



Inter-American Development Bank Banco Interamericano de Desarrollo (BID) Research Department Departamento de Investigación Working Paper #66 I RG-N2 I 47

# POLITICAL INSTITUTIONS, STATE CAPABILITIES AND PUBLIC POLICY: INTERNATIONAL EVIDENCE

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DECEMBER 2008

# Cataloging-in-Publication data provided by the Inter-American Development Bank Felipe Herrera Library

Scartascini, Carlos G., 1971-

Political institutions, state capabilities and public policy : international evidence / Carlos Scartascini, Ernesto Stein, Mariano Tommasi.

p. cm. (Research Department Working Papers ; 661) Includes bibliographical references.

1. Public policy--Databases. I. Stein, Ernesto. II. Tommasi, Mariano, 1964-. III. Inter-American Development Bank. Research Dept. IV. Title. V. Series.

H97 .S332 2008 320.6 S332----dc22

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#### Abstract<sup>1</sup>

This paper introduces preliminary evidence from a cross-country database of policy characteristics and potential uses of that database. While most databases have emphasized either the content of policies (e.g., size of government deficits) or countries' formal institutions (e.g., political regime, electoral system), the variables in this database reflect the policymaking capabilities of different polities. The paper attempts to explain these policy characteristics as depending on the workings of political institutions, using a logic emphasizing intertemporal political compromise. The paper also contrasts this logic with alternatives such as the veto players approach. The paper concludes by suggesting the use of these policy characteristics or state capabilities as explanatory variables for the effectiveness of public spending in various social areas.

**Keywords:** Political institutions, Public policies, Government capabilities, Veto players, Intertemporal cooperation, Development, Human Development Index, Public expenditures, Policy index, Adaptability, Stability, Judicial independence, Party institutionalization, Congress capabilities, Cabinet stability, Database

## **JEL Classification:** D72, D78, H10, H50, O10

Accompanying dataset available at: <u>http://www.iadb.org/RES/pub\_List.cfm?pub\_topic\_id=DBA&type=pub\_type&pub\_type\_id=DBA&pub\_type\_id1=DBA&language=english</u>

<sup>&</sup>lt;sup>1</sup> We are particularly grateful to Carolina Mandalaoui, Lorena Viñuela, Heather Berkman, and Fabiana Machado who have helped us to compile the dataset over the years. Ms. Machado has also provided superb assistance in the development of this document and research agenda.

# **1. Introduction**

In every state, big or small, new or old, public policies play a fundamental role in virtually all domains of development. The great surge of studies delving into this relationship in the context of growth has for several decades paid particular attention to the specific content of those policies. Countless overarching prescriptions were generated and also modified over the years according to the conventional wisdom of the time. Motivated in part by disappointing results, the appeal of such one-size-fits-all recommendations has lost considerable ground to concerns about states' ability to formulate and carry out policies. To date, many such "state capabilities" have been identified as key factors in explaining the impact of policies on desired outcomes. In a landmark study, Weaver and Rockman (1993) argue that governmental effectiveness can be measured according to several standards; the one they propose focuses on a set of tasks and on capabilities that governments need, regardless of their specific policy objectives, in order to perform those tasks (Weaver and Rockman, 1993: 6). Capabilities are a pattern of government influence on its environment that produces substantially similar outcomes across time and policy areas. Weaver and Rockman propose a number of government capabilities, including setting and maintaining priorities, targeting resources, innovating when old policies have failed, coordinating conflicting objectives, ensuring effective implementation, and ensuring policy *stability* so that policies have time to work.

From our applied experience with policies and policymaking in Latin America, we share the same substantive concerns. Latin America has gone through successive policy paradigms in the belief that once the "right" policies are implemented, things will work well. These waves have shifted from State-run, inward-looking development in the postwar era to the macroeconomic discipline and trade liberalization of the Washington Consensus of the 1990s. While the enthusiasm for the latter has waned, many observers and actors have started to search for (or to prematurely proclaim) a new paradigm.

This paper is part of an agenda that departs from the usual concern about "the right policies" and indeed focuses on the processes that shape policies, carry them forward to implementation, and sustain or adapt them over time. We believe that the process of policymaking has important implications in itself for the qualities of resulting policies and resulting welfare outcomes, independently of the specific content of the policies. For that reason, in previous work we have attempted to build indicators of some policy characteristics, such as stability, adaptability, quality of implementation, coordination and the like, for a sample of Latin American countries. This paper is a continuation of that effort, extending the empirical analysis originally focused in in-depth studies of Latin American cases, to the elaboration of a wider data set to explore these issues cross nationally.

The paper begins, in the next section, by motivating, introducing, and describing a number of variables capturing various qualities of public policies across countries. The rest of the paper presents different empirical applications utilizing these policy characteristics. These applications reflect our current efforts to explain the determinants of policy capabilities across countries, and some initial utilization of these variables as explanatory factors in the effectiveness of spending in some specific policy areas. The idea of the examples is not to provide the last word on those issues, but to motivate further utilization of the data by the research community.

## 2. Characteristics of Public Policies

#### 2.1 Motivation

Policies are complex undertakings. Taking any particular "policy reform" to fruition is a process that involves multiple actors through many stages of the policy process. It requires specific responses from economic and social agents, and therefore necessitates several forms of cooperation and beliefs about the durability and other properties of the policy. Thus in most instances, it takes more than a set of favorable initial conditions in order for policies to produce effective results. Governments need the capacity to maintain momentum throughout the whole process.

Some economists' beliefs notwithstanding, a universal set of "right" policies does not necessarily exist. Policies are contingent responses to underlying states of the world. What might work at one point in time in a given country might not work in a different place or in the same place at another time. In some cases, some particular characteristics of policies or the details of their implementation might matter as much as the broad type of policy. For instance, Dani Rodrik analyzed six countries that implemented a set of policies that shared the same generic title—"export subsidization"—but had widely different degrees of success.<sup>2</sup> Rodrik

<sup>&</sup>lt;sup>2</sup> Rodrik (1995).

relates their success to such features as the consistency with which the policy was implemented, which office was in charge, how the policy was bundled (or not) with other policy objectives, and how predictable the future of the policy was.

The literature on economic growth offers many such examples. Just to cite a few, scholars in this area of study have investigated the effect of credibility and flexibility on policy success. The former has been widely recognized in recent work on macroeconomics, trade policy, regulation, and other areas of economics.<sup>3</sup> The effects of policies on the final economic and social outcomes of interest depends on the actions and reactions of economic and social agents, who take into account their expectations about the future of the policies in question before deciding their responses. As Rodrik explains, in reference to trade reform, "it is not trade liberalization per se, but *credible* trade liberalization that is the source of efficiency benefits. The predictability of the incentives created by a trade regime, or lack thereof, is generally of much greater importance than the *structure* of these incentives. In other words, a distorted, but *stable* set of incentives generated by a process of trade reform lacking credibility."<sup>4</sup>

Engerman and Sokoloff (2008) take this argument further by adding to the role of credibility that of policy flexibility in explaining growth: "*Credible* commitment to acknowledge private property rights, whether in the interests of the elite or the majority of the population, is the classic example of the value of certainty about policy action. More generally, however, allowing some *flexibility* in institutions, such that they can be altered to allow private or public agents to take fuller advantage of new opportunities that arise as technology or the environment changes, would be expected to foster improved economic performance and more rapid growth."<sup>5</sup>

These are just a couple of examples motivating this project's efforts to build measures of certain characteristics or key features of public policy that may affect the countries ability to reach their development objectives, beyond their specific content (e.g., whether some particular

<sup>&</sup>lt;sup>3</sup> See, for example, Barro and Gordon (1983); Calvo (1996, Section V); Drazen (2000, Section II); Levy and Spiller (1994); and Rodrik (1989).

<sup>&</sup>lt;sup>4</sup> Rodrik (1989, p. 2). For models formalizing the effects of policies of uncertain duration in several economic contexts, see Calvo (1996, Section V) and Calvo and Drazen (1998).

<sup>&</sup>lt;sup>5</sup> Italics added for emphasis

taxes are high or low).<sup>6</sup> Based on our previous work, we have selected the following six characteristics as the leading indicators of a country's policy characteristics:

- *Stability*: The extent to which policies are stable over time;
- *Adaptability:* The extent to which they can be adjusted when they fail or when circumstances change;
- *Coherence and coordination:* The degree to which polices are consistent with related policies and result from well-coordinated actions among the actors who participate in their design and implementation;
- *The quality of implementation and enforcement:* The degree to which policies are enforced or not.
- *Public regardedness:* The degree to which policies pursue the public interest;
- *Efficiency:* The extent to which they reflect an allocation of scarce resources that ensures high returns.

In assembling these measures of policy characteristics, we have proceeded in two stages. In a first stage we focused on a number of in-depth studies across various Latin American countries. This effort involved:

- Policy case studies including tax policy, utilities privatization and regulation, education, decentralization, and civil sector reform. Several of these studies, undertaken by a number of sector specialists under a common analytical framework are summarized in IDB (2006).
- Studies of the overall process of policymaking in a number of Latin American countries, reflected in Stein et al. (2008).
- A "State Capabilities" Survey undertaken by the Inter-American Development Bank, which questioned more than 150 experts in 18 Latin American countries, regarding the capabilities of the State identified as crucial in the seminal work of Weaver and Rockman (1993). Even though these capabilities (See Appendix A) tie in closely with the features of public policies we wanted to study, the State Capabilities Survey

<sup>&</sup>lt;sup>6</sup> We have also been influenced by several strands of literature in political science, particularly the strand related to veto players analysis, which stresses the relevance of stability (Tsebelis 2002), decisiveness and resoluteness, and public regardedness (Cox and McCubbins 2001), and the strand on state capabilities (Weaver and Rockman 1993).

included a number of additional questions directly geared to uncover these policy characteristics.

