

This codebook reproduces excerpts from previously published research describing the construction of POLCONIII and POLCONV. It also lists the sources of the remaining variables in the Microsoft Access datafile that can be used to mate this database with other international datasets or that were used to construct these indexes. The 2002 release expands the scope of country (as many as 234 countries) and temporal coverage (up to 2001) of the POLCON dataset. It also corrects several computational, coding and factual errors in the previous release. For any additional questions, please do not hesitate to contact me at [henisz@wharton.upenn.edu](mailto:henisz@wharton.upenn.edu).

NB: 2000 and 2001 values use author's estimates where noted below and should therefore be used only with extreme care.

### CNTS\_COUNTRY

Country name for matching to the crossnational time series dataset :  
<http://www.databanks.sitehosting.net/>

### POLITY\_COUNTRY

Country name for matching to the Polity datasets:  
<http://www.bsos.umd.edu/cidcm/inscr/polity/index.htm>

### CNTS\_CODE

Country code for matching to the crossnational time series dataset :  
<http://www.databanks.sitehosting.net/>

### POLITY\_CODE

Country code for matching to the Polity datasets:  
<http://www.bsos.umd.edu/cidcm/inscr/polity/index.htm>

### CNTS\_YEAR

Year (data as of January 1 of that year) for matching to the crossnational time series dataset :  
<http://www.databanks.sitehosting.net/>

### POLITY\_YEAR

Year (data as of January 1 of that year) for matching to the Polity datasets:  
<http://www.bsos.umd.edu/cidcm/inscr/polity/index.htm>

### CTRYNM

Country code for matching to any World Bank datasets

POLCONIII 2002

The following excerpt describing the construction of this variable is taken from:

Henisz, W. J. (2002). "The Institutional Environment for Infrastructure Investment." Industrial and Corporate Change **11**(2): Forthcoming.

Please cite this publication when using this variable.

“The measure of political constraints employed in this paper estimates the feasibility of policy change (the extent to which a change in the preferences of any one actor may lead to a change in government policy) using the following methodology. First, extracting data from political science databases, it identifies the number of independent branches of government (executive, lower and upper legislative chambers)<sup>1</sup> with veto power over policy change in [234] countries in every year [that they existed] from 1800 to [2001]. The preferences of each of these branches and the *status quo* policy are then assumed to be independently and identically drawn from a uniform, unidimensional policy space. This assumption allows for the derivation of a quantitative measure of institutional hazards using a simple spatial model of political interaction.

This initial measure is then modified to take into account the extent of alignment across branches of government using data on the party composition of the executive and legislative branches. Such alignment increases the feasibility of policy change. The measure is then further modified to capture the extent of preference heterogeneity within each legislative branch which increases (decreases) decision costs of overturning policy for aligned (opposed) executive branches.

The main results of the calculations detailed in Appendix 1 ... are that (1) each additional veto point (a branch of government that is both constitutionally effective and controlled by a party different from other branches) provides a positive but diminishing effect on the total level of constraints on policy change and (2) homogeneity (heterogeneity) of party preferences within an opposition (aligned) branch of government is positively correlated with constraints on policy change. These results echo those produced in similar work by Tsebelis (1995; 1999) and Butler and Hammond (1997; 1996).”

From Appendix 1 of the same publication,

“In order to construct a structurally-derived internationally comparable measure of political constraints, the structure of political systems must be simplified in a manner which allows for cross-national comparisons over a wide range countries while retaining the elements of that structure which have a strong bearing on the feasibility of policy change. Here, I will focus on two such elements: the number of independent veto points over policy outcomes and the distribution of preferences of the actors that inhabit them. Without minimizing their

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<sup>1</sup> Previous derivations of the political constraint index described here have included an independent judiciary and sub-federal political entities for a total of five potential veto points. Data limitations preclude their inclusion here. The effect of their omission will be to diminish the variance among countries with relatively high levels of political constraints thereby dampening the magnitude of the observed effect.

importance, I set aside questions of agenda setting power, decision costs (Schwartz, Spiller, and Urbiztondo, 1994; Spiller, 1992; Spiller and Tiller, 1997) and the relative political authority held by various institutions for subsequent extensions of the admittedly simplistic modeling framework presented here.

Political actors will be denoted by E (for executive), L1 (for lower house of legislature), L2 (for upper house of legislature).<sup>2</sup> Each political actor has a preference, denoted by  $X_I$  where  $I \in [E, L1, L2]$ . Assume, for the time being, that the status quo policy ( $X_0$ ) and the preferences of all actors are independently and identically drawn from a uniformly distributed unidimensional policy space  $[0,1]$ . Data on actual preference distributions of political actors will subsequently be incorporated into the analysis loosening this assumption. The utility of political actor I from a policy outcome X is assumed equal to  $-|X - X_I|$  and thus ranges from a maximum of 0 (when  $X = X_I$ ) to a minimum of -1 (when  $X = 0$  and  $X_I = 1$  or vice versa). Further assume that each actor has veto power over final policy decisions. While these are, admittedly, strong assumptions, the incorporation of more refined and realistic game structures and preference distributions presents severe complications for analytic tractability. It is hoped that, mirroring the development of the domestic positive political theory literature, the strength of the results obtained using the simple framework presented here will provide an impetus for future research.

The variable of interest to investors in this model is the extent to which a given political actor<sup>3</sup> is constrained in his or her choice of future policies. This variable is calculated as  $(1 - \text{the level of political discretion})$ . Discretion is operationalized as the expected range of policies for which all political actors with veto power can agree upon a change in the status quo. For example, regardless of the status quo policy, an unchecked executive can always obtain policy  $X_E$  and is guaranteed their maximum possible utility of 0. Investors face a high degree of uncertainty since the executive's preferences may change or the executive may be replaced by another executive with vastly different preferences. Therefore this is categorized as a polar case in which political discretion = 1 and political constraints equals 0  $(1 - 1)$ .

As the number of actors with independent veto power increases, the level of political constraints increases. For example, in a country with an effective unicameral legislature (L1), the executive must obtain the approval of a majority of the legislature in order to implement policy changes. The Executive is no longer guaranteed the policy  $X_E$  as the legislature may veto a change from the status quo policy. The Executive can, at best, achieve the outcomes closest to  $X_E$  that is preferred by the legislature to the status quo. Without additional information on the preferences of the Executive and the legislature it is impossible to compute the exact outcome of the game. Nor is the expected magnitude of the effect on political discretion of adding this additional veto point immediately clear. However, one of the virtues of the simple spatial model outlined above is that it provides a more objective insight into the quantitative significance of adding an additional veto point.

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<sup>2</sup> Data limitations of the panel preclude the inclusion of other veto points such as an independent judiciary, sub-federal units of power, administrative agencies and the like.

<sup>3</sup> Without loss of generality, the remainder of the paper refers to changes in executive preferences. Note that since the preferences of all actors and the status quo policy are drawn identically from the same distribution, each actor, including the executive, faces the same constraints in changing policy. Allowance for the likelihood of multiple actors changing preferences simultaneously is made by incorporating information on alignment of preferences across the various branches of government later in the analysis.

