2 A SIMPLE MEASURE OF GOOD GOVERNANCE

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Introduction

Debates on the appropriate role of the state and appropriate policies and institutions to further this role are typically carried out by relying upon anecdotal evidence in the absence of a quantifiable definition of "good government." This paper attempts to fill this void by developing a gauge of the quality of government through the construction of an index of governance quality for a sample of 80 countries. This index is offered as a starting point for an objective assessment of various economic policies to further the quality of governance rather than as a precise and definitive indicator of governance quality. After describing the construction of the index and the results, we provide an application to the debate on the appropriate level of decentralization of fiscal powers.

This application provides empirical support for the theoretical underpinnings of the fiscal federalism literature. Governance quality is enhanced, according to this theory; by more closely matching services with citizen preferences, and by moving governments closer to the people they are intended to serve, which ensures greater accountability of the public sector. The paper is organized as follows. Section II presents an approach to the measurement of governance quality. Section III applies this measurement to the decentralization debate. Section IV notes limitations of the approach and a final section highlights main conclusions of this paper.

Measuring Governance Quality

Governance is a multi-faceted concept encompassing all aspects of the exercise of authority through formal and informal institutions in the management of the resource endowment of a state. The quality of governance is thus determined by the impact of this exercise of power on the quality of life enjoyed by its citizens. There is growing awareness in the development community that a comprehensive look at the enabling environment of institutions (World Bank 1992, 1994; Picciotto 1995; Hansen 1996; Huther, Roberts, and Shah 1996), interests (Shah 1996), and policies is needed in determining the net impact of the state on the well-being of its citizens. While no single index can conceptually capture all aspects of this enabling environment, a focus on key observable aspects of the governance dimensions can be helpful in providing a comparative perspective on differentials in the quality of governance among different nations. The key observable aspects of the governance dimension considered in this paper are: citizen voice and exit, government orientation, social development, and economic management. Accordingly, the governance index we have composed has four composite indices which have been chosen to provide an indication of a government's ability to: 1) ensure political transparency and voice for all citizens, 2) provide efficient and effective public services, 3) promote the health and well-being of its citizens, and 4) create a favorable climate for stable economic growth. These factors are among those cited in the World Bank's (1992) booklet, *Governance and Development* as representing the most important goals that ought to be faced by governments. It is important to note that these are goals which *all* governments can be expected to pursue regardless of their country's wealth. In developing these indices, we have relied upon existing indicators which measure salient characteristics of each of these indices (see table 1).

The ability to create an index of governance quality has been enhanced by the creation of several quality of life indices in recent years. For example, we make use of previously published indices measuring health, education, political freedom, and government corruption. The increasing interest in developing countries as potential borrowers has led to increased data, largely through surveys, on a wide variety of institutional issues. The index developed in this paper takes advantage of this increase in data availability as well as more traditional sources of information on developing countries such as the World Bank and International Monetary Fund. Using the objectives described above, the resulting index of governance quality (GQI) is:

$$GQI = CP^{I_1} * GO^{I_2} * SD^{I_3} * EM^{1-I_1-I_2-I_3}$$

where:

$$CP = PF^{\vartheta} * PS^{1-\vartheta}$$
$$GO = RT^{K_1} * CO^{K_2} * JE^{1-K_1-K_2}$$
$$SD = HD^{\Lambda} * GI^{1-\Lambda}$$
$$EM = OO^{M_1} * CB^{M_2} * DB^{1-M_1-M_2}$$

where I, ϑ, K, Λ and M are weights indicating relative importance of components to overall governance assessment.

Table 1: Components of Governance Index

Index Name		***Component Indices***	
CP	Citizen Participation Index		
		PF	Political Freedom
		PS	Political Stability
GO	Government Orientation Index		
		JE	Judicial Efficiency
		RT	Bureaucratic Efficiency
		CO	Lack of Corruption
SD	Social Development Index		
		HD	Human Development
		GI	Egalitarian Income

			Distribution
EM	Economic Management Index		
		OO	Outward Orientation
		CB	Central Bank Independence
		DB	Inverted Debt to GDP Ration

The citizens' participation index is composed of two indices—one that assesses the degree of political freedom within a country and one that assesses the level of political stability of a country. Political freedom assesses the ability of citizens to influence the quality of governance they receive. The political stability index was composed by a commercial group with the perspective of an investor in mind. This perspective may understate the ability of citizens to participate in governance decisions in some countries but it is a reasonable indicator of continuity of citizen participation.