This combination of quantitative and qualitative information was explored and contrasted in a number of ways, and it gave a pretty coherent picture across Latin American countries. IDB (2006) and Stein and Tommasi (2007) present an attempt to relate these policy characteristics to some aspects of political institutions in the Latin American countries.

This paper reflects the second stage of this research program, in which we attempt to build broader cross-country indicators of policy capabilities, drawing from available broad cross-national sources, building on the insights gained in the deeper study of the Latin American cases. The correlations of the international variables we construct here and those constructed for the Latin American sample are very high (Berkman et al., 2008).

#### 2.2. The Variables: Definition and Construction

#### 2.2.1 Policy Stability

Some countries seem capable of sustaining most policies over time. In other countries, policies are frequently reversed, often at each minor change of political winds (whether a change in administration or a change in some key cabinet member or senior bureaucrat). Having stable policies does not mean that policies cannot change at all, but rather that changes tend to respond to changing economic conditions or to failure of previous policies, rather than to political changes. In countries with stable policies, changes tend to be incremental, building upon achievements of previous administrations, and tend to be achieved through consensus. In contrast, volatile policy environments are characterized by large swings and by lack of consultation with different groups in society.

To gauge policy stability we used four variables from three different sources. The first is the standard deviation of the detrended (using a quadratic trend) Fraser Index of Economic Freedom for the years 1999 to 2004. Two of the variables come from the Global Competitiveness Report (GCR) of 2002. One measures whether legal or political changes over the past five years have undermined respondent's firm's planning capacity, and the other measures whether new governments honor the contractual commitments and obligations of their predecessors. Finally we used a question from Profils Institutionnels (PI) where experts evaluate the "Consistency and continuity of government action in economic matters."

#### 2.2.2 Policy Adaptability

It is desirable for countries to be able to adapt policies to changing economic conditions and to change policies when they are clearly failing. Policy adaptability can be hindered either by a policy making process prone to gridlock, or to rigidities introduced explicitly to avoid opportunistic manipulation of policy. In some cases, the configuration of the political system can often lead to gridlock, making it difficult to achieve change. In other cases, the government of the day might be prone to abuse discretion by adopting opportunistic one-side-policies. In order to limit that opportunism, such polities might resort to fixed policy rules that are difficult to change.<sup>7</sup> This, of course, limits policy volatility, but at the cost of reducing adaptability. In either case, low policy adaptability leads to the inability to respond to shocks adequately, and a propensity to keep sub-optimal policies for extended periods of time.

Our measure of policy adaptability was constructed based on four variables from three different sources. Two variables come from the Columbia University State Capacity Survey (CUSCS). In the first question experts (from academia, government and media) rate the states ability to respond effectively to domestic economic problems, and in the second they rate states' ability to formulate and implement national policy initiatives. A third variable is drawn from The Bertelsmann Transformation Index (BTI) for 2006 measuring the degree of adaptability based on the ability of the political leadership to act flexibly, political leaders' capability for learning, and whether political leaders can replace failing measures with innovative policy. Finally, we used the Profils Institutionnels item where experts evaluate the decision-making capacity of political authorities in economic matters (responsibility, rapidity, etc).

#### 2.2.3 Policy Coordination and Coherence

Public policies are the outcome of actions taken by multiple actors in the policymaking process. Ideally, different agents acting in the same policy domain should coordinate their actions to produce coherent policies. However, this does not always occur. In some countries, policymaking on certain issues involves a large number of actors that do not communicate

<sup>&</sup>lt;sup>7</sup> This is sometimes accomplished by embedding policies such as pension benefits or intergovernmental transfers into the constitution.

adequately with each other, leading to what Cox and McCubbins (2001) have called "balkanization" of public policies. Lack of coordination often reflects the non-cooperative nature of political interactions. It may occur among different agencies within the central government, between agencies in the central government and others at the regional or municipal level, or even among agents that operate in different stages of the policymaking process (such as when the complications that the bureaucracy might face during the implementation phase of a given policy are not taken into account during the design and approval stage of policymaking).

Our measure of coordination and coherence was built based on two variables, one from the Columbia University State Capacity Survey and the other from the Profils Institutionnels database. The first is a rating of the effectiveness of coordination between the central government and local-level government organizations. The second rates co-ordination between ministries and within administrations.

#### 2.2.4 Policy Implementation and Enforcement

A policy could be very well designed by the experts and pass through the appropriate legislative debate, and yet be completely ineffective if it is not well implemented and enforced. In many countries, the quality of policy implementation and enforcement is quite poor. This is associated in part with the lack of capable and independent bureaucracies, as well as the lack of strong judiciaries. To an important degree, the quality of policy implementation and enforcement in a given country will depend on the extent to which policymakers in that country have incentives and resources to invest in their policy capabilities.

This index is based on the following six variables. Expert evaluation of whether the minimum wage set by law in the country is enforced, expert evaluation of whether tax evasion in the country is rampant or minimal, and expert evaluation of whether environmental regulation in the country is enforced, all from the GCR. We draw from the BTI analysts' estimate of whether the government implements its reform policy effectively, and we draw from the CUSCS a rating of states' ability to formulate and implement national policy initiatives and a rating of states' effectiveness in collecting taxes or other forms of government revenue.

#### 2.2.5 Policy Efficiency

A key aspect of good policymaking is the ability of the state to allocate its scarce resources to those activities where they have the greatest returns. This feature of policies is somewhat related to public-regardedness since, to the extent that policymakers unduly favor specific sectors to the detriment of the public interest, they will be moving away from the most efficient allocation of resources.

To capture efficiency we employed three measures. From the GCR we used the expert ratings of the composition of Public Spending and whether it is wasteful. From the BTI we employed experts' evaluation of whether the government makes efficient use of available economic and human resources. Finally from the Economist Intelligence Unite (EIU) we use the experts' assessment of the effectiveness of the political system in formulating and executing policy.

#### 2.2.6 Public-Regardedness of Policies

Public-regardedness refers to the extent to which policies produced by a given system promote the general welfare and resemble public goods (that is, are public-regarding) or tend to funnel private benefits to certain individuals, factions, or regions in the form of projects with concentrated benefits, subsidies, or tax loopholes (that is, are private-regarding).<sup>8</sup> This dimension may exacerbate inequality, particularly since those favored by private-regarding policies tend to be the members of the elite, who have the economic and political clout to skew policy decisions in their favor.

The public regardedness index is captured by three variables. The GCR's expert rating of whether when deciding upon policies and contracts, government officials usually favor wellconnected firms and individuals or are neutral among firms and individuals. Also from GCR we use the experts' evaluation of whether government social transfers go primarily to poor people or to the rich. Finally we include the Transparency International Corruption Perceptions Index (2005).

#### 2.2.7 The Policy Index

The preceding section identified six key features of public policies: stability, adaptability, coordination and coherence, quality of implementation and enforcement, public-regardedness, and efficiency. While there may be other relevant characteristics of public policies that have not

<sup>&</sup>lt;sup>8</sup> This notion is taken from Cox and McCubbins (2001).

been included in the analysis, in combination these features should provide a good picture of the quality of policymaking in many countries.

The various indexes we have constructed to measure these key features could be combined in different ways to come up with an overall index of the quality of public policies. Because we don't have a prior regarding which index should weight more, in constructing a policy index for this study we allocated the same weight to each of the key features discussed above and use the simple average of the different policy characteristics. Given that all the indexes tend to be highly correlated with each other, we feel confident that the approach will not affect the results significantly.

# 3. Policy Characteristics across Countries

All the variables we constructed are available in the accompanying dataset. A visual summary of these variables across countries is provided in the Appendix. Table 1 presents the partial correlations among the indexes. Even though most of the correlations are positive and highly significant, suggesting that to a great extent all good things tend to go together, various analyses described below and in the Appendix indicate that each of them measures a substantively different concept.<sup>9</sup> Running simple cluster analysis on the data yields interesting and expected associations.<sup>10</sup> On the one hand, stability, where countries get the higher scores, stands out from the other measures reflecting the common sense view that countries are more likely to suffer from rigidities in policy making rather than from excessive flexibility (Engerman and Sokoloff, 2008). On the other, public-regardedness and efficiency seem to go hand in hand, again a fact that scholars and practitioners in the area of poverty alleviation tend to emphasize. Thus overall these results suggest that different policy dimensions are indeed being captured by the measures introduced here.

<sup>&</sup>lt;sup>9</sup> As explained in the Appendix we have taken great care in insuring that what we have is not just an optimism/pessimism bias driven by third factors. One of the reasons for our confidence is that the different components of the indexes come from different sources and from different points in time.

<sup>&</sup>lt;sup>10</sup> See the Appendix for a dendrogam of results.

|              | Stability | Adaptability | Coordination | Implement | Efficiency | Public<br>Regardedness | Policy<br>Index |
|--------------|-----------|--------------|--------------|-----------|------------|------------------------|-----------------|
| Stability    | 1.0000    |              |              |           |            |                        |                 |
| observations | 121       |              |              |           |            |                        |                 |
| Adaptability | 0.12      | 1.00         |              |           |            |                        |                 |
| observations | 117       | 132          |              |           |            |                        |                 |
| Coordination | 0.38**    | 0.42**       | 1.00         |           |            |                        |                 |
| observations | 108       | 120          | 120          |           |            |                        |                 |
| Implement    | 0.08      | 0.74**       | 0.50**       | 1.0000    |            |                        |                 |
| observations | 121       | 132          | 120          | 136       |            |                        |                 |
| Efficiency   | 0.21*     | 0.60**       | 0.40**       | 0.64**    | 1.00       |                        |                 |
| observations | 120       | 131          | 119          | 135       | 136        |                        |                 |
| Public Reg   | 0.31**    | 0.45**       | 0.47**       | 0.66**    | 0.65**     | 1.00                   |                 |
| observations | 116       | 127          | 1117         | 144       | 145        | 133                    |                 |
| Policy Index | 0.46**    | 0.77**       | 0.69**       | 0.85**    | 0.79**     | 0.77**                 | 1.00            |
| observations | 121       | 132          | 120          | 136       | 136        | 133                    | 138             |

**Table 1. Partial Correlations among the Indexes** 

All correlations were calculated after controlling for GDP per capita, legal origin and region.