Given the assumption that preferences are drawn independently and identically from a uniform distribution, the expected difference between the preferences of any two actors can be expressed as  $1/(n+2)^4$  where  $n$  is the number of actors. Assuming that there exist two political institutions with veto power (the Executive (E) and a unicameral legislature (L1)), the initial preference draw yields an expected preference difference equal to  $1/(2 + 2) = 1/4$ . There are six possible preference orderings in this game (see Figure 1) that we will assume are equally likely to occur in practice.<sup>5</sup>

In ordering (1), no change in executive preferences which retains the initial ordering of preferences yields a change in policy. The executive ( $X_E = 1/4$ ) prefers all policies between  $1/2 - \varepsilon$  and  $0 + \varepsilon$  to the status quo ( $X_0 = 1/2$ ) while the legislature ( $X_{L1} = 3/4$ ) prefers all policies between  $1/2 + \varepsilon$  and  $1 - \varepsilon$  to  $X_0$ . As the executive and the legislature cannot agree on a change in policy, political discretion (the feasibility of policy change) equals 0 and political constraints equal 1. The same argument is true by symmetry for ordering (2). In the remaining orderings, both the executive and legislature agree on a direction in which policy should move relative to the status quo  $X_0$ . These cases have closed form solutions other than the status quo policy. Their exact values depend on the assumption as to who moves first (or last) and the relative costs of review by each party.

However, in the absence of knowledge on the rules of the game in each country, the range of outcomes over which both parties can agree to change the status quo is used as a measure of political discretion. As this range expands, there exists a larger set of policy changes preferred by both political actors with veto power. The existence of such a set reduces the credibility of any given policy and therefore decreases the level of political constraints. In ordering (3), the executive ( $X_E = 1/2$ ) prefers policies between  $1/4 + \varepsilon$  and  $3/4 - \varepsilon$  to the status quo ( $X_0 = 1/4$ ) while the legislature ( $X_{L1} = 3/4$ ) prefers all policies greater than  $1/4 + \varepsilon$ . There exists a range of policies approximately equal to  $1/2$  (between  $1/4 + \varepsilon$  and  $3/4 - \varepsilon$ ), which both actors agree are superior to the status quo. The political discretion measure for this ordering therefore equals  $1/2$  yielding a political constraints measure equal to  $1/2$ . The same is true in orderings (4), (5) and (6). The expected level of political constraints for the game  $\{X_E, X_{L1}\}$  based on the number of veto points alone is the average of the political constraint measures across the six possible preference orderings:  $(1 + 1 + 1/2 + 1/2 + 1/2 + 1/2)/6 = 2/3$ .

Note that this initial measure of political constraints is based solely on the number of de jure veto points in a given polity maintaining the strong and unrealistic assumption of uniformly distributed preferences. However, neither the Constitutional existence of veto power nor its prior exercise provide a de facto veto threat in the current period. Specifically, loosening the assumption of uniformly distributed preferences by allowing for preference alignment (i.e., majority control of the executive and the legislature by the same party) would be expected to

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<sup>4</sup> See Rice (1995:p. 155). The intuition for this result is that the expectation of any single draw is equal to  $1/2$  but there exists variation across draws. Given a uniform distribution, the expected distance between any two adjacent positions declines proportionally to the number of additional draws. The exact formula is  $1/(\# \text{ of draws} + 1)$ .

<sup>5</sup> For expositional convenience, I center each of the preference distributions on the unit line. As long as the expected difference between any two preferred points remains  $1/4$ , the quantitative results are insensitive to the absolute location of these points. For example, were the leftmost (rightmost) point in each distribution to be placed at 0 (1) rather than  $1/4$  ( $3/4$ ), the quantitative results would be unchanged.

expand the range of political discretion and thereby decrease the level of political constraints. In order to allow for this effect, the purely institutional measure of political constraints described above is supplemented with information on the preferences of various actors and their possible alignments. For example, if the legislature were completely aligned with the executive, the game would revert back to our simple unitary actor discussed above with a constraint measure of 0. The same exercise of determining constraints given the assumption of either completely independent or completely aligned actors was conducted for all observed institutional structures yielding the values for political constraints displayed in Table 1.

Further modifications are required when other political actors are neither completely aligned with nor completely independent from the executive. In these cases, the party composition of the other branches of government are also relevant to the level of constraints. For example, if the party controlling the executive enjoys a majority in the legislature, the level of constraints is negatively correlated with the concentration of that majority. Aligned legislatures with large majorities are less costly to manage and control than aligned legislatures that are highly polarized.

By contrast, when the executive is faced with an opposition legislature, the level of constraints is positively correlated with the concentration of the legislative majority. A heavily fractionalized opposition may provide the executive with more discretion due to the difficulty in forming a cohesive legislative opposition bloc to any given policy. Information on the partisan alignment of different government branches and on the difficulty of forming a majority coalition within them can therefore provide valuable information as to the extent of political constraints.

Suppose, for example, that the party controlling the executive completely controls the other branch(es) of government (100%<sup>6</sup> of legislative seats). In this case, the values displayed in the appropriate right-hand column of Table 1 are utilized. However, as the executive's need for coalition building and maintenance increases (his or her majority diminishes), and under the assumption that the same party controls both branches, the values converge to the levels displayed in the left-most column. For the case in which the branches are controlled by different parties, the results are reversed. Now, complete concentration by the opposition (100% legislative seats) leads to the assignment of the values in the left-most column. As the opposition's difficulty of forming coalitions increases, the values converge to the levels displayed in the appropriate right-hand column. Following an extensive body of literature in political science on the costs of forming and maintaining coalitions, the rate of convergence is based upon the extent of legislative (or judicial) fractionalization (Rae and Taylor, 1970).

The fractionalization of the legislature (or court) is equal to the probability that two random draws from the legislature or court are from different parties. The exact formula is:

$$1 - \sum_{i=1}^n \left[ \frac{(n_i - 1) \frac{n_i}{N}}{N - 1} \right]$$

where  $n$  = the number of parties,  $n_i$  = seats held by  $n$ th party and  $N$  = total seats.

