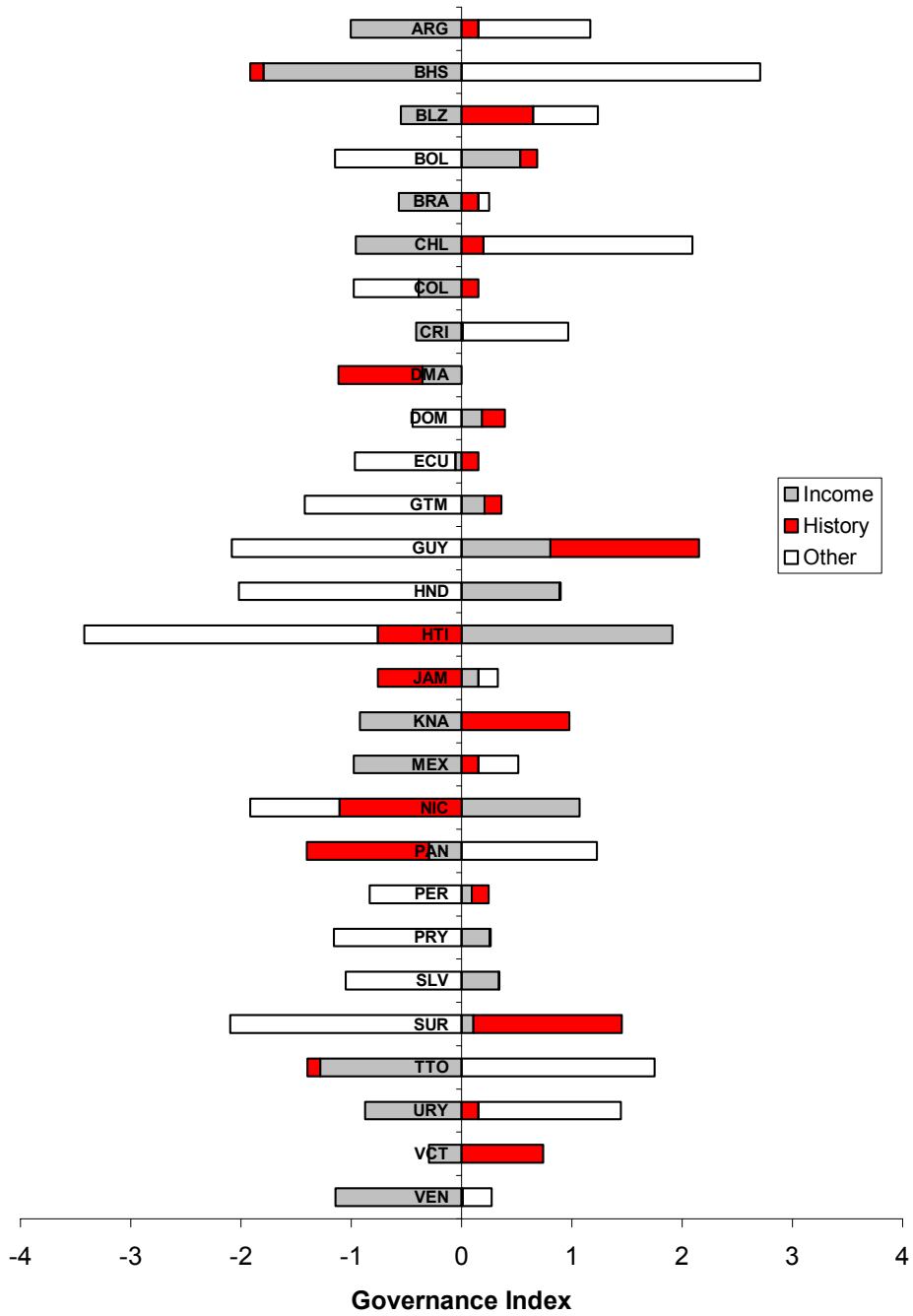
Note: The governance ratings on the vertical axis are based on subjective assessments from a variety of sources, are subject to substantial margins of error, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Figure 2: Imprecision of Estimates of Governance