\*\* p<0.01 \* p<0.05

As mentioned in the introduction the policy features measured in this study are usually associated with some aspects of development. Here we explore this connection in a broader sense by presenting some preliminary evidence showing the association that exists between our policy variables and two measures of economic development. We suggest (and briefly explore) more specific channels for that connection later in the paper.

Table 2 shows basic and partial correlations (controlling for GDP per capita in 1990) between the six public policy variables and the policy index, with two measures of development. The first is the average GDP per capita growth, in U.S. dollars at purchasing power parity, between 1980 and 2005, from the World Bank's World Development Indicators. The second measure is the change in the UNDP's Human Development Index (HDI) between 1990 and 2005 weighted by the available range for change.<sup>11</sup> The partial correlations are always positive and usually statistically significant.

<sup>&</sup>lt;sup>11</sup> The Human Development Index is a bounded measure where the bounds are set based on the minimum and maximum values observed in the data. Thus the simple difference between initial and final years "punish" countries at the extreme ends of the distribution, especially the upper end, since it is harder to make any significant change if a country's scores are already at the top. There is no easy way out of that problem. The measure employed here was created by dividing the change (measured between 1990 and 2005 to be consistent with the rest of the indexes) by the amount available to improve in the initial year (the scale ranges from 0 to 1). This rewards somewhat countries that have little room for improvement.

|                           | Adapt  | Stability | Coordination<br>Coherence | Efficiency | Implement<br>Enforce | Public<br>Regard | Policy<br>Index |
|---------------------------|--------|-----------|---------------------------|------------|----------------------|------------------|-----------------|
| GDP per capita            |        |           |                           |            |                      |                  |                 |
| growth                    | 0.36** | 0.24**    | 0.28**                    | 0.33**     | 0.24**               | 0.25**           | 0.37**          |
| Observations              | 131    | 121       | 119                       | 135        | 135                  | 132              | 137             |
| HDI (change) <sup>b</sup> | 0.24** | 0.11      | 0.20*                     | 0.16       | 0.18*                | 0.15             | 0.28**          |
| Observations              | 119    | 116       | 110                       | 123        | 123                  | 121              | 125             |

Table 2. Key Features of Public Policies and Economic Development: Partial Correlations<sup>a</sup>

\*\* p<0.01 \* p<0.05

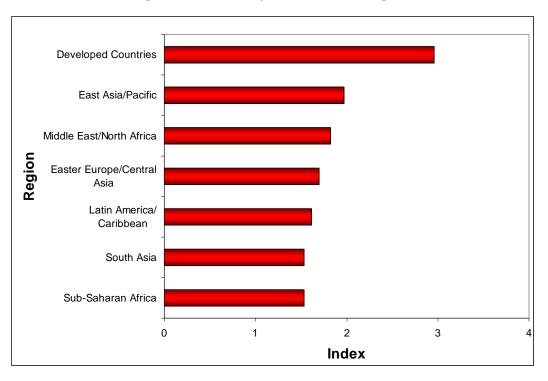
<sup>a</sup> All results shown are after controlling for the log of GDP per capita in 1990, legal origin and region.

<sup>b</sup> Results for the HDI measure also control for the Human Development Index value in 1990.

Besides their association with indicators of interest to researchers, these policy variables can be a handy tool on their own right by allowing countries to be evaluated in comparative perspective. A first straightforward exercise in this direction is to consider country rankings. This can be a daunting task, however, with so many countries and dimensions, besides placing too much emphasis on the precision of the estimates. The approach taken in this section is to provide a summarized version of the ranking starting with a broader regional perspective. Clearly regions are one rough approximation of how countries are expected to perform. Thus the section ends by outlining some interesting deviations within regions and how countries tend to group across them. To provide the reader with a general overview, the Appendix contains a table with each country's position based on quartile distributions of each policy variable.

Beginning with regions, Figure 1 shows that the developed countries (including Western Europe, Japan, Australia, the United States, and Canada) rank the highest in terms of the policy index and are considerably higher on average than those of the rest of the world. The second highest ranking is that of the countries of East Asia and the Pacific, which includes the economically successful countries of Singapore, Taiwan, Thailand, and China. Following third and fourth are those of the Middle East/North Africa and Eastern Europe/Central Asia, while Latin American and Caribbean (LAC) countries fall to fifth on the scale. The only regions surpassed by LAC are Sub-Saharan Africa and South Asia.

This pattern can be somewhat replicated when performing cluster analysis at the regional level and taking all policies into consideration (see the Appendix for results). Developed countries stand out, Middle-Eastern and East Asian countries group together and Latin America is closer to South Asian and Sub-Saharan African countries.



**Figure 1. The Policy Index across Regions** 

This distribution varies little when we look at individual policy features. Developed countries lead on all fronts, followed by East Asia and the Pacific (except in Stability and Public Regardedness, where this group ranks third). Middle Eastern and North African countries rise to second place with regards to the degree to which their policies are public regarding. However, they place fifth in terms of both stability and adaptability of their policies. Latin America performs poorly in the efficiency and stability of its policies, coming last in both aspects. Its best ranking is achieved on policy adaptability, and even there it is still placed fourth. This evidence seems to suggest that even though all the variables tend to go together, the polities of some countries seem to be better able to deliver certain features of policies in detriment of others.

Indeed, as shown in Table 3 while in some features countries of a given region tend to be close to each other, in others the variance is relatively large. To give some examples, developed countries tend to receive relatively high scores on stability. If we run cluster analysis on the data we find that they tend to form a somewhat uniform group that stands out from countries in other regions (the variance is 0.03). However, if we apply the same procedure to coordination the picture is quite different (variance is 0.48). Countries like Italy, Israel and France tend to be closer to success cases in the developing world (e.g. Botswana, Chile, Brazil, and Taiwan) rather

than to the highest ranking developed countries (e.g. Finland, Germany, Sweden, and Norway). Conversely, Singapore tends to cluster together with successful developed countries, rather than with its East Asian fellows, in features such as coordination, public-regardedness, and implementation and enforcement.

| Region | Adapt        | Stability | Coordination<br>Coherence | Implement<br>Enforce | Efficiency  | Public<br>Regard | Policy<br>Index |
|--------|--------------|-----------|---------------------------|----------------------|-------------|------------------|-----------------|
| DEV    | 0.21         | 0.03      | 0.48                      | 0.20                 | 0.14        | 0.20             | 0.13            |
| EAP    | 0.40         | 0.10      | 0.51                      | 0.32                 | 0.63        | 0.48             | 0.27            |
| ECA    | <u>0.35</u>  | 0.10      | 0.28                      | 0.19                 | 0.17        | 0.10             | 0.15            |
| LAC    | 0.29         | 0.17      | 0.32                      | 0.26                 | <u>0.33</u> | 0.25             | 0.23            |
| MNA    | 0.25         | 0.08      | <u>0.36</u>               | 0.13                 | 0.20        | 0.10             | 0.13            |
| SAS    | 0. <u>14</u> | 0.07      | 0.16                      | 0.10                 | 0.05        | 0.11             | 0.05            |
| SSA    | 0.32         | 0.07      | <u>0.41</u>               | 0.26                 | 0.27        | 0.18             | 0.18            |

Table 3. Variance of Distances between Countries within Regions<sup>12</sup>

Again, these differences in clustering show that some countries seem to be better able to deliver certain features of policies to the detriment of others. For example, countries like Korea seem to have a high capacity to adapt their economic policies; however, they seem to be less able to do it in line with benefits for the overall population (public-regardedness). Comparatively, Finland seems to favor a wide range of the population with its policies; however, its capacity to adapt in the face of shocks seems to be relatively lower.

In line with our findings from the initial data collected for Latin America, countries within the LAC region tend to group themselves as expected. High performers include Chile (reaching the top developed countries groups in almost all measures, except coordination), Uruguay (usually grouping with countries like Italy, Korea, Taiwan and South Africa), and Brazil (again appearing closer to countries like Italy, France, Portugal and Taiwan). Haiti, Guatemala and Paraguay tend to appear at the bottom of the scale.

One of the concerns usually expressed by researchers is that, despite the multitude of measures of policy and institutional capacity available, they are all getting at the same abstract

<sup>&</sup>lt;sup>12</sup> These variances are calculated based on the mean of Euclidean distances between each country of a given group and each of the other countries in that same group. The list of regional acronyms is the following: DEV: high-income countries, EAP: East Asia and Pacific, ECA: Europe and Central Asia, LAC: Latin America and Caribbean, MNA: Middle East and North Africa, SAS: South Asia, SSA: Sub-Saharan Africa.

concept (Van de Walle, 2005; Knack and Manning, 2000). In this regard, the patterns discussed above seem to contribute to the face validity of the measures proposed here to the extent that interesting and reasonable variations are observed when comparing country rankings on the different dimensions.

In the remainder of the paper we present a number of uses of these variables measuring policy characteristics. In Section 4 we summarize and utilize an approach that emphasizes intertemporal cooperation in the policymaking process in order to link these policy characteristics to a number of features of the workings of political institutions. Section 5 contrasts the predictions of that intertemporal framework with those from the prominent veto players approach. Section 6 uses our indicator of policy quality as an explanatory variable to understand the effects of public spending in education and health; the general message being that the effectiveness of some specific policies depends on policymaking capabilities.

# 4. Political Institutions, Intertemporal Cooperation, and the Quality of Policies

As mentioned in the introduction, the data construction and analysis of this paper follows from previous work by the authors on the study of the policymaking process using a particular lens. This lens focuses on the intertemporal nature of transactions. This section briefly discusses the framework that has guided the research. More detailed accounts of the framework are presented in IDB (2006), Spiller and Tommasi (2007) and Stein et al. (2008).