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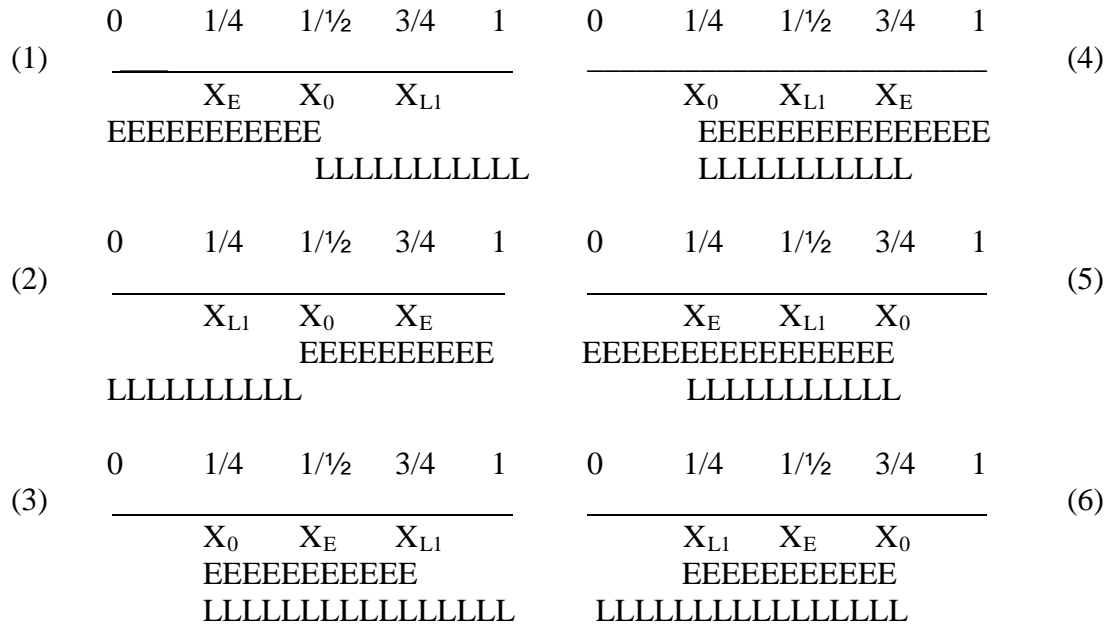
<sup>6</sup> I assume that as the majority diminishes from this absolute level the difficulty in satisfying the preferences of all coalition or faction members increases thus increasing the level of political constraints.

The final value of political constraints for cases in which the executive is aligned with the legislature(s) is thus equal to the value derived under complete alignment plus the fractionalization index multiplied by the difference between the independent and completely aligned values calculated above. For cases in which the executive party is in the minority in the legislature(s), the modified constraint measure equals the value derived under complete alignment plus (one minus the fractionalization index) multiplied by the difference between the completely independent and dependent values calculated above. In cases of mixed alignment, a weighted (equally) sum of the relevant adjustments is used.

For example, in the case described above the constraint measure equaled 0 if the legislature was completely aligned and  $2/3$  if it was completely independent. However, if the same party controls the executive and the legislative chamber and the probability of two random draws from the legislature belonging to different parties equals  $1/4$  (the executive has a large majority in Parliament) then the modified constraint measure equals  $0 + 1/4 * (2/3 - 0) = 1/6$ . By contrast, if the executive relied on a heavily fractionalized coalition in which the probability that any two random draws were from different parties was 75%, the modified constraint measure would equal  $0 + 3/4 * (2/3 - 0) = 1/2$ . In the case where the opposition controls the legislature the values would be reversed. A heavily concentrated majority by the opposition would lead to a value of  $0 + (1 - 1/4) * (2/3 - 0) = 1/2$  while a fractionalized legislature would receive a score of  $0 + (1 - 3/4) * (2/3) = 1/6$ .

This measure of political constraints has one important virtue that also yields several weaknesses. The strength of the measure is that it is structurally derived from a simple spatial model of political interaction which incorporates data on the number of independent political institutions with veto power in a given polity and data on the alignment and heterogeneity of the political actors that inhabit those institutions. The first weakness of the measure is that its validity is based upon the validity of the assumptions imposed upon the spatial model in order to generate quantitative results. Another weakness is that many features of interest are left out of the model including agenda setting rights, decision costs, other relevant procedural issues, the political role of the military and/or church, cultural/racial tensions, and other informal institutions which impact economic outcomes.”

**Figure 1: The Six Possible Preference Ordering of the Game {X<sub>E</sub>, X<sub>L1</sub>}**



Note : E indicates the range of outcomes preferred by the executive to the status quo X<sub>0</sub>  
 L indicates the range of outcomes preferred by the legislature to the status quo X

**Table 1: Political Constraints with Complete Independence/Alignment**

<u>Independent</u> <u>Political Actors</u>	<i>Entities Completely Aligned with Executive</i>		
	<u>None</u>	<u>(L1 or L2)</u>	<u>L1&amp;L2</u>
E	0		
E, L1	2/3	0	
E, L1, L2	4/5	2/3	0

Note: E = executive, L1 = lower legislature, L2 = upper legislature

The specific formulae used to construct the index are:

<u>Condition</u>	<u>Calculation</u>
L1=0	0
L1=1 And L2=0 And Align E_L1=1	$(LEGRAL\_2002)*0.6667$
L1=1 And L2=0 And Align E_L1=0	$(1-LEGRAL\_2002)*0.6667$
L1=1 And L2=1 And Align E_L1=1 And Align E_L2=1	$((LEGRAL\_2002+LEGRAU\_2002)/2)*0.8$
L1=1 And L2=1 And Align E_L1=1 And Align E_L2=0	$((LEGRAL\_2002)+(1-LEGRAU\_2002))/2)*0.8$
L1=1 And L2=1 And Align E_L1=0 And Align E_L2=1	$((1-LEGRAL\_2002)+(LEGRAU\_2002))/2)*0.8$
L1=1 And L2=1 And Align E_L1=0 And Align E_L2=0	$(1-(LEGRAL\_2002+LEGRAU\_2002)/2)*0.8$

Data on POLCONIII\_2002 is available for the following 234 countries between the following years (though not necessarily continuously).

Country	Min_year	Max_year
ABYSSINIA	1855	1945
AFGHANISTAN	1800	2001
ALBANIA	1913	2001
ALGERIA	1962	2001
ANDORRA	1994	2001
ANGOLA	1975	2001
ANTIGUA	1981	2001
ARGENTINA	1816	2001
ARMENIA	1991	2001
AUST EMPIRE	1800	1860
AUST-HUNG	1898	1918
AUSTRALIA	1901	2001
AUSTRIA	1919	2001
AZERBAIJAN	1991	2001
BADEN	1815	1871
BAHAMAS	1973	2001
BAHRAIN	1971	2001
BANGLADESH	1972	2001
BARBADOS	1966	2001
BAVARIA	1800	1871
BELARUS	1991	2001
BELGIUM	1830	2001
BELIZE	1981	2001
BENIN	1975	2001
BHUTAN	1960	2001