The orientation of governments towards the provision of public goods and services is assessed through three indices: judicial efficiency, bureaucratic efficiency, and lack of corruption. Improving judicial efficiency has been recognized as a pre-requisite for a country's development at least since the 1960s (Blair and Hansen 1994) and the costs of bureaucratic inefficiency and corruption have been well documented (de Soto 1989). All three of these indices are based on surveys which attempt to gauge the degree to which public sector employees are focused on serving the populace rather than enriching themselves or their political parties.

Social development within a country is assessed through two widely known components, the United Nations' human development index and gini coefficients (which quantify the degree of income inequality). The human development index combines estimates of life expectancy, average education levels, and per capita income. The gini coefficients are based on recent surveys of income distribution.

The quality of a government's economic management is assessed through performance indicators of fiscal policy (debt-GDP ratio), monetary policy (central bank independence), and trade policy (outward orientation). For monetary and trade policy, we were able to use indices which capture, to some degree, the institutional orientation of government. The central bank independence index is based on the legally stated independence of the central bank. The outward orientation index includes a component of investors' perceptions of the receptivity of a government to trade. Unfortunately, the fiscal policy index, debt-GDP ratio, is a particularly imperfect measure of institutional orientation. This limitation is offset to some degree by the historical perspective it provides since debt is a cumulative measure of a country's fiscal policies. The indices of fiscal and monetary policy may be subject to a bias against poor countries. It is possible, for example, that the debt-GDP ratio may be biased against countries that are growing rapidly, regardless of the quality of their economic management since public investment typically has very long term payoffs. Or, conceivably, a country with a poorly developed revenue collection system may find monetization of debt to be the most efficient form of financing. However, neither of these indices are strongly correlated with income, suggesting that bias, if it exists, is not strong.

A more general question regarding bias is whether aggregating these indices introduces a systematic bias towards or against any country or group of countries. For example, does the better availability of data from developed countries mean that these countries, as a group, are rated higher or lower than LDCs? Or, does the composition of these indices by western oriented academics, businessmen and economists lead to a bias against governments pursuing alternative goals? The answer to the first question is that it seems unlikely. The answer to the second question is, yes, although ideological differences are more likely to develop over the weights applied to each objective rather than which objectives should be included. The index is flexible enough that adjustments could easily be made if one wishes to argue, say, that citizen participation is not a relevant component of governance quality.

The issue of the appropriate weight of each category is clearly a sensitive one. For example, should a government that creates a favorable economic climate but lacks political freedoms be judged a higher or lower quality government than one that provides political freedom but hinders economic growth? Where possible, our answer has been to give each of these categories equal weight. This was done, in part, to convey a sense of impartiality to the process. More importantly, this approach places no excessive emphasis to any single index. This is important given the nature of the indices used—some of them are, by necessity, subjective and others may reflect assessments that may change quickly. Equal weighting means that potential biases or errors do not unduly influence the composite index.

With the exception of the social development index, all component indices were given equal weight. For social development, the Human Development Index coefficient, Λ, was given a weight of 0.80 because of the broad, encompassing nature of the Human Development Index (see appendix 1 for compilation techniques, sources, and limitations of these indices). The results are presented in table 2 for 80 countries. The indices used to create this index were modified in two ways. First, indices for which higher numbers represented worse governance (gini and debt/GDP) were inverted. Second, all indices were re-scaled so that each has a mean of 50. The outward orientation index required additional modification to combine the initial 1980–83 index

Table 2: Ranking of Countries on Governance Quality

Country	*Governance Quality Index*	*Country*	*Governance Quality Index*
	(a) Good Governance		
Switzerland	75	France	60
Canada	71	Czech Republic	60
Netherlands	71	Belgium	58
Germany	71	Malaysia	58
United States	70	Israel	57
Austria	70	Trinidad and Tobago	57
Finland	68	South Korea	57
Sweden	67	Greece	55
Australia	67	Spain	55
Denmark	67	Hungary	54
Norway	67	Costa Rica	54
United Kingdom	66	Uruguay	54
Ireland	66	Italy	53
Singapore	65	Chile	53
New Zealand	64	Argentina	52
Japan	63	Jamaica	52
(b) Fair Governance		***(c) Poor Governance***	
Romania	50	Egypt	40
Panama	50	Morocco	40
Venezuela	50	China	39
South Africa	50	Kenya	39
Poland	49	Honduras	38
Mexico	48	Indonesia	38
Saudi Arabia	48	Cameroon	38
Jordan	48	Nicaragua	37
Peru	48	Nepal	36
Oman	48	Pakistan	34
Ecuador	48	Nigeria	33
Colombia	47	Ghana	32
Tunisia	47	Zambia	29
Russia	46	Togo	29
Brazil	46	Uganda	28
Turkey	46	Yemen	28
Sri Lanka	45	Senegal	28
Paraguay	45	Sierra Leone	26
Philippines	44	Malawi	26
Zimbabwe	44	Iran	26