The policymaking process (PMP) can be understood as a process of bargains and exchanges (or transactions) among political actors. Some of these exchanges are consummated on the spot or instantaneously (spot transactions). In many other cases, current actions or resources (such as votes) are exchanged for promises of future actions or resources (they are intertemporal transactions). The type of transaction that political actors are able to engage in will depend on the possibilities provided by the institutional environment. Issues of credibility and the capacity to enforce political and policy agreements are crucial for political actors to be able to engage in intertemporal transactions.

The behavior of political actors in the policymaking process, shaped by their preferences, incentives, and constraints, will in turn depend on the workings of political institutions (such as congress, the party system, or the judiciary) and on more basic institutional rules (such as

electoral rules and constitutional rules) that determine the roles of each of the players, as well as the rules of engagement among them.

We argue that valuable features of public policies depend on the ability of political actors to reach and enforce intertemporal agreements: that is, to cooperate.<sup>13</sup> In political environments that facilitate such agreements, public policies will tend to be of higher quality, less sensitive to political shocks, and more adaptable to changing economic and social conditions. In contrast, in settings that hinder cooperation, policies will be either too unstable (subject to political swings) or too inflexible (unable to adapt to socioeconomic shocks); they will tend to be poorly coordinated; and investments in state capabilities will tend to be lower. That is, the value of the policy indexes we have constructed will depend on how cooperative the policymaking process is.

The question then becomes, under what conditions is cooperation more likely? Drawing on intuitions from game theory, it can be argued that cooperative outcomes are more likely if:

- There are good "aggregation technologies" so that the numbers of actors with direct impact on the policy-making game is relatively small.
- There are well-institutionalized arenas for political exchange.
- Key actors have long time horizons.
- There are credible enforcement technologies, such as an independent judiciary or a strong bureaucracy, to which certain public policies can be delegated.<sup>14</sup>

These conditions are associated with some characteristics of key players and arenas such as congress, the party system, the judiciary, and the bureaucracy. For example, the political regime, the electoral system, the organization of Congress, the geographical organization of government, and the structure of the Judiciary may affect the number of agents. Also, the

<sup>&</sup>lt;sup>13</sup> The ingredients of our framework are not new. It builds upon previous contributions such as Alesina (1988), Dixit, Grossman and Gul (2000), Dixit (2003), and de Figueiredo (2002). The conceptualization of policymaking as intertemporal exchanges draws from a long tradition in transaction cost economics, which has been applied to the political arena by North (1990), Dixit (1996), and Levy and Spiller (1994).

<sup>&</sup>lt;sup>14</sup> These conditions can not be considered in isolation and their impact will depend on the full set of conditions—the "general equilibrium." For example, the role of the number of actors may depend on their horizon, and so forth. If horizons are short, a higher number of players may act to prevent policy change as predicted in the veto player theory. If horizons are long, a higher number of players may not necessarily generate the same results. See Scartascini, Stein, and Tommasi (2008) and the next section.

electoral system, term limits, reelection constraints, and the organization of parties may affect the term horizon of agents.<sup>15</sup>

Consequently, in this framework, the political institutions of a country, along with cultural norms and certain paths of previous behavior, affect the features of cooperation and more generally, the policymaking process. Those processes in which cooperation is possible will generate better features of policies. For example, countries in which cooperation is possible will have policies that are more stable, more adaptable, better coordinated, and so on.

#### 4.1 Institutional Variables

This subsection presents some indicators of the workings of political institutions that, according to our framework, are likely to affect the probability of reaching cooperative agreements (aggregation technologies, arenas for exchange, time horizons, enforcement technologies, etc.) and hence the qualities of public policies. We also present some other institutional variables considered in the literature. The next subsection relates these institutional variables to the qualities of public policies.

#### 4.1.1 Capabilities of Congress

Legislatures are critical to the functioning of democracy and act as an important arena for discussing and negotiating policy. A legislature made of up professional legislators, with technical capabilities for discussing and overseeing policies, and adequate organizational structures, can facilitate the development of relatively consensual and consistent policies over time.

To measure the capabilities of legislatures, we used the average of two data sources, including the effectiveness of lawmaking bodies (from the GCR) and the population's confidence in parliament (from the World Values Survey).

#### 4.1.2 Judicial Independence

The judiciary is a key element of a well-functioning political system, as it is responsible for the enforcement of political and policy decisions, as reflected in constitutions and laws. A judiciary that effectively plays its role may contribute to better public policy outcomes, such as enhanced

<sup>&</sup>lt;sup>15</sup> Scartascini (2007) develops the links between the institutional variables traditionally utilized in the literature and the features of cooperation.

policy stability, and policy implementation and enforcement. If the judiciary is not independent of the other branches of government, it may not be effective in adhering to its role.

This variable has been constructed from three different sources—GCR, BTI, and the Fraser Index—that attempt to measure the same phenomenon: whether the judiciary is subject to interference by the government or other political actors.

#### 4.1.3 Civil Service

An effective and capable bureaucracy is likely to improve the quality of implementation of public policies, as well as their coordination across ministries. The competence and independence of the bureaucracy may decrease the likelihood that policy will be prone to politicization and political opportunism, and could increase policy adaptability to changing circumstances by relying on technical expertise.

Our database includes an index that measures the degree of professionalism in the civil service, whether recruitment is based on merit, the level of the bureaucracy's functional capacity and performance, and its efficiency (data sources include the State Capacity Survey and the International Country Risk Guide's "Bureaucracy Quality" rating).

#### 4.1.4 Party Institutionalization

The structure and organization of political parties and party systems can have an important influence on the policymaking process, both by playing a direct role and through interactions with other institutions. Political parties can influence policy debates, affect executive-legislative relations, enhance or constrict the possibilities for coordination in congress, or manage the incentives of politicians at both the national and local level. Institutionalized party systems could additionally serve as facilitators of intertemporal policy compromise.<sup>16</sup>

The Party System Institutionalization Index is comprised of five variables, which measure the extent to which there is a stable, moderate and socially rooted party system that can articulate and aggregate societal interests (from the BTI); the level of confidence in political parties (from the World Values Survey and various Barometers); vote volatility; the age of parties; and the fairness of elections.

<sup>&</sup>lt;sup>16</sup> In our previous work within Latin America we have found that institutionalized party systems, if programmatic, tend to correlate with high-quality policies (Stein and Tommasi, 2007).

#### *4.1.5 Cabinet Stability*

Cabinet ministers in many countries play key roles in various stages of the policy process. The strength and organizational abilities of cabinets can have important effects on the outcomes of public policy. For example, a certain degree of cabinet stability is likely to be necessary to promote longer-term policies and allow ministers to see programs and policy implementation through to completion. Frequent turnover of cabinet ministers may foster the short-term orientation of policy and frequent policy changes, as well as a reduction in the effective coordination between the ministers and the bureaucratic institutions they may oversee. We employed a number of variables that describe the state of cabinets, including the number of cabinet changes in a year from the Cross National Time Series database.

#### 4.1.6 Other Variables

The variables listed above are natural proxies for some facilitators of intertemporal cooperation. In our analysis we have included other institutional variables which come from alternative frameworks (such as veto player theories, particularly Tsebelis, 2002), as well as some of the institutional rules used more broadly in the literature on political institutions and policy.

One important variable for the very prominent veto players approach is the variable *Executive Constraints*. These variables refer to the number of veto players and checks in the political system. The number of veto players in a system—those individuals or organizations who play a significant role by either blocking a policy, or whose consent is needed to pass a proposal—can affect policy stability and adaptability. The presence of more veto players in a system signifies that it may be more difficult to change policy, thus increasing policy stability. At the same time, higher numbers of veto gates to pass through may indicate that policy may be more difficult to change, leading to decreased policy adaptability. We employed a number of variables that attempt to measure the number of veto players or institutional checks within various political systems. They come from various datasets such as Henisz's "polcon" variables and the Database of Political Institutions from the World Bank.

Other variables that we consider include Parliamentarism, Federalism, whether the electoral system is proportional, and whether the executive is elected. These variables are not easily mapped directly into this project's motivating framework. As will be shown below, they are usually not related to the policy variables. Some, however, such as political regime, seem to

matter. Left for future exploration is whether some institutional variables may have a direct impact on the policy variables (e.g., whether parliamentarism embodies certain characteristics facilitating intertemporal cooperation that are not captured otherwise) or whether they may proxy for other characteristics of the polity (e.g., in parliamentary countries, party systems are usually more institutionalized and congress tend to be more capable, hence, parliamentarism may proxy for certain good characteristics of the polity but have no additional impact as explanatory variable).<sup>17</sup>

#### **4.2 Relating Political Institutions and Policy Outcomes**

In this section we present a brief summary of ongoing work (Machado et al., 2009) relating the institutional variables listed above to the indicators of policy characteristics presented earlier. The framework used to construct these variables generates a number of predictions relating some institutional conditions likely to foster intertemporal cooperation to the features of policies captured by our policy indexes. As shown in Table 4, our expectations are borne out by the data. The "intertemporal" institutional variables are often positively and significantly correlated with policy features, (a partial exception being the durability of cabinets). This suggests these desirable policy features might indeed be a consequence of good well-functioning policymaking institutions being in place.<sup>18</sup>

<sup>&</sup>lt;sup>17</sup> Gerring, Thacker, and Moreno (2005), another interesting inquiry into the role of alternative political institutions on some governance outcomes, shares the same broad set of concerns as this agenda. The authors propose a reduced-form characteristic of political systems called *centripetalism* as the most favorable to good governance. In their view, parliamentarism favors centripetalism, and hence good outcomes.