<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
BOLIVIA	1839	2001
BOSNIA-HERZ	1993	2001
BOTSWANA	1966	2001
BRAZIL	1823	2001
BRUNEI	1984	2001
BULGARIA	1881	2001
BURKNA FASO	1984	2001
BURMA	1960	1988
BURUNDI	1962	2001
C VERDE IS	1975	2001
CAMBODIA	1953	2001
CAMEROON	1960	2001
CANADA	1867	2001
CEN AFR EMP	1976	1978
CEN AFR REP	1960	2001
CEYLON	1960	1970
CHAD	1961	2001
CHILE	1818	2001
CHINA	1800	1918
CHINA PR	1949	2001
CHINA REP	1919	1948
COLOMBIA	1830	2001
COMORO IS	1975	2001
CONGO	1971	1996
CONGO (BRA)	1961	1970
CONGO (KIN)	1960	1963
CONGO DR	1964	2001
CONGO REP	1997	2001
COSTA RICA	1838	2001
COTE D'IVOR	1985	2001
CROATIA	1991	2001
CUBA	1902	2001
CYPRUS	1960	2001
CZECH REP	1993	2001
CZECHOS'KIA	1919	1992
DAHOMY	1960	1974
DENMARK	1800	2001
DJIBOUTI	1977	2001
DOMIN REP	1919	2001
DOMINICA	1979	2001
ECUADOR	1830	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
EGYPT	1922	2001
EL SALVADOR	1841	2001
EQUA GUINEA	1969	2001
ERITREA	1993	2001
ESTONIA	1920	2001
ETHIOPIA	1946	1986
ETH'PIA PDR	1987	2001
FED MALAYA	1960	1962
FIJI	1970	2001
FINLAND	1917	2001
FRANCE	1800	2001
GABON	1961	2001
GAMBIA	1965	2001
GEORGIA	1993	2001
GERMANY	1871	2001
GERMANY DR	1949	1989
GERMANY FR	1949	1989
GHANA	1957	2001
GREECE	1827	2001
GRENADA	1974	1999
GUATEMALA	1839	2001
GUINEA	1958	2001
GUINEA-B'AU	1974	2001
GUYANA	1966	1999
HAITI	1815	2001
HONDURAS	1838	2001
HONG KONG	1843	1996
HUNGARY	1867	2001
ICELAND	1918	2001
INDIA	1952	2001
INDONESIA	1945	2001
IRAN	1935	2001
IRAQ	1924	2001
IRELAND	1922	2001
ISRAEL	1949	2001
ITALY	1895	2001
IVORY COAST	1960	1984
JAMAICA	1959	2001
JAPAN	1800	2001
JORDAN	1946	2001
KAMPUCHEA	1975	1989

Country	Min_year	Max_year
KAZAKHSTAN	1991	2001
KENYA	1964	2001
KHMER REP	1971	1974
KIRIBATI	1994	2001
KOREA	1800	1910
KOREA PR	1948	2001
KOREA REP	1948	2001
KUWAIT	1962	2001
KYRGYZSTAN	1991	2001
LAOS	1954	2001
LATVIA	1919	2001
LEBANON	1944	2000
LESOTHO	1966	2001
LIBERIA	1847	2001
LIBYA	1951	2001
LIECHTSTEIN	1975	2001
LITHUANIA	1919	2001
LUXEMBOURG	1919	2001
MACEDONIA	1991	2001
MADAGASCAR	1975	2001
MALAGASY R	1961	1974
MALAWI	1965	2001
MALAYSIA	1963	2001
MALDIVE IS	1975	2001
MALI	1960	2001
MALTA	1964	2001
MARSHALL IS	1986	2001
MAURITANIA	1961	2001
MAURITIUS	1968	2001
MEXICO	1821	2001
MICRONESIA	1986	1990
MOLDOVA	1991	2001
MONACO	1975	2001
MONGOLIA	1921	2001
MOROCCO	1800	2001
MOZAMBIQUE	1976	2001
MYANMAR	1989	2001
NAMIBIA	1991	2001
NAURU	1968	2001
NEPAL	1800	2001
NETHERLANDS	1851	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
NEW ZEALAND	1857	2001
NICARAGUA	1893	2001
NIGER	1960	2001
NIGERIA	1960	2001
NORWAY	1882	2001
OMAN	1800	2001
OTTOMAN EMP	1800	1918
PAKISTAN	1958	2001
PALAU	1994	2001
PANAMA	1928	2001
PAPUA NEW G	1976	2001
PARAGUAY	1812	2001
PERSIA	1800	1934
PERU	1821	2001
PHILIPPINES	1937	2001
POLAND	1919	2001
PORTUGAL	1800	2001
QATAR	1971	2001
RHODESIA	1965	1979
ROMANIA	1859	2001
RUSSIA	1800	2001
RWANDA	1961	2001
SAINT LUCIA	1980	2001
SAMOA	1998	2001
SAN MARINO	1975	2001
SANTO DOMIN	1844	1918
SAO TOME/PR	1976	1998
SAO TOME/PR	1999	2001
SA'U ARABIA	1926	2001
SENEGAL	1960	2001
SERBIA	1830	1920
SEYCHELLES	1977	1998
SEYCHELLES	1999	2001
SIAM	1800	1918
SIERRA LEO	1961	2001
SINGAPORE	1965	2001
SLOVAK REP	1993	2001
SLOVENIA	1991	2001
SO AFRICA	1910	2001
SOLOMON IS	1978	2001
SOMALIA	1960	2001

Country	Min_year	Max_year
SPAIN	1800	2001
SRI LANKA	1971	2001
ST KITT/NEV	1984	2001
ST VINCENT	1980	2001
SUDAN	1958	2001
SURINAME	1980	2001
SWAZILAND	1968	2001
SWEDEN	1800	2001
SWITZERLAND	1815	2001
SYRIA	1947	2001
TAIWAN	1973	2001
TAJIKISTAN	1991	2001
TANGANYIKA	1963	1963
TANZANIA	1964	2001
THAILAND	1919	2001
TOGO	1961	2001
TONGA	1997	2001
TRINIDAD	1967	2001
TUNISIA	1960	2001
TURKEY	1919	2001
TURKMENSTAN	1991	2001
UA EMIRATES	1971	2001
UAR	1958	1970
UGANDA	1962	2001
UK	1833	2001
UKRAINE	1991	2001
UPPER VOLTA	1960	1983
URUGUAY	1828	2001
US	1800	2001
USSR	1919	1990
UZBEKISTAN	1991	2001
VANUATU	1980	2001
VENEZUELA	1830	2001
VIETNAM	1976	2001
VIETNAM DR	1954	1975
VIETNAM REP	1954	1975
WESTN SAMOA	1979	1997
YEMEN	1918	1961
YEMEN AR	1962	1989
YEMEN PDR	1967	1989
YEMEN REP	1990	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
YUGOSLAVIA	1919	2001
ZAIRE	1971	1996
ZAMBIA	1964	2001
ZIMBABWE	1980	2001

POLCONV\_2002

The following excerpt describing the construction of this variable is taken from:

Henisz, W. J. (2000). "The Institutional Environment for Economic Growth." Economics and Politics **12**(1): 1-31.

Please cite this publication when using this variable. Note that the following derivation follows the same logic as POLCONIII\_2002 but also includes two additional veto points (the judiciary and sub\_federal entities). There is both substantial academic debate on the efficacy of these additional veto players and substantial data limitations in the measurement of their existence.

**“A New Measure of Credible Commitment**Modeling Approach

... In order to construct a structurally-derived internationally comparable measure of political constraints, the structure of political systems must be simplified in a manner which allows for cross-national comparisons as many as 157 countries while retaining the elements of that structure which have a strong bearing on the feasibility of policy change. Here, I will focus on two such elements: the number of independent veto points over policy outcomes and the distribution of preferences of the actors that inhabit them. Without minimizing their importance, I set aside questions of agenda setting power, decision costs [see Spiller and Tiller (1997)] and the relative political authority held by various institutions for subsequent extensions of the admittedly simplistic modeling framework presented here.