Thailand	43	Zaire	25
India	43	Rwanda	22
Cote d'Ivoire	42	Sudan	20
Papua New Guinea	41	Liberia	20

Source: Authors' calculations.

with the speed of integration index for 1980–83 to 1990–93. In cases where the underlying index did not provide an assessment of countries in our sample, we have extrapolated index numbers based on the performance of comparable countries (see appendix 2 for component indices).

There is a high correlation between governance quality and per capita income—OECD countries dominate the top governance category and none are in the two categories with the poorest governance. Conversely, there are no African countries in the top governance category. The correlation between the index of governance quality and per capita GDP appears to be much stronger than its weight of 6.7 percent (through the HDI) would suggest. This high correlation between governance quality and per capita GDP raises the question of causality. If demand for high governance quality is driven by high per capita income, then an index of governance quality will simply reflect per capita income. Or, if there are necessary pre-conditions for high per capita income, such as outward economic orientation and work force education, then high per capita income will reflect high quality governance.

It seems likely to us that causality runs both ways—some components of governance do enhance the likelihood of higher per capita income and higher per capita income does increase the demand for higher quality governance. The challenges for those postulating a relationship between governance quality and income that only runs in one direction are the outliers—why, for example, is Ireland's per capita income so low given its high governance quality or, if causality runs the other way, why does Czech Republic have such good governance given its per capita income?

The good performance of European countries is not limited to Western Europe. The Central and East European countries (as well as Latin American countries) have combined improvements in citizen participation and economic management with relatively high marks for social development. Strong geographical patterns appear in all parts of the world—European countries govern well, African and South Asian countries govern poorly, Latin American and East Asian countries are somewhere in the middle. One possibility these patterns raise is those countries' standards for governance quality may be influenced by the performance of their neighbors.

Relationship to Factors Influencing Development

In table 3 we have shown correlation coefficients for several factors that may influence, or may be influenced by, governance quality: per capita PPP income, GDP growth, and military spending. The strong positive correlation between income and governance quality supports the casual observations drawn above. The negative correlation of military spending with governance quality is not statistically strong but it does suggest that it may be governments that are being defended rather than countries. The positive correlation between the ten-year economic growth rate and governance quality supports the argument that the institutional focus of government is an important determinant in economic development. Also, since the highest income countries have generally not had the highest growth rates over the last decade, the positive correlation between higher growth and better governance suggests that good governance improves economic performance rather than vice-versa.

Table 3: Governance Index Correlation Coefficients

	Governance Index	***Income***	***Military (as % govt spending)***	***Annual Growth (85-94)***
Governance	1.00	0.89 (0.00)	-0.16 (0.22)	0.25 (0.03)
Income		1.00	-0.11 (0.42)	0.26 (0.03)

Military			1.00	0.10 (0.47)
Annual Growth				1.00

Sources: Income and Growth from World Bank (1996b), Military and Subnational
Expenditures from International Monetary Fund (1995).

Quality of Governance and Fiscal Decentralization

During the past half a century, developing countries have, in general, followed a path of centralization and as a result, these countries are more centralized today than industrialized countries were in their early stages of development (Boadway, Roberts, and Shah 1994). The economic framework developed in the fiscal federalism literature addresses the question of the appropriate level of centralization by assigning taxing, spending and regulatory responsibility to various levels of government and their interface with the private sector and the civil society at large. This framework argues for the assignment of a responsibility to the lowest level of government that can internalize benefits and costs of decision making for the specific service (see Shah 1994). The subsidiary principle adopted by the European Union conforms to this view by requiring that the assignment of responsibility should be to the lowest level of government unless a convincing case can be made for a higher-level assignment. A number of recent developments, discussed below, are prompting these countries to have a second look at this issue and almost all developing countries with population size greater than 20 million are rethinking their fiscal arrangements.