Note: This graph shows estimates of the indicated dimension of governance (on the vertical axis) for all countries for which data is available (on the horizontal axis) for 2000/01. The vertical bars show the statistically-likely range of values of governance for each country, with the midpoint of each bar corresponding to the best single estimate. The length of these bars varies with the amount of information available for each country, and the extent to which information from different sources correspond with each other. Estimates of governance for 1997/98 are indicated as dots. Selected countries are indicated on the horizontal axis. As emphasized in the text, the ranking of countries along the horizontal axis is subject to significant margins of error, and this ordering in no way reflects the official view of the World Bank, its Executive Directors, or the countries they represent.

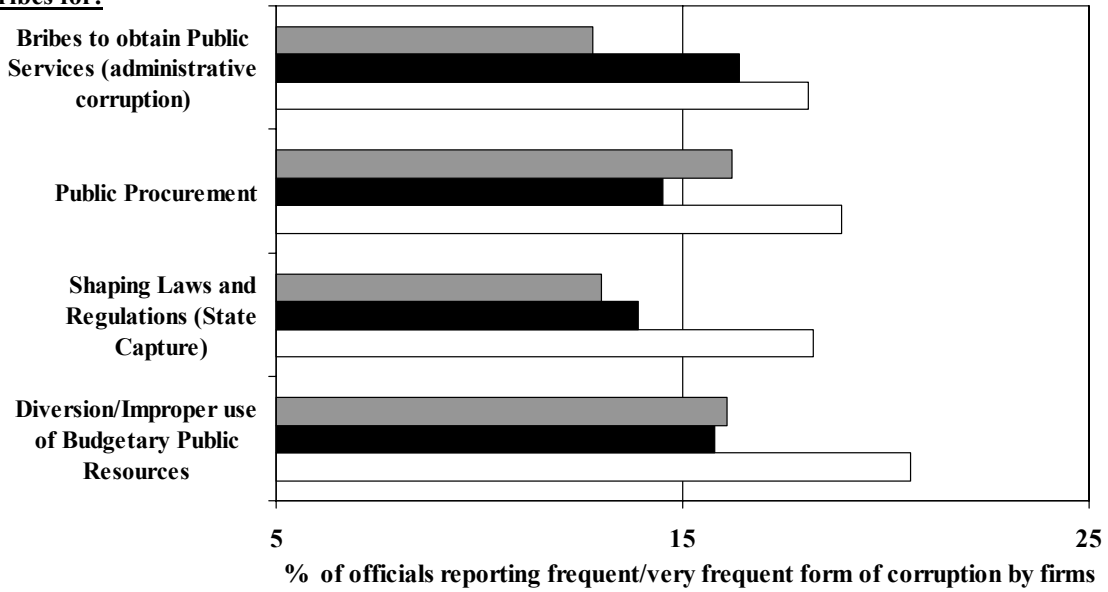
Figure 4 – Determinants of Governance in LAC



Note: The governance ratings on the vertical axis are based on subjective assessments from a variety of sources, are subject to substantial margins of error, and in no way reflect the official view of the World Bank, its Executive Directors, or the countries they represent.

Figure 5: Prevalence of Different Forms of Corruption in Peru, Honduras, and Colombia