Political actors will be denoted by  $E$  (for executive),  $L1$  (for lower house of legislature),  $L2$  (for upper house of legislature),  $F$  (sub-federal units) and  $J$  (judiciary). Each political actor has a preference, denoted by  $X_I$  where  $I \in [E, L1, L2, F, J]$ . Assume, initially, that the status quo policy ( $X_0$ ) and the preferences of all actors are independently and identically drawn from a uniformly distributed unidimensional policy space  $[0,1]$ . The utility of political actor  $I$  from a policy outcome  $X$  is assumed equal to  $-|X - X_I|$  and thus ranges from a maximum of 0 (when  $X = X_I$ ) to a minimum of -1 (when  $X = 0$  and  $X_I = 1$  or vice versa). Further assume that each actor has veto power over final policy decisions. While these are, admittedly, strong assumptions, the incorporation of more refined and realistic game structures and preference distributions presents severe complications for analytic tractability. It is hoped that, mirroring the development of the positive political theory literature domestically, the strength of the results obtained using the simple framework presented here will provide an impetus for future research.

The variable of interest to investors in this model is the extent to which a given political actor<sup>7</sup> is constrained in his or her choice of future policies. This variable is calculated as one minus the expected range of policies for which a change in the status quo can be agreed upon by all political actors with veto power. For example, regardless of the status quo policy, an

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<sup>7</sup> Without loss of generality, the remainder of the paper refers to changes in executive preferences. Note that since the preferences of all actors and the status quo policy are drawn identically from the same distribution, each actor, including the executive, faces the same constraints in changing policy. Allowance for the likelihood of multiple actors changing preferences simultaneously is made by incorporating information on alignment of preferences across the various branches of government later in the analysis.

unchecked executive can always obtain policy  $X_E$  and is guaranteed their maximum possible utility of 0. Investors face a high degree of uncertainty since the executive's preferences may change or the executive may be replaced by another executive with vastly different preferences. I therefore categorize this as a polar case in which political discretion equals 1 and political constraints ( $1 - \text{political discretion}$ ) = 0.

As the number of actors with independent veto power increases, the level of political constraints increases. For example, in a country with an effective unicameral legislature ( $LI$ ), the executive must obtain the approval of a majority of the legislature in order to implement policy changes. The Executive is no longer guaranteed the policy  $X_E$  as the legislature may veto a change from the status quo policy. The Executive can, at best, achieve the outcome closest to  $X_E$  that is preferred by the legislature to the status quo. Without additional information on the preferences of the Executive and the legislature it is impossible to compute the exact outcome of the game. Nor is the expected magnitude of the effect on political discretion of adding this additional veto point immediately clear. However, one of the virtues of the simple spatial model outlined above is that it provides a more objective insight into the quantitative significance of adding an additional veto point.

Given the assumption that preferences are drawn independently and identically from a uniform distribution, the expected difference between the preferences of any two actors can be expressed as  $1/(n+2)$ <sup>8</sup> where  $n$  is the number of actors. Assuming that there exist two political institutions with veto power (the Executive ( $E$ ) and a unicameral legislature ( $LI$ )), the initial preference draw yields an expected preference difference equal to  $1/(2 + 2) = 1/4$ . There are six possible preference orderings in this game [see Figure 2] that I will assume are equally likely to occur in practice.<sup>9</sup>

In ordering (1), no change in executive preferences that retains the initial ordering of preferences yields a change in policy. The executive ( $X_E = 1/4$ ) prefers all policies between  $1/2 - \varepsilon$  and  $0 + \varepsilon$  to the status quo ( $X_0 = 1/2$ ) while the legislature ( $X_{LI} = 3/4$ ) prefers all policies between  $1/2 + \varepsilon$  and  $1 - \varepsilon$  to  $X_0$ . As the executive and the legislature cannot agree on a change in policy, political discretion (the feasibility of policy change) equals 0 and political constraints equal 1. The same argument is true by symmetry for ordering (2). In the remaining orderings, both the executive and legislature agree on a direction in which policy should move relative to the status quo  $X_0$ . These cases have closed form solutions other than the status quo policy. Their exact values depend on the assumption as to who moves first (or last) and the relative costs of review by each party.

However, in the absence of knowledge on the rules of the game in each country, the range of outcomes over which both parties can agree to change the status quo is used as a measure of political discretion. As this range expands, there exists a larger set of policy changes preferred by both political actors with veto power. The existence of such a set reduces the credibility of any given policy. In ordering (3), the executive ( $X_E = 1/2$ ) prefers policies between  $1/4 + \varepsilon$  and  $3/4 - \varepsilon$  to the status quo ( $X_0 = 1/4$ ) while the legislature ( $X_{LI} = 3/4$ ) prefers all

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<sup>8</sup>. See Rice (1995):p. 155.

<sup>9</sup>. For expositional convenience, I center each of the preference distributions on the unit line. As long as the expected difference between any two preferred points remains  $1/4$ , the quantitative results are insensitive to the absolute location of these points.



policies greater than  $1/4 + \varepsilon$ . There exists a range of policies approximately equal to  $1/2$  (between  $1/4 + \varepsilon$  and  $3/4 - \varepsilon$ ), which both actors agree are superior to the status quo. The political discretion measure for this ordering therefore equals  $1/2$  yielding a political constraint measure also equal to  $1/2$ . The same is true in orderings (4), (5) and (6). The expected level of political constraints for the game

$\{X_E, X_{LI}\}$  based on the number of veto points alone is the average of the political constraint measures across the six possible preference orderings:  $(1 + 1 + 1/2 + 1/2 + 1/2 + 1/2)/6 = 2/3$ .

Note that this measure of political constraints is based solely on the number of de jure veto points in a given polity maintaining the strong and unrealistic assumption of uniformly distributed preferences. However, neither the Constitutional existence of veto power nor its prior exercise provide a de facto veto threat in the current period. Specifically, alignment (i.e., majority control of the executive and the legislature by the same party) would be expected to expand the range of political discretion and thereby reduce the level of political constraints. In order to allow for this effect, the purely institutional measure of political constraints described above is supplemented with information on the preferences of various actors. For example, if the legislature were completely aligned with the executive, the game would revert back to our simple unitary actor discussed above with a constraint measure of 0. The same exercise of determining constraints given the assumption of either completely independent or completely aligned actors was conducted for all observed institutional structures yielding the values for political constraints displayed in Table 2.

Further modifications are required when other political actors are neither completely aligned with nor completely independent from the executive. In these cases, the party composition of the other branches of government are also relevant to the level of constraints. For example, if the party controlling the executive enjoys a majority in the legislature, the level of constraints is negatively correlated with the magnitude and concentration of that majority. Aligned legislatures with large homogeneous majorities are less costly to manage and control than aligned legislatures with precarious majorities that are highly heterogeneous and/or polarized.

By contrast, when the executive is faced with an opposition legislature, the level of constraints is positively correlated with the magnitude and concentration of the legislative majority. A heavily fractionalized opposition with a precarious majority may provide the executive with a lower level of constraints due to the difficulty in forming a cohesive legislative opposition bloc to any given policy. Information on the partisan alignment of different government branches and on the difficulty of forming a majority coalition within them can therefore provide valuable information as to the extent of political constraints.