Major Catalysts for Change

Major catalysts for change include the demise of capitalism, national government failures, subnational government failures, assertion of basic rights by the courts, globalization of economic activities, and the demonstration effects of the European Union (see Shah 1995). The demise of communism prompted a major change in government organization and geographical boundaries of some countries. In other countries, national governments have failed to ensure regional equity, economic union, central bank independence, a stable macroeconomic environment, or local autonomy. The record of subnational governments is also not very commendable. Subnational governments have often followed beggar-thy-neighbor policies, sought to seek free ridership with no accountability and, in pursuit of narrow self-interest, often undermined national unity.

The judicial systems in some countries are also providing stimuli for change by providing a broader interpretation of basic rights and requiring that national and subnational legislation conform to the basic rights of citizens. The emergence of a new "borderless" world economy complicates this picture by bringing new challenges to constitutional federalism. These challenges arise from the decline of nation states in carrying out regulation of certain economic activities as borders have become more porous and information technology has weakened their ability to control information flows. The European Union's policies and principles regarding subsidiary, fiscal harmonization and stabilization checks are also having demonstrable effects on country policies.

The overall impact of these influences is to force a rethinking on assignment issues and to force a jurisdictional realignment in many countries around the globe. In developing countries, rethinking these arrangements has led to gradual decentralization of responsibilities to lower levels in a small but growing number of countries. Some writers have cautioned against such a shift in division of powers in a developing country environment and have highlighted the "dangers of decentralization" (Prud'homme 1995, also see

Tanzi 1996). These authors have expressed concerns ranging from macro mismanagement, corruption, red tape, and widening gulf between rich and poor persons regions under decentralized fiscal system. Sewell (1996) and McLure (1995) provide rejoinders to these concerns by marshaling conceptual arguments and anecdotal evidence in support of their viewpoints.

In the following, we reflect upon various elements of the “dangers of decentralization” based upon available empirical evidence. In relating decentralization to quality of governance, four aspects of governance quality are stressed: citizen participation, social development, government orientation, and economic management. These aspects are considered in turn in the following paragraphs.

Citizens Participation

Citizen participation ensures that public goods are consistent with voter preferences and public sector accountability. Such participation is possible only if political freedom (voice and exit) is permitted and political stability prevails. We combined individual rankings of countries on these indicators to develop a composite index of citizen participation. We find that both sub-indices are positively correlated with fiscal decentralization. The correlation coefficients in table 4 indicate that this relationship is statistically significant which suggests that citizen participation and public sector accountability go hand in hand with decentralized public sector decision making.

Table 4: Correlation of Subnational Expenditures with Governance Quality Indicators

	Pearson Correlation Coefficients
Citizen Participation	
Political Freedom	0.599**
Political Stability	0.604**
Government Orientation	
Judicial Efficiency	0.544**

Bureaucratic Efficiency	0.540**
Absence of Corruption	0.532**
Social Development	
Human Development Index	0.369*
Income Distribution (inverse of gini coefficient)	0.373*
Economic Management	
Central Bank Independence	0.327*
Inverse of Debt to GDP Ratio	0.263
Outward Orientation	0.523**
Governance Quality Index	0.617**

Level of significance is in parentheses.

* Pearson correlation coefficient is significant at the 0.05% level (2-tailed test).

** Pearson correlation coefficient is significant at the 0.01% level (2-tailed test).

Government Orientation

Public sector orientation plays an important role in public sector performance. If the public service is oriented towards serving its citizens, bureaucratic red tape and corruption would be minimal and judiciary will further enforce accountability through timely and fair decisions in the administration of justice. One finds such an orientation typically lacking in some developing countries where the civil service pursues rent seeking and power and influence through command and control and bureaucratic red tape and graft.