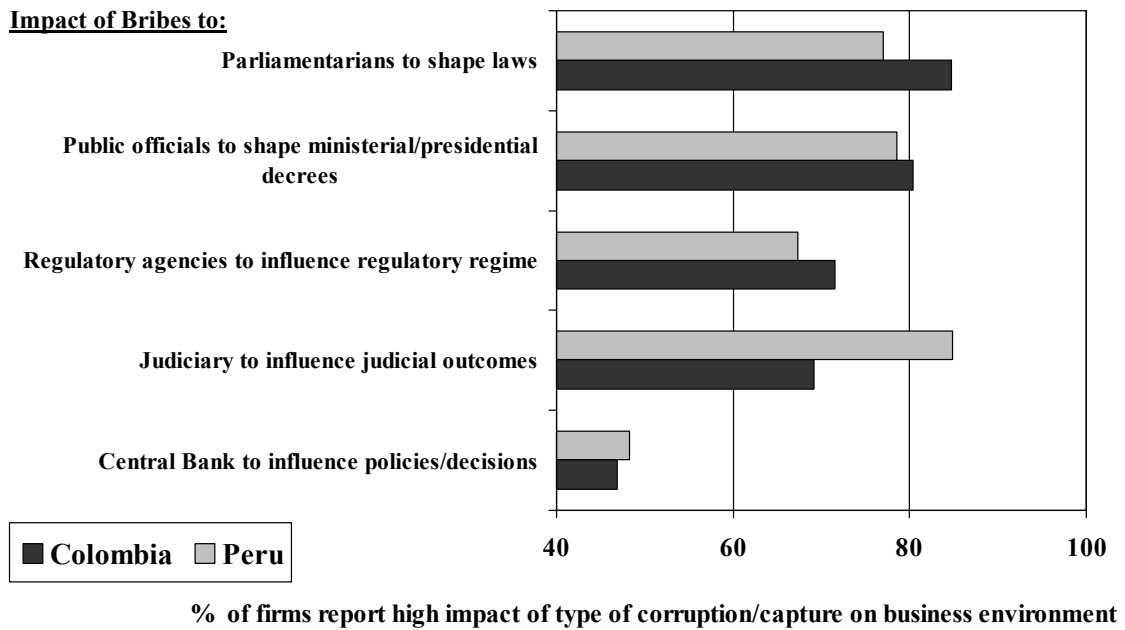
Bribes for:



□ Peru ■ Honduras ■ Colombia

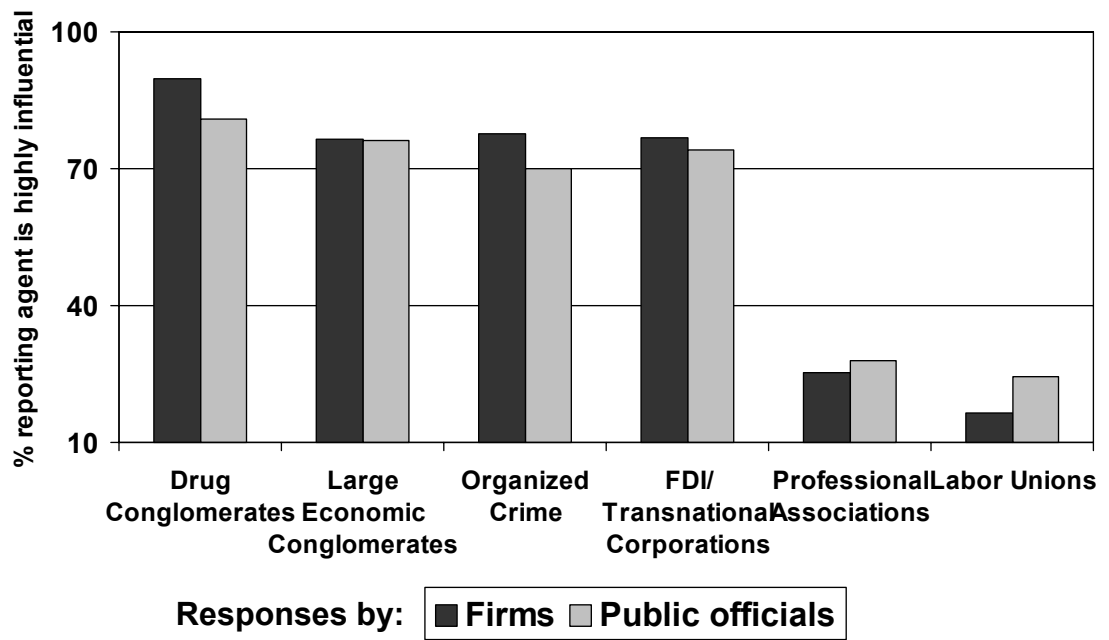
Note: This graph shows the percent of public officials rating the indicated forms of bribery as being “frequent” or “very frequent”, based on a survey of public officials carried out in 2001.
 Source: Governance Diagnostics for Peru, Honduras, Colombia, The World Bank Institute.]