Suppose, for example, that the party controlling the executive completely controls the other branch(es) of government (100%<sup>10</sup> of legislative seats or supreme court justices). In this case, the values displayed in the appropriate right-hand column of Table 2 are utilized. However, as the executive's need for coalition building and maintenance increases (his or her majority diminishes), and under the assumption that the same party controls both branches, the values

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<sup>10</sup> I assume that as the majority diminishes from this absolute level the difficulty in satisfying the preferences of all coalition or faction members increases thus increasing the level of political constraints.

converge to the levels displayed in the left-most column. For the case in which the branches are controlled by different parties, the results are reversed. Now, complete concentration by the opposition (100% legislative seats or supreme court justices) leads to the assignment of the values in the left-most column. As the opposition's difficulty of forming coalitions increases, the values converge to the levels displayed in the appropriate right-hand column. Following an extensive body of literature in political science on the costs of forming and maintaining coalitions, the rate of convergence is based upon the extent of legislative (or judicial) fractionalization (Rae and Taylor (1970)).

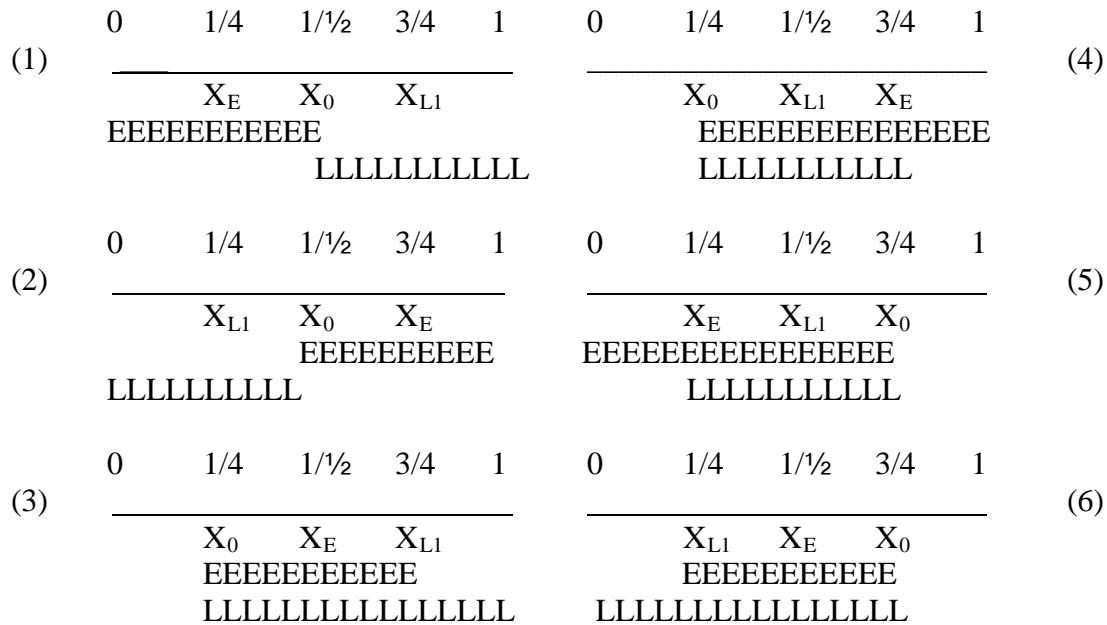
The fractionalization of the legislature (or court) is approximately equal to the probability that two random draws from the legislature or court are from different parties. The exact formula is:

$$1 - \sum_{i=1}^n \left[ \frac{(n_i - 1) \frac{n_i}{N}}{N - 1} \right]$$

where  $n$  = the number of parties,  $n_i$  = the number of seats held by  $i$ th party and  $N$  = the total number of seats. The final value of political constraints for cases in which the executive is aligned with the legislature(s) and/or court is thus equal to the value derived under complete alignment plus the fractionalization index multiplied by the difference between the independent and completely aligned values calculated above. For cases in which the executive's party is in the minority in the legislature(s) and/or courts, the modified constraint measure equals the value derived under complete alignment plus (one minus the fractionalization index) multiplied by the difference between the completely independent and dependent values calculated above. In cases of mixed alignment, a weighted (equally) sum of the relevant adjustments is used.

For example, in the case described above the constraint measure equaled 0 if the legislature was completely aligned and 2/3 if it was completely independent. However, if the same party controls the executive and the legislative chamber and the fractionalization index equals 1/4 (the executive has a large and/or homogeneous majority in Parliament) then the modified constraint measure equals  $0 + 1/4 * (2/3 - 0) = 1/6$ . By contrast, if the fractionalization index equals 3/4 (the executive's majority is very precarious and/or heterogeneous), the modified constraint measure would equal  $0 + 3/4 * (2/3 - 0) = 1/2$ . In the case where the opposition controls the legislature the values would be reversed. A large and/or homogeneous opposition majority would lead to a value of  $0 + (1 - 1/4) * (2/3 - 0) = 1/2$  while a small and/or heterogeneous opposition legislature would yield a score of  $0 + (1 - 3/4) * (2/3) = 1/6$ ."

**Figure 2: The Six Possible Preference Ordering of the Game {X<sub>E</sub>, X<sub>L1</sub>}**



Note : E indicates the range of outcomes preferred by the executive to the status quo X<sub>0</sub>  
 L indicates the range of outcomes preferred by the legislature to the status quo X

**Table 2: Political Constraints Assuming Complete Independence or Alignment**

<u>Independent Political Actors</u>	<i>Entities Completely Aligned with Executive</i>					
	<u>None</u>	<u>L</u> <sup>11</sup>	<u>J</u>	<u>L1&amp;L2</u>	<u>L&amp;J</u>	<u>L1&amp;L2&amp;J</u>
<i>E</i>	0					
<i>E, L1</i>	2/3	0				
<i>E, F</i>	2/3					
<i>E, J</i>	2/3		0			
<i>E, L1, F</i>	4/5	2/3				
<i>E, L1, L2</i>	4/5	2/3		0		
<i>E, L1, J</i>	4/5	2/3	2/3		0	
<i>E, L1, L2, F</i>	13/15	4/5		2/3		
<i>E, L1, F, J</i>	13/15	4/5	4/5		2/3	
<i>E, L1, L2, J</i>	13/15	4/5	4/5	2/3	2/3	0
<i>E, L1, L2, F, J</i>	19/21	13/15	13/15	4/5	4/5	2/3

Note: *E* = executive, *L1* = lower legislature, *L2* = upper legislature, *F* = sub-federal, *J* = judiciary

<sup>11</sup>. Either L1 or L2.