A composite ranking of countries of three indicators of government orientation, judicial efficiency, bureaucratic efficiency, and the lack of corruption, provides a good indicator of public sector orientation and performance. We relate the degree of expenditure decentralization to the ranking of countries on individual indicators as well as to the composite rank on government orientation and find that all of these correlations show a positive, and statistically significant, association (see table 4). This suggests that typically decentralized countries are more responsive to citizen preferences in service delivery and strive harder to serve their people than centralized countries. Several case studies corroborate above findings. Crook and Manor (1994), Meenakshisundaram (1996) based upon a review of experience of the Indian state of Karnatka, and Blair (1996) based upon Philippines more recent experience with decentralization, conclude that decentralized democratic governance had a positive impact on the quality of governance especially in re-orienting government from a command and control to a service provider role (see also Blair and Hansen 1994). Landon (1996) carried out a study of education costs in Canada and concluded that local control regimes were more successful in controlling overhead costs than provincial control regimes. Humplick and Moini-Araghi (1996) report that for a large sample of countries decentralization leads to lower unit administration costs for road services.

Social Development

Two aspects of social development are considered: human development and income inequality. For ranking countries in terms of their achievements on human development, we solely rely on the United Nations' index on human development. This index incorporates life expectancy, adult literacy, educational enrollments and per capita GDP in purchasing power parity terms. Egalitarian nature of the society is captured by an inverse rank on the Gini coefficients estimated by Deininger and Squire (1996). Table 4 shows that fiscal decentralization is positively correlated and statistically significant with both the indices.

Macroeconomic Management

It is frequently argued that a decentralized public policy environment of the type found in developing countries contributes “to the aggravation of macroeconomic problems” (Tanzi 1996, p. 305). In the following, we reflect upon the available empirical evidence on aspects of monetary and fiscal policies to form a perspective on this issue.

Monetary Policy

Monetary policy is clearly a central function and best entrusted to an independent central bank (Shah 1994, p. 11). The critical question then is whether or not independence of the central bank is compromised under a decentralized fiscal system. One would expect, a priori, that the central bank would have greater independence under a decentralized system since such a system would require clarification of rules under which a central bank operates, its functions and its relationships with various governments. For example, when Brazil in 1988 introduced a decentralized federal constitution, it significantly enhanced the independence of the central bank (Bomfim and Shah 1994). On the other hand, in centralized countries the role of the central bank is typically shaped and influenced by the Ministry of Finance. In an extreme case, the functions of the central bank of the U.K., the Bank of England, are not defined by law but have developed over time by a tradition fostered by the U.K. Treasury.

For a systematic examination of this question, we relate the evidence presented in Cukierman, Webb, and Neyapti (1992) on central bank independence to a share of subnational expenditures in total spending. The correlation coefficient in table 4 shows a weak but positive association confirming our a priori judgment that central bank independence is strengthened under decentralized systems. Increases in monetary base caused by the central bank’s bailout of failing state and non-state banks represents an important source of monetary stability and a significant obstacle to macro economic management. In Pakistan, a centralized federation, both the central and provincial governments have, in the past, raided nationalized banks. In Brazil, a decentralized federation, state banks have made loans to their own governments without due regard for their profitability and risks. A central bank role in ensuring arms length transactions between governments and the banking sector would enhance monetary stability regardless of the degree of centralization.

The empirical evidence presented suggests that such arm length transactions are more difficult to achieve in countries with a centralized structure of governance than under decentralized structure with a larger set of players. This is because a decentralized structure requires greater clarity in the roles of various public players, including the central bank.

Fiscal Policy

In a centralized country, central government assumes the exclusive responsibility for fiscal policy. In decentralized countries, fiscal policy becomes a responsibility shared by all levels of government and the federal (central) government in these countries use their powers of the purse (transfers) and moral suasion through joint meetings to induce a coordinated approach. Several writers (Tanzi 1995, Wonnacott 1972) have argued, without empirical corroboration, that the financing of subnational governments is likely to be a source of concern within open federal systems since subnational governments may circumvent federal fiscal policy objectives. Tanzi (1995) is also concerned with deficit creation and debt management policies of junior governments. Available theoretical and empirical work does not provide support for the validity of these concerns. On the first point, at a theoretical level, Sheikh and Winer (1977) demonstrate that relatively extreme and unrealistic assumptions about discretionary non-cooperation by junior jurisdictions are needed to conclude that stabilization by the central authorities would not work at all simply because of this lack of cooperation. Their empirical simulations for Canada further suggest that failure of a federal fiscal policy in most instances cannot be attributed to non-cooperative junior governments' behavior. Saknini, James, and Sheikh (1996) further demonstrate that, in a decentralized federation with markedly differentiated subnational economies with incomplete markets and non-traded goods, federal fiscal policy acts as an insurance against region-specific risks and therefore decentralized fiscal structures do not compromise any of the goals sought under centralized fiscal policies.