<sup>&</sup>lt;sup>18</sup> When we look at basic institutional rules such as the electoral system or the government system we fail to observe significant effects.

|                                    | Adapt         | Stability     | Efficien<br>cy | Coordinati<br>on<br>Coherence | Public<br>Regard | Implement<br>Enforce | Policy<br>Index |
|------------------------------------|---------------|---------------|----------------|-------------------------------|------------------|----------------------|-----------------|
| Congress<br>Capabilities           | 0.26**<br>112 | 0.20**<br>105 | 0.37**<br>117  | 0.26**<br>103                 | 0.29**<br>117    | 0.28**<br>116        | 0.40**<br>117   |
| Judicial<br>Indepen-<br>dence      | 0.29**<br>129 | 0.15<br>118   | 0.27**<br>134  | 0.19**<br>117                 | 0.36**<br>130    | 0.31**<br>133        | 0.40**<br>134   |
| Bureau-<br>cracy<br>Quality        | 0.29**<br>128 | 0.10<br>119   | 0.13<br>131    | 0.30**<br>119                 | 0.16*<br>128     | 0.25**<br>132        | 0.29**<br>132   |
| Party<br>Institution-<br>alization | 0.34**<br>130 | 0.04<br>119   | 0.21**<br>134  | 0.11<br>118                   | 0.16**<br>130    | 0.30**<br>134        | 0.29**<br>135   |
| Cabinet<br>Stability               | 0.01<br>131   | 0.18*<br>120  | 0.07<br>135    | 0.28**<br>119                 | 0.14<br>132      | 0.01<br>135          | 0.14*<br>137    |

**Table 4. Policy and Institutional Variables Partial Correlation Matrix** 

\*\* p < 0.05 \* p < 0.1. Second row of each variable indicates the number of observations.

Similar results are obtained when we look at the multivariate interaction of these variables. We focus this brief analysis on the Policy Index.<sup>19</sup> Looking at the three specifications in Table 5, where each includes a particular set of variables, we see that both our institutional quality variables and other polity characteristics have a significant effect on the overall quality of policies. The one exception is our measure of party institutionalization, where we fail to reject the hypothesis that its effect is null for the policy index. It is significant, however, for some of the individual indexes.

Plain institutional rules have no discernible effect either. When we group all these variables into a single specification, though, only the previously significant institutional quality variables remain positive and significantly associated with the Policy Index. The results, which are explored further in Machado et al. (2009) are encouraging regarding the framework. Particularly, the institutional variables related to intertemporal cooperation are significant to explain the policy index (and the individual indexes which are no reported here) but the institutional variables traditionally used in the literature to explain economic outcomes seem not to matter that much, at least not directly.

<sup>&</sup>lt;sup>19</sup> See Machado et al. (2009) for a more complete analysis, looking at each of our dependent variables in detail.

|                              |         | Policy Index |         |
|------------------------------|---------|--------------|---------|
|                              | (1)     | (2)          | (3)     |
| Congress Conchilities        | 0.29*** |              | 0.32*** |
| <b>Congress Capabilities</b> | (0.058) |              | (0.08)  |
| Judicial                     | 0.32*** |              | 0.32*** |
| Independence                 | (0.054) |              | (0.07)  |
| Dumaanana Quality            | 0.18*** |              | 0.17*** |
| Bureaucracy Quality          | (0.052) |              | (0.06)  |
| Party                        | -0.004  |              | 0.04    |
| Institutionalization         | (0.065) |              | (0.09)  |
| Cabinat Stability            | 0.02    |              | 0.11    |
| Cabinet Stability            | (0.123) |              | (0.15)  |
| Europeting Constraints       |         | 0.09**       | -0.012  |
| Executive Constraints        |         | (0.033)      | (0.03)  |
| Parliamentarism              |         | - 0.02       | -0.004  |
| Parliamentarism              |         | (0.071)      | (0.05)  |
| Federalism                   |         | 0.09         | 0.04    |
| rederalism                   |         | (0.16)       | (0.11)  |
| Proportional                 |         | -0.12        | -0.02   |
| Electoral System             |         | (0.10)       | (0.07)  |
| Executive elected            |         | 0.11         | 0.04    |
| Executive elected            |         | (0.09)       | (0.07)  |
| Ln(GDPpc)                    | Yes     | Yes          | Yes     |
| Region                       | Yes     | Yes          | Yes     |
| Legal Origin                 | Yes     | Yes          | Yes     |
| Adjusted R2                  | 0.88    | 0.69         | 0.87    |
| Ν                            | 113     | 122          | 105     |

 Table 5. Regression Results: Policy Index and Institutional Variables

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# 5. Veto Players, Intertemporal Interactions, and Policy Adaptability

One of the most prominent theoretical strands in comparative politics today is the veto player theory developed and summarized by Tsebelis (2002).<sup>20</sup> It is an approach that attempts to provide a synthetic characterization of political systems in terms of their impact on the easiness or difficulty of implementing policy change.

Veto players are political actors whose agreement is necessary to change policy. One of the main predictions of veto players' theory is that polities with a higher number of veto players are less likely to change their policies. This is good for sustaining policy commitments, but bad for adapting to changing circumstances or to policy failures.

Using the policy variables constructed in this paper, and the framework summarized in the previous section, Scartascini, Stein and Tommasi (2008) challenges this prediction from the veto player approach. We postulate that polities more able to sustain policies over time will not necessarily will be less able to adjust policies when necessary, and our separate notions of stability and adaptability attempt to capture these two distinct concepts. Furthermore, in our perspective, polities that are better able to cooperate over time might be able to achieve more of *both* desirable policy qualities in such a way that we could find these two variables positively correlated in a cross section of countries. If policymaking takes place over time with actors interacting repeatedly, more cooperative polities might be able to achieve both objectives at once (and under some conditions a higher number of veto players might even favor intertemporal cooperation.) Figure 2 shows that stability and adaptability are indeed positively correlated across countries, even after controlling for other factors likely to affect both policy characteristics.

<sup>&</sup>lt;sup>20</sup> In Scartascini, Stein and Tommasi (2008) we complement the theory as presented in Tsebelis with the work of Cox and McCubbins (2001) for presidential democracies. This distinction is important, as some of the predictions of the theory that we analyze come from this strand of literature.

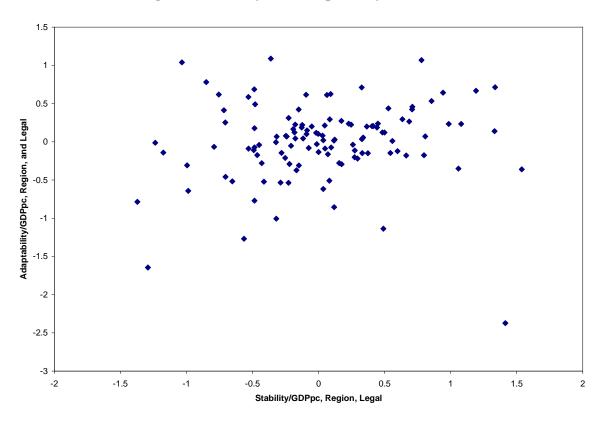


Figure 2. Stability and Adaptability Scatter Plot

Furthermore, in that paper we find that a higher number of veto players indeed increases both stability and adaptability, and that both variables are better explained by institutional variables attempting to capture intertemporal cooperation than by variables that measure the number of veto players (see Table 6).

|                      | Stab     | oility   | Adaptability |          |  |  |
|----------------------|----------|----------|--------------|----------|--|--|
|                      | (1)      | (2)      | (3)          | (4)      |  |  |
| Vetoes (polcon V)    | 0.978*** | -0.135   | 1.710***     | 0.0437   |  |  |
|                      | (0.176)  | (0.229)  | (0.207)      | (0.354)  |  |  |
| Party                |          |          |              |          |  |  |
| institutionalization |          | 0.121*   |              | 0.260**  |  |  |
|                      |          | (0.0686) |              | (0.120)  |  |  |
| Judicial             |          |          |              |          |  |  |
| independence         |          | 0.293*** |              | 0.469*** |  |  |
|                      |          | (0.0684) |              | (0.114)  |  |  |
| Cabinet changes      |          | 0.106    |              | 0.205    |  |  |
|                      |          | (0.163)  |              | (0.277)  |  |  |
| Ln(GDPpc)            |          | Yes      |              | Yes      |  |  |
| Region               |          | Yes      |              | Yes      |  |  |
| Legal Origin         |          | Yes      |              | Yes      |  |  |
| R-squared            | 0.19     | 0.695    | 0.31         | 0.681    |  |  |
| Observations         | 126      | 99       | 145          | 103      |  |  |

Table 6. Regression Results: The Role of Veto Players

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# 6. Effective Policy Outcomes Depend on the Quality of Policies: The Cases of Education and Health

So far, we have considered the policy features in their role as dependent variables. However, some of the features captured by our indexes may also help explain certain political and economic outcomes. One possibility we explore here is that the indexes may help to explain improvements in development outcomes. For that purpose, we look at the impact of the policy indexes on some components of the Human Development Index.

The Human Development Index (HDI) is composed of three aspects of a country's development: health, education and wealth. As shown above, our policy indexes are positively associated with GDP per capita growth and also positively associated with changes in the UNDP index of development (HDI). Now we want to explain what matters for a country for improving their scores on the other two components of the HDI: health, measured in terms of life expectancy, and education, measured as a combination of adult literacy rate and enrollment rates at all educational levels. Basically, we want to check the relationship between quantity of inputs and quality of outcomes given the overall features of policies in the countries. Do countries that

spend more on health and education perform better irrespective of their institutions? Or does the quality of the policies they produce also play a significant role?