The specific formulae used to construct the index are as follows:

<u>Condition</u>	<u>Calculation</u>
L1=0 And polity_year > 1960	0
L1=1 And L2=0 And J=0 And F=0 And Align E_L1=1	(LEGRAL_2002)*0.6667
L1=1 And L2=0 And J=0 And F=0 And Align E_L1=0	(1-LEGRAL_2002)*0.6667
L1=1 And L2=0 And J=1 And F=0 And Align E_L1=1	0.6667+ (LEGRAL_2002*0.13333)
L1=1 And L2=0 And J=1 And F=0 And Align E_L1=0	0.6667+ ((1-LEGRAL_2002)*0.13333)
L1=1 And L2=0 And J=0 And F=1 And Align E_L1=1	0.6667+ (LEGRAL_2002*0.13333)
L1=1 And L2=0 And J=0 And F=1 And Align E_L1=0	0.6667+ ((1-LEGRAL_2002)*0.13333)
L1=1 And L2=0 And J=1 And F=1 And Align E_L1=1	0.8+ (LEGRAL_2002*0.0667)
L1=1 And L2=0 And J=1 And F=1 And Align E_L1=0	0.8+ ((1-LEGRAL_2002)*0.0667)
L1=1 And L2=1 And J=0 And F=0 And Align E_L1=1 And Align E_L2=1	((LEGRAL_2002+LEGRAU_2002)/2)*0.8
L1=1 And L2=1 And J=0 And F=0 And Align E_L1=1 And Align E_L2=0	((LEGRAL_2002)+(1-LEGRAU_2002))/2)*0.8
L1=1 And L2=1 And J=0 And F=0 And Align E_L1=0 And Align E_L2=1	((1-LEGRAL_2002)+(LEGRAU_2002))/2)*0.8
L1=1 And L2=1 And J=0 And F=0 And Align E_L1=0 And Align E_L2=0	(1-(LEGRAL_2002+LEGRAU_2002)/2)*0.8
L1=1 And L2=1 And J=1 And F=0 And Align E_L1=1 And Align E_L2=1	0.6667+(((LEGRAL_2002+LEGRAU_2002)/2)*0.1333)
L1=1 And L2=1 And J=1 And F=0 And Align E_L1=1 And Align E_L2=0	0.6667+(((LEGRAL_2002)+(1-LEGRAU_2002))/2)*0.1333)
L1=1 And L2=1 And J=1 And F=0 And Align E_L1=0 And Align E_L2=1	0.6667+(((1-LEGRAL_2002)+(LEGRAU_2002))/2)*0.1333)
L1=1 And L2=1 And J=1 And F=0 And Align E_L1=0 And Align E_L2=0	0.6667+((1-(LEGRAL_2002+LEGRAU_2002)/2)*0.1333)
L1=1 And L2=1 And J=0 And F=1 And Align E_L1=1 And Align E_L2=1	0.6667+(((LEGRAL_2002+LEGRAU_2002)/2)*0.1333)
L1=1 And L2=1 And J=0 And F=1 And Align E_L1=1 And Align E_L2=0	0.6667+(((LEGRAL_2002)+(1-LEGRAU_2002))/2)*0.1333)
L1=1 And L2=1 And J=0 And F=1 And Align E_L1=0 And Align E_L2=1	0.6667+(((1-LEGRAL_2002)+(LEGRAU_2002))/2)*0.1333)
L1=1 And L2=1 And J=0 And F=1 And Align E_L1=0 And Align E_L2=0	0.6667+((1-(LEGRAL_2002+LEGRAU_2002)/2)*0.1333)
L1=1 And L2=1 And J=1 And F=1 And Align E_L1=1 And Align E_L2=1	0.8+(((LEGRAL_2002+LEGRAU_2002)/2)*0.1048)
L1=1 And L2=1 And J=1 And F=1 And Align E_L1=1 And Align E_L2=0	0.8+(((LEGRAL_2002)+(1-LEGRAU_2002))/2)*0.1048)
L1=1 And L2=1 And J=1 And F=1 And Align E_L1=0 And Align E_L2=1	0.8+(((1-LEGRAL_2002)+(LEGRAU_2002))/2)*0.1048)
L1=1 And L2=1 And J=1 And F=1 And Align E_L1=0 And Align E_L2=0	0.8+((1-(LEGRAL_2002+LEGRAU_2002)/2)*0.1048)

Data for POLCONV\_2002 are available for the following 189 countries between the following years (though not necessarily continuously):

Country	Min_year	Max_year
AFGHANISTAN	1960	2001
ALBANIA	1960	2001
ALGERIA	1962	2001
ANGOLA	1975	2001
ARGENTINA	1960	2001
ARMENIA	1991	2001
AUSTRALIA	1960	2001
AUSTRIA	1960	2001
AZERBAIJAN	1991	2001
BAHRAIN	1971	2001
BANGLADESH	1972	2001
BELARUS	1991	2001
BELGIUM	1960	2001
BENIN	1975	2001
BHUTAN	1960	2001
BOLIVIA	1960	2001
BOTSWANA	1966	2001
BRAZIL	1960	2001
BULGARIA	1960	2001
BURKNA FASO	1984	2001
BURMA	1960	1988
BURUNDI	1962	2001
CAMBODIA	1960	2001
CAMEROON	1961	2001
CANADA	1960	2001
CEN AFR EMP	1976	1978
CEN AFR REP	1965	2001
CEYLON	1960	1970
CHAD	1962	2001
CHILE	1960	2001
CHINA PR	1960	2001
COLOMBIA	1960	2001
COMORO IS	1975	2001
CONGO	1971	1996
CONGO (BRA)	1961	1970
CONGO DR	1967	2001
CONGO REP	1997	2001
COSTA RICA	1960	2001
COTE D'IVOR	1985	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
CROATIA	1991	2001
CUBA	1960	2001
CYPRUS	1960	2001
CZECH REP	1993	2001
CZECHOS'KIA	1960	1992
DAHOMEY	1960	1974
DENMARK	1960	2001
DJIBOUTI	1977	2001
DOMIN REP	1960	2001
ECUADOR	1960	2001
EGYPT	1971	2001
EL SALVADOR	1960	2001
EQUA GUINEA	1969	2001
ERITREA	1993	2001
ESTONIA	1993	2001
ETHIOPIA	1960	1986
ETH'PIA PDR	1987	2001
FED MALAYA	1960	1962
FIJI	1970	2001
FINLAND	1960	2001
FRANCE	1960	2001
GABON	1961	2001
GAMBIA	1965	2001
GEORGIA	1993	2001
GERMANY	1990	2001
GERMANY DR	1960	1989
GERMANY FR	1960	1989
GHANA	1960	2001
GREECE	1960	2001
GUATEMALA	1960	2001
GUINEA	1960	2001
GUINEA-B'AU	1974	2001
GUYANA	1966	1999
HAITI	1960	2001
HONDURAS	1960	2001
HUNGARY	1960	2001
ICELAND	1960	2001
INDIA	1960	2001
INDONESIA	1960	2001
IRAN	1960	2001
IRAQ	1960	2001
IRELAND	1960	2001
ISRAEL	1960	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
ITALY	1960	2001
IVORY COAST	1960	1984
JAMAICA	1959	2001
JAPAN	1960	2001
JORDAN	1960	2001
KAMPUCHEA	1975	1989
KAZAKHSTAN	1991	2001
KENYA	1965	2001
KHMER REP	1971	1974
KOREA PR	1960	2001
KOREA REP	1960	2001
KUWAIT	1965	2001
KYRGYZSTAN	1991	2001
LAOS	1975	2001
LATVIA	1991	2001
LEBANON	1960	2000
LESOTHO	1966	2001
LIBERIA	1960	2001
LIBYA	1960	2001
LITHUANIA	1991	2001
LUXEMBOURG	1960	2001
MACEDONIA	1991	2001
MADAGASCAR	1975	2001
MALAGASY R	1961	1974
MALAWI	1965	2001
MALAYSIA	1963	2001
MALDIVE IS	2000	2001
MALI	1960	2001
MARSHALL IS	2000	2001
MAURITANIA	1961	2001
MAURITIUS	1968	2001
MEXICO	1960	2001
MOLDOVA	1991	2001
MONGOLIA	1960	2001
MOROCCO	1960	2001
MOZAMBIQUE	1976	2001
MYANMAR	1989	2001
NAMIBIA	1991	2001
NEPAL	1960	2001
NETHERLANDS	1960	2001
NEW ZEALAND	1960	2001
NICARAGUA	1960	2001
NIGER	1960	2001