Figure 6: Extent of State Capture in Peru and Colombia



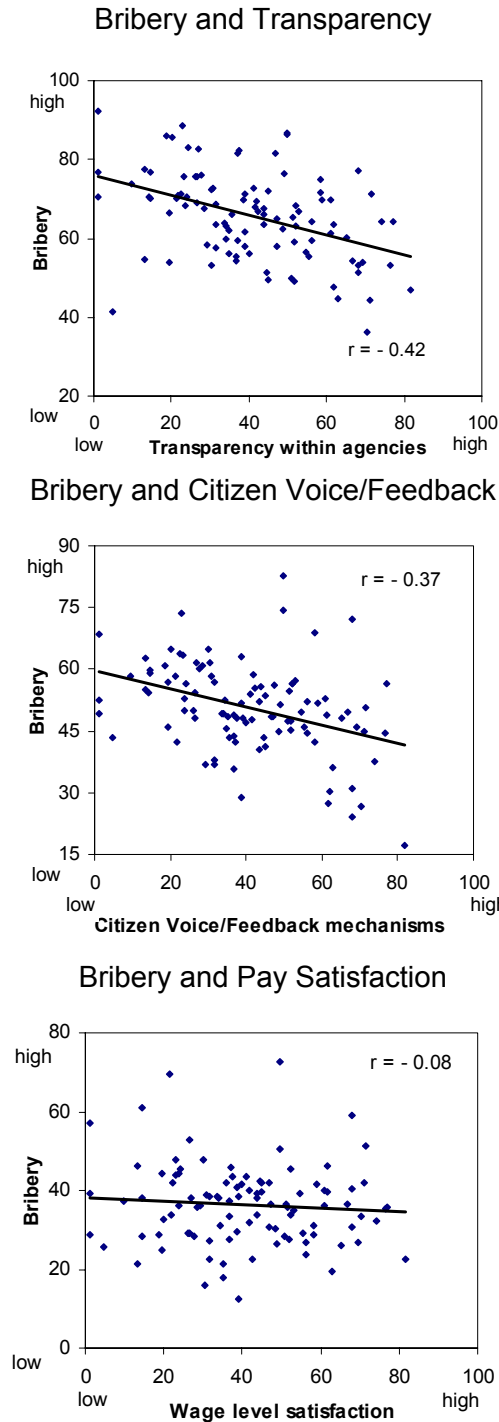
Note: This figure reports the percentage of firms reporting a “high impact” of the indicated form of bribery on the business environment, based on a survey of firms carried out in 2001.
Source: Governance Diagnostics for Peru, Colombia, World Bank Institute.

Figure 7: Sources of Undue Private Influence on the State in Peru



Note: This graph reports the fraction of respondents rating the indicated agents as being “highly influential” on the state, based on a survey of firms and public officials carried out in 2001.
 Source: Governance diagnostics for Peru, World Bank Institute.

Figure 8: Correlation Between Bribery and Agency Attributes in Bolivia



Note: This graph reports the correlation across public agencies between corruption as reported by the public officials (on the vertical axis) and the indicated agency attribute (on the horizontal axis), based on a survey of public officials in Bolivia. "Transparency" refers to the average of six questions relating to the openness of decision making procedures in each agency. "Citizen Voice/Feedback" refers to the average of four questions regarding the presence of formal feedback mechanisms available to users of the institution. "Wage Level Satisfaction" refers to the fraction of respondents who rated their compensation as satisfactory.

Source: Kaufmann, Mehrez and Gurgur (2002).