On the second point noted by Tanzi, empirical evidence from a number of countries suggests that, while federal fiscal policies typically do not adhere to the European Union (EU) guidelines that deficits should not exceed 3 percent of GDP and debt should not exceed 60 percent of GDP, junior governments policies typically do. This is true both in decentralized federal countries such as Canada and centralized federal countries such as India and Pakistan. Centralized countries even do worse on these indicators. For example, Greece, Turkey, and Portugal do not satisfy the EU guidelines. The results in table 4 provide weak confirmation of our empirical observations—the coefficient, while positive, is not statistically significant at the 95 percent confidence level.

Outward Orientation

Economic liberalization is now commonly accepted as a cornerstone of good economic management. World Bank has recently ranked countries on the openness of their economies taking into account factors such as GNP originating from trade, manufacturing exports, foreign direct investment as a share of GDP, credit rating, and manufacturing content of exports. This index is related to the degree of expenditure decentralization and finds a positive relationship between these two indicators.

Economic Management

When we combine the three aspects of economic management considered above in a quality index of economic management, the resulting index shows a positive association with the degree of fiscal decentralization. This is to be expected, as the decentralized systems are more transparent in defining the role of various public agents and place a greater premium on accountability for results.

Quality of Governance and Decentralization

Finally, we combine indices on economic management, social development, government orientation, and citizen participation to derive an overall index of governance quality. This index is then related to the degree of fiscal decentralization. Given the positive correlation between all of the governance quality component indices and the composition of government expenditures, the positive relationship between fiscal decentralization and governance quality is unsurprising. What may be surprising is the strength of this correlation: if one assumes that the mix of national and subnational expenditures is an explanatory variable for governance quality, the resulting OLS regression yields an R^2 of 0.38 (the coefficient on subnational expenditures was 53.07, with a standard error of 10.99).

Causality

The relationship between the level of decentralized expenditures and governance quality appears to be strictly increasing but clearly there must be some form of "Laffer Curve"—it is easy to construct cases where complete decentralization of expenditures would lead to lower quality governance than where there is a mix of national and subnational expenditures. However, the data do not show that even the most highly decentralized governments have increased decentralization at the expense of lower quality governance. This suggests that highly centralized countries can improve their governance quality through more decentralized expenditures without the risk of engaging in excessive decentralization.

In conclusion, recent discussions on the appropriate level of decentralization of fiscal expenditures have largely been theoretical or anecdotal (for example, see Prud'homme (1995) and Sewell (1996)). The decentralization side of this debate cites efficiency gains due to greater voice for local constituents while the centralized side cites efficiency gains from economies of scale (often from consolidating human or physical capital). The conclusion of the value of greater decentralization was informed by examining the relationship of fiscal decentralization to various individual and composite measures of quality of governance. At an empirical level, it appears that governance quality may be enhanced by greater decentralization. It should be noted however, that this analysis is a macroeconomic one and cannot be applied to specific expenditures. Even at the theoretical level, the appropriate mix of national and subnational roles and thereby expenditures differs by sector (or, even by project).

Reservations

As a starting point, we accept the caveats offered by the authors of the individual indices that we have used. These caveats generally note that the indices are meant to convey a general placement of countries rankings rather than precise assessments of countries relative performance. Additionally, the authors generally acknowledge the potential for errors in individual rankings since many of the indices rely on subjective judgments or limited surveys. It can be argued that aggregation may offset the statistical biases associated with the techniques and biases of the individual indices. A larger issue is less an econometric one than a theoretical one relating to the weights applied to each component index. Our approach of applying equal weights to each component index is open to criticism that one component, say citizen participation or social development, should be weighted more heavily than another, say economic management. Making adjustments to these weightings would influence the rankings of individual countries but our preliminary impression is that such adjustments would not affect the general trends noted above.

Omissions

Many of the indices used in the governance index did not cover all of the countries that we have included in our sample. In cases where index numbers were not available (see table 5), we sought assessments of the relative performances of missing countries from World Bank staff. The majority of missing cases were from Africa although indices of government orientation were missing for Central Europe. Estimates for missing values were made by senior members of the World Bank's Operations Evaluation Department.