Table 7 shows the results of running a simple OLS specification explaining a country's change in the health and education index between 1995 and 2005 based on our Policy and Public-Regardedness indexes, and expenditures on health and education (measured as the log of average expenditures between 1998 and 2005<sup>21</sup>) and, in some specifications, an interaction effect between the two independent variables.

|                                   |                  | -              | ements in<br>1 Index |                |                   | -                  | ements in<br>on Index |                    |
|-----------------------------------|------------------|----------------|----------------------|----------------|-------------------|--------------------|-----------------------|--------------------|
|                                   | (1)              | (2)            | (3)                  | (4)            | (5)               | (6)                | (7)                   | (8)                |
| Policy Index                      | 0.05<br>(0.05)   | -0.08<br>0.12  |                      |                | 0.17***<br>(0.04) | 1.63***<br>(0.45)  |                       |                    |
| Public-Regardedness               |                  |                | 0.08**<br>(0.03)     | 0.06<br>(0.1)  |                   |                    | 0.14***<br>(0.03)     | 1.43***<br>(0.43)  |
| Health Expenditures               | 0.04**<br>(0.02) | -0.001<br>0.04 | 0.03*<br>(0.017)     | 0.02<br>(0.03) |                   |                    |                       |                    |
| Education Expenditures            |                  |                |                      |                | 0.02*<br>(0.01)   | 0.13***<br>(0.04)  | 0.02**<br>(0.01)      | 0.11***<br>(0.03)  |
| Policy*<br>Health Expenditures    |                  | $0.02 \\ 0.02$ |                      |                |                   |                    |                       |                    |
| Policy*<br>Education Expenditures |                  |                |                      |                |                   | -0.05***<br>(0.02) |                       |                    |
| Public*<br>Health Expenditures    |                  |                |                      | -0.09<br>(0.2) |                   |                    |                       |                    |
| Public*<br>Education Expenditures |                  |                |                      |                |                   |                    |                       | -0.05***<br>(0.02) |
| Adjusted R2<br>Obs                | 0.16<br>137      | 0.16<br>137    | 0.17<br>132          | 0.16<br>132    | 0.28<br>118       | 0.34<br>118        | 0.26<br>114           | 0.31<br>114        |

Table 7. Health and Education Outcomes and the Policy Index

Note: Significant at 1% level (\*\*\*), 5% (\*\*), and 10% (\*)

The dependent variables are measures as changes in the health and education index calculated by the UNDP between the years 1992 and 2005, weighted by possible improvement.

Considering health first, we see that while our policy index fails to achieve significance, our measure of public-regardedness seems significant. One possible explanation is the following: improving life expectancy requires not only having a good set of policies but targeting them to the worse-off. In addition, following our question regarding expenditures and policies, it is interesting to consider the effect of the quality of the policies interacted with that of

<sup>&</sup>lt;sup>21</sup> Expenditures are measured in constant dollars of 2000. The source is the World Development Indicators compiled by the World Bank.

expenditures. The findings are plotted in Figure 3. While the effect of the policy index is not significant at the 95 percent confidence level for any level of expenditures (left panel), expenditures on health are significant only for higher values of the policy index (right panel). In other words, if a country's policy environment is not good, spending more on health has no clear effect on improving life expectancy. Conversely it suggests that as countries develop a good policy environment (i.e., they move along the x axis on the right panel), they tend to benefit more from a given amount spent (the effect of health expenditures is positive and significant).

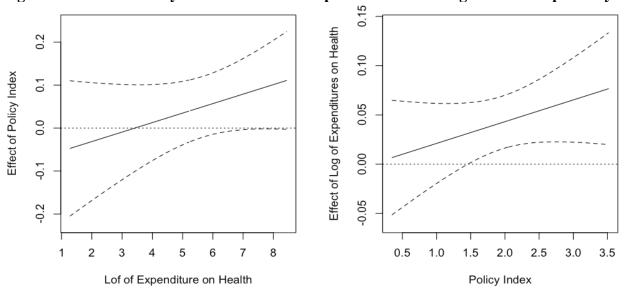
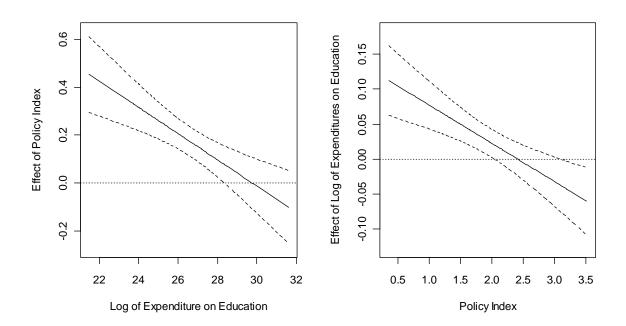


Figure 3. Effects of Policy Index and Health Expenditures on Changes in Life Expectancy

Turning now to changes in a country's education index, we notice that both the general policy environment and the degree to which policies are public regarding matter significantly. Also how much a country invests in education plays a significant role. Here the interaction between the two explanatory variables seems to add to the models explanatory power in an interesting way.

As shown in Figure 4, if a country does not spend much on education relative to others (maybe because it is poor), the quality of its policies matters considerably. For a same small amount spent, countries whose policies have better features reap greater benefits in terms of lower literacy and higher enrollment rates (left panel). However, this effect is not the same for every level of expenditure. Those countries that are able to spend more (which means moving to

the right in the x axis of the left panel) get a very similar result regardless of the quality of their policies. The evidence seems to indicate that in education countries can substitute money for policy quality. The right panel of the figure shows similar evidence. Countries displaying low quality of policies tend to show higher improvements if they invest higher amounts. However, once they achieved average to high levels of policy quality, the amount spent has no discernible effect on changes in outcome.



#### Figure 4. Effects of Policy Index and Education Expenditures on Education Improvement

This simple exercise suggests that the policy environment does indeed matter. However, it also suggests that it matters differently depending on the issue at hand. Despite the differences, though, a common underlying message seems to come out clearly, corroborating what other researchers have also found. That countries may achieve important gains by investing on their institutions and the quality of policies they produce (Killick, 1995). In some cases, it may be enough to compensate low levels of resources. In other cases, it might potentiate whatever is invested.

## **6.** Conclusions

The paper has introduced a number of cross-national measures of various properties or qualities of public policies. These variables can have multiple uses. Here, we have suggested some applications. First, we have shown that certain characteristics of the policymaking environment, that in our previous work we have related to the capacity of generating intertemporal agreements, tend to generate better policy features. For example, we show that countries with higher congress capabilities, judicial independence, and bureaucratic quality tend to fare better in terms of their policy index.

Second, we have summarized related work using two of the policy variables that challenges some of the results of the veto player literature. Basically, we find that there is not necessarily a trade-off between stability and adaptability and that a higher number of veto players reduce policy adaptability. We argue that a higher number of vetoes may facilitate intertemporal cooperation, and intertemporal cooperation may give countries the ability of circumvent the trade-off.

Third, we are also attempting to use these proxies for state capacity as control variables for explaining the impact of public spending on a number of social areas. These preliminary results suggest that the policy environment does indeed matter. However, it also suggests that it matters differently depending on the issue at hand (in our example, education and health).

While we believe these preliminary results are interesting in their own right, if for no other reason than to foster discussion on these subjects, we hope that the dataset itself will stimulate scholars to utilize it in their analysis of political institutions, public policies, and development outcomes.

# Appendix A

#### Index Construction Method and Robustness Checks

As previously mentioned, the variables we have introduced have been constructed using available data. As in some cases data were not available for every country, we have followed the particular method that we describe in this section. In this section we also try to tackle two issues related to the construction of the variables: the perils of using aggregate indicators and the fact that they have been constructed using (mostly) subjective data.

#### *i. Construction Methodology*

All of the indexes created for this project were calculated based on the average of their respective components. Before calculating this average, we rescaled some variables so that their values would go from low to high levels of the measure of interest. Observations for which data were missing, but for which data on at least one component of an index were available, had data entered according to the following procedure:

- 1. Create new variables, one for each component of the index, with values corresponding to how many standard deviations away from the mean (of the given component) each observation is.
- 2. Input the average standard deviation (calculated over the components of the index) to the missing data.
- 3. Transform these new variables back to the original scale.
- 4. Rescale all components (now with inputted values in place of missing ones) to range between 0 and 4.

This method was chosen so that inputted data would take the position of each country vis-à-vis other countries in the distributions of component variables into account.

Given the large number of countries covered and the wide variance of data availability, we created measures of the "quality" of each index recording the number of component variables available for each observation. In all of the regressions presented here, where one of our indexes is the dependent variable, we estimate "weighted least squares" models. That is, we weight each observation by the number of sources available to create the index (using the "quality" variables).<sup>22</sup>

#### ii. Robustness Checks

In order to ensure that the new data we collected are reliable, we ran a number of checks to examine whether we were measuring the desired components of public policies and institutions. First, we correlated the new data with the data collected from the State Capabilities survey conducted for IDB (2006). This survey questioned more than 150 experts in 18 Latin American countries, including public policy analysts, economists, political scientists, and former policymakers (including a few former presidents), regarding the capabilities of the State in a number of dimensions identified as crucial by Weaver and Rockman (1993). The results of the correlations, which are in general positive, significant, and high, suggests that the new data collected reflect previous exercises conducted on experts' opinions of the state of public policy, at least for Latin America and the Caribbean.

We also checked the data against cyclicality data from Braun and di Gresia (2002). We found a negative and significant relationship between our policy adaptability variables and the Braun and di Gresia's cyclicality data, which shows that the adaptability variable is effectively capturing government policy responses to changes, in this case, economic conditions.

#### iii. Addressing the Perils of Aggregate Indicators

The "use and abuse" of governance indicators has garnered enough attention in some circles to merit a discussion here of our use of particular indicators and our arguments in favor of them. Critics of governance indicators such as the World Bank's Governance Indicators argue that the design of the indicators—especially qualitative indicators—leaves them vulnerable to measurement error, is insufficiently transparent, creates an arbitrary scale that does not allow for monitoring of changes in levels of governance over time, and allows for sample bias (Arndt and Oman 2006; Glaeser et al., 2004). In order to avoid bias, Glaeser et al. (2004) argue for using "hard," objective measures of institutions, as these measures are not influenced by the outcomes they are meant to predict. Examples of "hard" measures include variables on electoral system design and constitutional elements. However, Woodruff (2007 mimeo) argues that relying on

<sup>&</sup>lt;sup>22</sup> Weights are calculated using the aweight command in stata.

hard measures of constitutional design fails to capture the difference between intended and actual outcomes., as there often discrepancies en differences between *de jure* laws and rules mandated in institutions and *de facto* conditions. "Soft" measurements of institutions tend to capture more subjective features of the outcome of institutional design and implementation, such as the level of judicial independence, the capacity of institutions such as the legislature or the bureaucracy, or the institutionalization of political parties. These measures are often available from organizations such as the Global Competitiveness Report or Bertelsmann Transformation index. The data are often based on the opinion of in-country experts, who then submit their ratings to a panel of members that checks and verifies the data and subsequently rates the countries.<sup>23</sup> "In-between" measures are "harder" than impressionistic measures but "softer" than the constitutional measures. An example of "in-between" measures include the Polity IV measure of executive constraints, which looks at the various veto players in a government, as well as the ideological alignment among players, to measure the level of constraints upon the executive branch.

Given the large number of countries and the fact that most data sources have been collected for a limited number of years, in our dataset we use averages of data, ranging from [either 1980 to the present or] 1990 to the present, conditional on the availability of data. Most qualitative, or "soft" measurements of public policy outcomes and institutions, such as those that survey expert opinion, start in the 1990s. Averaging the values of the indicators does not allow us to see changes in policy outcomes over time; however, it may allow us to ensure that the "soft" measures of institutional capacity are not influenced by the economic conditions of the country. Glaeser et. al (2004) and Arndt and Oman (2006) criticize the World Bank Governance Indicators (Kaufmann, Kraay, and Mastruzzi, 2004) in part for their belief that experts who provide data for some of the sources may be influenced by financial or political crises and by perceived changes or long-term trends in a country's economic performance. Kaufmann, Kray and Mastruzzi (2004) reply that this "halo effect," which may be thought of as a measurement error, does not withstand statistical models they developed to test for the impact on the governance indicators (p. 12). Glaeser et al. (2004) also note that variables, such as those

 $<sup>^{23}</sup>$  Interested readers may view an example of how some organizations produce their data; an example is the BTI. Their methodology is available at

 $<sup>:</sup> http://www.bertelsmann-transformation-index.de/fileadmin/pdf/BTI_2006\_Brosch\_re\_GB.pdf$ 

available in Henisz (2006) and the Polity IV dataset (Marshall and Jaggers 2006), which measure veto players and preferences, are in essence recording election outcomes instead of institutions.

In any event, by averaging the data available for the "softer" measurements of institutions, we may be ensuring that inflated or deflated scores on certain measures are smoothed out over time and provide a better picture of the state of institutions and related public policy outcomes.

# Appendix B

# Country Ranking by Policy Index\*

| country              | Policy<br>Index | Adapt   | Implemer | nt Coordinate | Efficiency | Public<br>Regard | Stab    |
|----------------------|-----------------|---------|----------|---------------|------------|------------------|---------|
| Denmark              | high            | high    | high     | high          | high       | high             | high    |
| Germany              | high            | high    | high     | high          | high       | high             | high    |
| Netherlands          | high            | high    | high     | high          | high       | high             | high    |
| Ireland              | high            | high    | high     | high          | high       | high             | high    |
| Switzerland          | high            | high    | high     | high          | high       | high             | high    |
| Australia            | high            | high    | high     | high          | high       | high             | high    |
| Singapore            | high            | high    | high     | high          | high       | high             | high    |
| Hong Kong, China     | high            | high    | high     | high          | high       | high             | high    |
| Norway               | high            | high    | high     | high          | high       | high             | high    |
| New Zealand          | high            | high    | high     | high          | high       | high             | high    |
| United Kingdom       | high            | high    | high     | high          | high       | high             | high    |
| Iceland              | high            |         | high     |               | high       | high             | high    |
| Austria              | high            |         | high     |               | high       | high             | high    |
| Belgium              | high            |         | high     |               | mid-hi     | high             | high    |
| Slovenia             | high            | high    | high     | high          | high       | high             | mid-hi  |
| Oman                 | high            | high    | high     | high          | high       | high             | mid-hi  |
| Spain                | high            | high    | high     | high          | high       | high             | mid-hi  |
| Cuba                 | high            | high    | high     | high          | high       | mid-hi           | mid-hi  |
| Hungary              | high            | high    | high     | high          | high       | mid-hi           | mid-hi  |
| Mauritius            | high            | high    | high     | high          | high       | mid-hi           | mid-hi  |
| Israel               | high            | high    | high     | high          | mid-hi     | high             | high    |
| Sweden               | high            | high    | high     | high          | mid-hi     | high             | high    |
| Canada               | high            | high    | high     | high          | mid-hi     | high             | high    |
| Japan                | high            | high    | high     | high          | mid-low    | high             | mid-hi  |
| Chile                | high            | high    | high     | mid-hi        | high       | high             | high    |
| Tunisia              | high            | high    | high     | mid-hi        | high       | high             | high    |
| Botswana             | high            | high    | high     | mid-hi        | high       | high             | mid-hi  |
| Taiwan               | high            | high    | high     | mid-hi        | high       | high             | mid-low |
| France               | high            | high    | high     | mid-hi        | mid-hi     | high             | mid-hi  |
| Korea, Rep.          | high            | high    | high     | mid-hi        | mid-hi     | mid-hi           | mid-hi  |
| Estonia              | high            | mid-hi  | high     | high          | high       | high             | high    |
| United States        | high            | mid-hi  | high     | high          | high       | high             | high    |
| Finland              | high            | mid-hi  | high     | high          | high       | high             | high    |
| Portugal             | high            | mid-hi  | mid-hi   | high          | high       | high             | high    |
| Bahrain              | high            | mid-hi  | mid-hi   | high          | high       | high             | mid-hi  |
| South Africa         | high            | mid-hi  | mid-hi   | mid-hi        | high       | high             | mid-hi  |
| Malaysia             | high            | mid-hi  | mid-hi   | mid-hi        | high       | mid-hi           | high    |
| United Arab Emirates | high            | mid-low | mid-hi   |               | high       | high             | high    |
| Namibia              | mid-hi          | high    | high     | mid-hi        | mid-hi     | mid-hi           | mid-hi  |
|                      | mia-m           | mgn     | 8        |               |            |                  |         |
| Lithuania            | mid-hi          | high    | high     | mid-hi        | mid-hi     | mid-hi           | mid-low |

| country               | Policy<br>Index    | Adapt   | Implemen  | t Coordinate       | Efficiency         | Public<br>Regard   | Stab               |
|-----------------------|--------------------|---------|-----------|--------------------|--------------------|--------------------|--------------------|
| Greece                | mid-hi             | high    | mid-hi    | low                | high               | mid-hi             | mid-hi             |
| Slovak Republic       | mid-hi             | high    | mid-hi    |                    | high               | mid-hi             | low                |
| Latvia                | mid-hi             | high    | mid-hi    |                    | high               | mid-hi             | low                |
| Uruguay               | mid-hi             | high    | mid-hi    |                    | mid-hi             | high               | mid-hi             |
| China                 | mid-hi             | high    | mid-low   | high               | mid-hi             | mid-hi             | mid-hi             |
| Ghana                 | mid-hi             | mid-hi  | high      | mid-low            | mid-hi             | mid-hi             | low                |
| Rwanda                | mid-hi             | mid-hi  | mid-hi    | high               | mid-hi             | mid-low            | high               |
| Iraq                  | mid-hi             | mid-hi  | mid-hi    | high               | low                | low                |                    |
| Thailand              | mid-hi             | mid-hi  | mid-hi    | mid-hi             | high               | mid-hi             | mid-hi             |
| Jordan                | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | high               | mid-hi             |
| India                 | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | mid-hi             | mid-hi             |
| Mexico                | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | mid-hi             | mid-low            |
| Romania               | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | mid-hi             | mid-low            |
| Kuwait                | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | mid-hi             | mid-low            |
| Poland                | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | mid-low            | mid-low            |
| Uganda                | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-hi             | low                | mid-low            |
| Mozambique            | mid-hi             | mid-hi  | mid-hi    | mid-hi             | mid-low            | mid-low            | mid-hi             |
| Senegal               | mid-hi             | mid-hi  | mid-hi    | mid-low            | high               | mid-hi             | mid-hi             |
| Czech Republic        | mid-hi             | mid-hi  | mid-hi    | mid-low            | mid-hi             | mid-hi             | mid-hi             |
| Colombia              | mid-hi             | mid-hi  | mid-hi    | mid-low            | mid-low            | mid-low            | mid-low            |
| Costa Rica            | mid-hi             | mid-hi  | mid-hi    | mid-low            | low                | mid-hi             | mid-hi             |
| Tanzania              | mid-hi             | mid-hi  | mid-hi    | low                | mid-hi             | mid-hi             | low                |
| Armenia               | mid-hi             | mid-hi  | mid-hi    |                    | mid-hi             | low                |                    |
| Jamaica               | mid-hi             | mid-hi  | mid-hi    |                    | mid-low            | mid-low            | mid-low            |
| Italy                 | mid-hi             | mid-hi  | mid-low   | mid-hi             | mid-hi             | mid-hi             | mid-hi             |
| Turkey                | mid-hi             | mid-hi  | mid-low   | mid-hi             | mid-hi             | mid-low            | mid-low            |
| Sri Lanka             | mid-hi             | mid-hi  | mid-low   | mid-hi             | mid-low            | mid-hi             | mid-low            |
| Vietnam               | mid-hi             | mid-hi  | mid-low   | mid-low            | mid-low            | mid-low            | high               |
| Korea, Dem. Rep.      | mid-hi             | mid-low | mid-hi    | mid-low            | mid-hi             |                    | mid-low            |
| El Salvador           | mid-hi             | mid-low | mid-hi    | low                | mid-hi             | mid-hi             | mid-low            |
| Cote d'Ivoire         | mid-hi             | mid-low | mid-hi    | low                | mid-hi             | low                | mid-low            |
| Morocco               | mid-hi             | mid-low | mid-low   | mid-low            | mid-hi             | mid-hi             | mid-low            |
| Kazakhstan            | mid-hi             | mid-low | mid-low   | mid-low            | mid-low            | mid-low            | mid-hi             |
| Gambia, The           | mid-hi             | low     | mid-hi    | mid-low            | mid-hi             | mid-hi             |                    |
| Trinidad and Tobago   | mid-hi             |         | mid-low   |                    | mid-hi             | mid-low            | high               |
| Congo, Dem. Rep.      | mid-low            | high    | high      | low                | high               |                    | low                |
| Lao PDR               | mid-low            | mid-hi  | mid-low   | mid-hi             | mid-low            | mid-low            |                    |
| Burkina Faso          | mid-low            | mid-hi  | mid-low   | mid-low            | mid-low            | mid-hi             | low                |
| Mongolia              | mid-low            | mid-hi  | mid-low   | mid-low            | mid-low            | low                | - **               |
| Peru                  | mid-low            | mid-hi  | mid-low   | low                | mid-low            | mid-hi             | mid-low            |
| Macedonia, FYR        | mid-low            | mid-hi  | mid-low   |                    | mid-low            | mid-low            |                    |
| Serbia and Montenegro | mid-low            | mid-hi  | mid-low   |                    | mid-low            | mid-low            |                    |
| Argentina             | mid-low            | mid-hi  | low       | mid-low            | mid-low<br>mid-low | low                | mid-low            |
| Zambia                | mid-low            | mid-low | mid-hi    | mid-low<br>mid-low | mid-low            | mid-low            | mid-low<br>mid-low |
| Gabon                 | mid-low<br>mid-low | mid-low | mid-hi    | mid-low<br>mid-low | low                | mid-low<br>mid-low | mid-low<br>mid-low |
| Gaboli                | mia-iow            | mia-i0w | IIIIu-III | mia-i0w            | 10 W               | mu-iow             | mia-i0w            |