Table 5: Omissions from Original Indices

Index	***Omitted (%)***
Political Freedom	6
Political Stability	28
Judicial Efficiency	28
Red Tape	28
Corruption	20
Human Development	0
Gini Coefficient	19
Outward Orientation	0
Central Bank Independence	30

Debt / GDP Ratio	21

Of the 80 countries for which we were able to construct the governance index, subnational expenditure data were only available for 40. These countries, listed in appendix 3, are fairly well distributed across per capita income groups and geographic regions although developed countries are more strongly represented in this group than the larger group for which the governance index was calculated.

Conclusion

Discussions and policy work regarding the role, scope, and effectiveness of government have typically taken place in the absence of empirical measures of governance quality. This paper introduces a measurement that will allow both theoretical work and policy issues to be discussed in the framework of a concrete definition of governance quality. The definition we have used could easily be modified to reflect different beliefs about the relevance of the components used in this index. The index could also be narrowed or broadened to reflect differences in beliefs about the role and scope of government.

The application of this index to the decentralization debate highlights that the polarization of opinion in the absence of hard empirical evidence can be overcome with the use of an appropriate standard of reference such as the one used here. The use of this index allows us to reach unambiguous conclusions regarding the net positive effects of fiscal decentralization on public sector performance in a majority of countries.

Appendix 1: Sources and Quality of Data and Explanations Regarding Development of Component Indices

Political Freedom: Haq (1995). This index measures four factors that reflect an individual's ability to exercise political freedom: a country's political process, statutory freedoms, an individual's ability to exercise freedom of expression, and degree to which discrimination is tolerated.

Political Stability, Judicial Efficiency, Red Tape: Mauro (1995). These indices, developed by Business International Corporation (BIC), are unavoidably subjective. These indices were developed with an investor's perspective in mind. This perspective may lead to different assessments of, say, judicial efficiency than an index with a less pecuniary perspective. These indices, which we have not been updated, are based on older data than the other indices—1980–83.

Corruption: Transparency International/Gottingen University (1996). This index, frequently updated, is based on survey results from several risk assessment consulting groups, the Global Competitiveness Report, and the Institute for Management Development.

Human Development Index: Human Development Report (1996). This index, published by the United Nations Development Program measures life expectancy, adult literacy, enrollments in primary, secondary, and tertiary education institutions, and per capita GDP in purchasing power parity terms.

Gini Coefficients: Deininger and Squire (1996). These estimates of income equality are based on household surveys which are presented by the authors as both a substantial improvement over previous work in both data quality and coverage.

Outward Orientation: World Bank (1996a). This index uses an initial assessment of outward orientation made for 1980–83 and modifies it according to the speed of integration index calculated for 1990–93. The factors composing the index are: a population-adjusted trade ratio, country credit rating by Institutional Investor, Foreign Direct Investment as a share of GDP (in PPP terms), and the share of manufacturing that is exported.

Central Bank Independence: Cukierman, Webb, and Neyapti (1992). This index is compiled from examination of 16 statutory aspects of central bank operations including the terms of office for the chief executive officer, the formal structure of policy formulation, the bank's objectives (as stated in its charter), and limitations on lending to the government.

Debt to GDP Index: Compiled from IMF (1995) and IFS (1995) using data from most recent year available.

Quality of Indices

For detailed information on the component indices used, we refer those interested to the original works for discussions of the index strengths and weaknesses. In cases where the indices have been produced for several years (HDI and gini coefficients), the authors have had time to respond to criticisms of the initial versions. The indices used from Mauro were constructed by a commercial organization, Business International Corporation, which sells updated versions of its indices. Presumably, the version made public by Mauro is old enough that its commercial (and, perhaps, academic) value is low. Unfortunately, an updated version was out of the range of our research budget.

The political freedom index created by Haq is new both in the sense that there are no previous versions and in that it addresses a topic that had previously not been subjected to formal indexing. The corruption index is updated annually and reflects the results of several surveys on bureaucratic honesty. The outward orientation index is an updated version of an index first created in the mid-1980s. The central bank independence index is relatively new and represents the legal characteristics of a country's central bank. As the authors note, there is often a discrepancy between the statutory independence of a central bank and its independence in practice. The authors attempted to capture this effect, by developing a second index which measures the frequency of turnover of heads of central banks. This second index has not been incorporated into this paper because of the small number of countries covered.