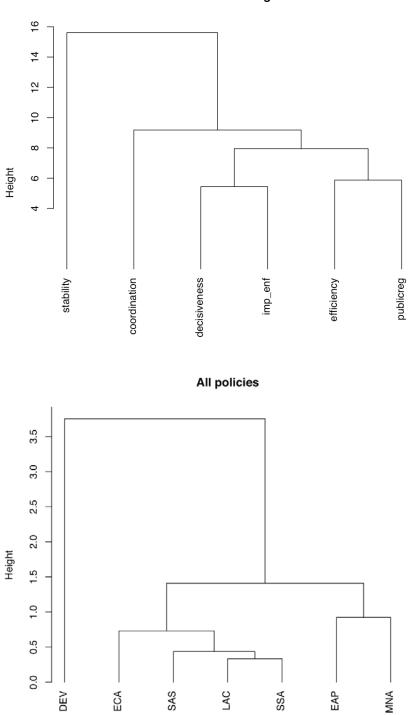
| country                | Policy<br>Index | Adapt      | Implemen           | t Coordinate | Efficiency | Public<br>Regard | Stab    |
|------------------------|-----------------|------------|--------------------|--------------|------------|------------------|---------|
| Malawi                 | mid-low         | mid-low    | mid-hi             | low          | low        | mid-low          | mid-hi  |
| Indonesia              | mid-low         | mid-low    | mid-low            | mid-hi       | mid-hi     | mid-low          | low     |
| Benin                  | mid-low         | mid-low    | mid-low            | mid-hi       | mid-low    | mid-low          | mid-low |
| Panama                 | mid-low         | mid-low    | mid-low            | mid-hi       | mid-low    | mid-low          | low     |
| Uzbekistan             | mid-low         | mid-low    | mid-low            | mid-hi       | low        | low              | mid-hi  |
| Bulgaria               | mid-low         | mid-low    | mid-low            | mid-low      | mid-hi     | mid-hi           | mid-low |
| Egypt, Arab Rep.       | mid-low         | mid-low    | mid-low            | mid-low      | mid-hi     | mid-hi           | mid-low |
| Georgia                | mid-low         | mid-low    | mid-low            | mid-low      | mid-hi     | low              |         |
| Ukraine                | mid-low         | mid-low    | mid-low            | mid-low      | low        | mid-hi           | low     |
| Mali                   | mid-low         | mid-low    | mid-low            | low          | mid-hi     | mid-hi           | mid-low |
| Madagascar             | mid-low         | mid-low    | mid-low            | low          | mid-low    | mid-low          | low     |
| Libya                  | mid-low         | mid-low    | mid-low            |              | mid-low    | low              |         |
| Saudi Arabia           | mid-low         | mid-low    | low                | high         | mid-low    | mid-hi           | mid-hi  |
| Tajikistan             | mid-low         | mid-low    | low                | mid-hi       | mid-hi     | mid-low          |         |
| Philippines            | mid-low         | mid-low    | low                | mid-low      | mid-low    | low              | mid-low |
| Syria                  | mid-low         | mid-low    | low                | mid-low      | low        | mid-hi           | low     |
| Bosnia and Herzegovina | mid-low         | mid-low    | low                | low          | mid-low    | mid-low          |         |
| Belarus                | mid-low         | low        | mid-hi             | high         | mid-low    | mid-low          |         |
| Kenya                  | mid-low         | low        | mid-low            | mid-hi       | mid-low    | low              | low     |
| Iran, Islamic Rep.     | mid-low         | low        | mid-low            | mid-hi       | low        | mid-low          | low     |
| Eritrea                | mid-low         | low        | mid-low            | mid-hi       | low        | mid-low          |         |
| Ethiopia               | mid-low         | low        | mid-low            | mid-low      | mid-low    | mid-low          | low     |
| Guinea-Bissau          | mid-low         | low        | low                | high         |            |                  | mid-hi  |
| Nepal                  | mid-low         | low        | low                | mid-low      | mid-low    | mid-low          | high    |
| Pakistan               | mid-low         | low        | low                | mid-low      | mid-low    | mid-low          | mid-low |
| Albania                | mid-low         | low        | low                | low          | mid-low    | low              | high    |
| Lesotho                | mid-low         |            |                    |              | mid-low    | mid-hi           |         |
| Swaziland              | mid-low         |            |                    |              |            | mid-low          |         |
| Bangladesh             | low             | mid-low    | mid-low            | mid-low      | low        | low              | mid-low |
| Bolivia                | low             | mid-low    | mid-low            | mid-low      | low        | low              | low     |
| Russia                 | low             | mid-low    | mid-low            | low          | mid-low    | low              | low     |
| Azerbaijan             | low             | mid-low    | mid-low            | low          | low        | mid-low          |         |
| Honduras               | low             | mid-low    | mid-low            | low          | low        | low              | low     |
| Dominican Republic     | low             | mid-low    | low                | mid-low      | low        | mid-low          | low     |
| Ecuador                | low             | mid-low    | low                | mid-low      | low        | low              | low     |
| Afghanistan            | low             | mid-low    | low                | low          | mid-low    | low              |         |
| Guinea                 | low             | mid-low    | low                | low          | mid-low    |                  | mid-low |
| Nigeria                | low             | mid-low    | low                | low          | low        | low              | mid-low |
| Cambodia               | low             | mid-low    | low                | low          | low        | low              | low     |
| Mauritania             | low             | low        | mid-hi             | mid-low      | low        | high             | low     |
| Papua New Guinea       | low             | low        | mid-hi             | low          | low        | low              | low     |
| Algeria                | low             | low        | mid-low            | mid-low      | low        | mid-hi           | low     |
|                        |                 |            |                    |              |            |                  | mid-low |
| Niger                  | low             | low        | mid-low            | low          | mid-low    | low              | mia-iow |
| Niger<br>Sudan         | low<br>low      | low<br>low | mid-low<br>mid-low | low          | low        | low              | mia-iow |

| country                  | Policy<br>Index | Adapt | Impleme | entCoordinate | Efficiency | Public<br>Regard | Stab    |
|--------------------------|-----------------|-------|---------|---------------|------------|------------------|---------|
| Kyrgyz Republic          | low             | low   | low     | mid-hi        | low        | low              |         |
| Nicaragua                | low             | low   | low     | mid-low       | mid-low    | low              | low     |
| Burundi                  | low             | low   | low     | mid-low       | low        | mid-low          | mid-low |
| Venezuela                | low             | low   | low     | mid-low       | low        | mid-low          | low     |
| Lebanon                  | low             | low   | low     | low           | mid-hi     | mid-low          | low     |
| Yemen, Rep.              | low             | low   | low     | low           | mid-low    | mid-low          | low     |
| Sierra Leone             | low             | low   | low     | low           | mid-low    | low              | high    |
| Moldova                  | low             | low   | low     | low           | low        | mid-low          |         |
| Haiti                    | low             | low   | low     | low           | low        | low              | mid-hi  |
| Chad                     | low             | low   | low     | low           | low        | low              | mid-low |
| Cameroon                 | low             | low   | low     | low           | low        | low              | mid-low |
| Croatia                  | low             | low   | low     |               | mid-low    | mid-low          | low     |
| Togo                     | low             | low   | low     |               | low        |                  | high    |
| Central African Republic | low             | low   | low     |               | low        |                  | mid-hi  |
| Paraguay                 | low             | low   | low     | low           | low        | low              | low     |
| Guatemala                | low             | low   | low     | low           | low        | low              | low     |
| Somalia                  | low             | low   | low     | low           | low        | low              |         |
| Liberia                  | low             | low   | low     | low           | low        | low              |         |
| Angola                   | low             | low   | low     | low           | low        | low              |         |
| Zimbabwe                 | low             | low   | low     |               | low        | low              | low     |
| Turkmenistan             | low             | low   | low     |               | low        | low              |         |

\**Note:* The categories in the table correspond to quartile distributions. The quartiles for each policy variable were calculated based on its own distribution of values. Thus countries scoring the same value in two policies might well end up in different quartiles if different policies displayed different distributions (e.g., one policy distribution is skewed towards lower values and the other towards higher values).

# Appendix C

# **Policy Cluster Analysis Results**



## Cluster Dendrogram

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