Note that although all of these indices have been published in the past three years, the data from Mauro and Cukierman, Webb, and Neyapti are somewhat older. This may bias results for, or against, specific countries which have experienced rapid change since the early 1990s. The Mauro indices, for example, have assessments of Liberia and Nigeria which, given more recent events, seem high. The indices have not been adjusted to reflect these changes in order to preserve the internal consistency of these indices.

Adjustments

Political Freedom: mean shifted to 50.

Political Stability, Red Tape, Judicial Efficiency: mean shifted to 50.

Corruption: unchanged.

Human Development Index: mean shifted to 50.

Gini Coefficients: 10 - sqrt(gini), mean shifted to 50.

Outward Orientation: ln (speed of integration index) used as percent change, then applied to initial index, mean shifted to 50.

Central Bank Independence: mean shifted to 50.

Debt to GDP Index: 2 - debt/gdp, mean shifted to 50.

Means were shifted by:

Initial Index Number * 50 / Average of Initial Index

Appendix 2: Composite Indices

Country Name	***Citizen Participation***	***Government Orientation***	***Social Development***	***Economic Management***
Switzerland	67	86	65	85
Canada	64	83	66	72
Netherlands	65	86	66	69
Germany	62	74	64	85
United States	66	80	64	71
Austria	65	73	65	78
Finland	66	83	65	60
Sweden	66	83	65	59
Australia	61	83	63	65
Denmark	65	83	64	60
Norway	68	84	64	54

Country Name	Citizen Participation	Government Orientation	Social Development	Economic Management
United Kingdom	61	78	66	62
Ireland	60	74	63	67
Singapore	59	86	60	59
New Zealand	64	88	64	48
Japan	62	76	64	52
France	64	65	62	52
Czech Republic	59	54	62	66
Belgium	62	72	66	40
Malaysia	54	59	54	64
Israel	52	75	61	45
Trinidad and Tobago	59	53	58	58
South Korea	51	52	62	63
Greece	60	47	63	52
Spain	56	52	66	48
Hungary	57	52	62	48
Costa Rica	62	46	58	51
Uruguay	64	53	56	45
Italy	59	43	63	52
Chile	49	69	57	42
Argentina	57	46	55	52
Jamaica	57	50	49	52
Romania	50	48	55	49
Panama	54	58	55	37
Venezuela	55	36	57	55
South Africa	52	56	42	50
Poland	55	54	60	32
Mexico	49	42	54	48
Saudi Arabia	32	48	55	63
Jordan	49	58	52	36
Peru	44	53	48	46
Oman	40	41	50	62
Ecuador	51	42	53	46
Colombia	47	40	55	50
Tunisia	46	40	51	53
Russia	54	32	59	46
Brazil	50	37	51	48
Turkey	48	38	48	50
Sri Lanka	46	51	49	36
Paraguay	46	43	46	44

Country Name	Citizen Participation	Government Orientation	Social Development	Economic Management
Philippines	44	36	46	52
Zimbabwe	46	63	37	34
Thailand	43	30	56	50
India	50	37	35	53
Cote d'Ivoire	53	58	29	37
Papua New Guinea	54	29	36	52
Egypt	45	34	45	37
Morocco	38	52	40	32
China	38	25	46	56
Kenya	42	36	34	44
Honduras	45	37	39	33
Indonesia	40	24	48	46
Cameroon	42	42	35	32
Nicaragua	46	44	40	24
Nepal	45	39	29	35
Pakistan	41	24	36	38
Nigeria	44	22	32	41
Ghana	34	31	37	26
Zambia	38	24	31	25
Togo	37	22	30	27
Uganda	40	24	27	24
Yemen	28	28	26	31
Senegal	39	22	26	27
Sierra Leone	36	22	18	31
Malawi	31	28	25	20
Iran	20	14	52	29
Zaire	32	18	28	22
Rwanda	14	20	29	29
Sudan	18	22	29	16
Liberia	11	32	24	18

Source: Authors' calculations.

Appendix 3: Countries Used in Analysis of Subnational Expenditures

Argentina		Kenya
Australia		Malawi
Austria		Malaysia
Belgium		Mexico
Brazil		Netherlands
Canada		Norway
Chile		Pakistan
Colombia		Paraguay
Czech Republic		Philippines
Denmark		Poland
Finland		Romania
France		South Africa
Germany		Spain
Hungary		Sweden
India		Switzerland
Indonesia		Thailand
Iran		Uganda
Ireland		United Kingdom
Israel		United States
Italy		Zimbabwe

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