<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
NIGERIA	1960	2001
NORWAY	1960	2001
OMAN	1960	2001
PAKISTAN	1960	2001
PANAMA	1960	2001
PAPUA NEW G	1976	2001
PARAGUAY	1960	2001
PERU	1960	2001
PHILIPPINES	1960	2001
POLAND	1960	2001
PORTUGAL	1960	2001
QATAR	1971	2001
RHODESIA	1965	1979
ROMANIA	1960	2001
RUSSIA	1991	2001
RWANDA	1961	2001
SA'U ARABIA	1960	2001
SENEGAL	1960	2001
SIERRA LEO	1961	2001
SINGAPORE	1965	2001
SLOVAK REP	1993	2001
SLOVENIA	1991	2001
SO AFRICA	1960	2001
SOLOMON IS	2000	2001
SOMALIA	1960	2001
SPAIN	1960	2001
SRI LANKA	1971	2001
SUDAN	1960	2001
SWAZILAND	1968	2001
SWEDEN	1960	2001
SWITZERLAND	1960	2001
SYRIA	1961	2001
TAIWAN	1973	2001
TAJKISTAN	1991	2001
TANGANYIKA	1963	1963
TANZANIA	1964	2001
THAILAND	1960	2001
TOGO	1961	2001
TRINIDAD	1967	2001
TUNISIA	1960	2001
TURKEY	1960	2001
TURKMENSTAN	1991	2001
UA EMIRATES	1971	2001



<b>Country</b>	<b>Min_year</b>	<b>Max_year</b>
UAR	1960	1970
UGANDA	1962	2001
UK	1960	2001
UKRAINE	1991	2001
UPPER VOLTA	1960	1983
URUGUAY	1960	2001
US	1960	2001
USSR	1960	1990
UZBEKISTAN	1991	2001
VENEZUELA	1960	2001
VIETNAM	1976	2001
VIETNAM DR	1960	1975
VIETNAM REP	1960	1975
YEMEN	1960	1961
YEMEN AR	1962	1989
YEMEN PDR	1967	1989
YEMEN REP	1990	2001
YUGOSLAVIA	1960	2001
ZAIRE	1971	1996
ZAMBIA	1964	2001
ZIMBABWE	1980	2001

L1

The existence of an effective lower legislative chamber is taken from the cross-national time series dataset. Specifically, an effective legislative veto player (L1=1) is entered when the CNTS variable Legislative Effectiveness (definition excerpted below) is > 1.

“ S22F4 Legislative Effectiveness

Location: 829-837 Coverage: 1815-1999

Notes: (0) None. No legislature exists.

- (1) Ineffective. There are three possible bases for this coding: first, legislative activity may be essentially of a "rubber stamp" character; second, domestic turmoil may make the implementation of legislation impossible; third, the effective executive may prevent the legislature from meeting, or otherwise substantially impede the exercise of its functions.
- (2) Partially Effective. A situation in which the effective executive power substantially outweighs, but does not completely dominate that of the legislature.
- (3) Effective. The possession of significant governmental autonomy by the legislature, including, typically, substantial authority in regard to taxation and disbursement, and the power to override executive vetoes of legislation.”

The following 174 countries have between the minimum and maximum years specified (though not necessarily continuously) had an effective lower legislative chamber:

Country	Min_year	Max_year
AFGHANISTAN	1965	1972
ALBANIA	1991	2001
ALGERIA	1998	2001
ANDORRA	1975	2001
ANGOLA	1992	1995
ANTIGUA	1981	2001
ARGENTINA	1854	2001
ARMENIA	1991	1994
AUST EMPIRE	1848	1866
AUST-HUNG	1867	1918
AUSTRALIA	1901	2001
AUSTRIA	1919	2001
BADEN	1862	1869
BAHAMAS	1973	2001
BANGLADESH	1971	2001
BARBADOS	1966	2001
BAVARIA	1848	1869
BELARUS	1991	2001
BELGIUM	1830	2001
BELIZE	1981	2001
BENIN	1991	2001
BHUTAN	1907	1959

Country	Min_year	Max_year
BOLIVIA	1826	2001
BOSNIA-HERZ	1996	2001
BOTSWANA	1966	2001
BRAZIL	1841	2001
BULGARIA	1879	2001
BURKNA FASO	1992	2001
BURMA	1948	1961
BURUNDI	1962	1965
C VERDE IS	1991	2001
CAMBODIA	1993	1996
CANADA	1867	2001
CEN AFR REP	1960	2001
CEYLON	1948	1970
CHILE	1837	2001
COLOMBIA	1832	2001
CONGO	1992	1996
COSTA RICA	1854	2001
COTE D'IVOR	2001	2001
CROATIA	1991	2001
CYPRUS	1976	2001
CZECH REP	1993	2001
CZECHOS'KIA	1919	1992
DENMARK	1849	2001
DJIBOUTI	1977	2001
DOMIN REP	1924	2001
DOMINICA	1979	2001
ECUADOR	1846	2001
EL SALVADOR	1903	2001
EQUA GUINEA	1968	1968
ESTONIA	1917	2001
FED MALAYA	1958	1962
FIJI	1970	2001
FINLAND	1917	2001
FRANCE	1814	2001
GAMBIA	1965	1993
GEORGIA	1991	2001
GERMANY	1868	2001
GERMANY FR	1949	1989
GHANA	1968	2001
GREECE	1862	2001
GRENADA	1974	2001
GUATEMALA	1871	2001
GUINEA	1995	2000

Country	Min_year	Max_year
GUINEA-B'AU	1994	1998
GUYANA	1966	2001
HAITI	1870	2001
HONDURAS	1919	2001
HUNGARY	1945	2001
ICELAND	1918	2001
INDIA	1950	2001
INDONESIA	1955	2001
IRAN	1947	2001
IRELAND	1922	2001
ISRAEL	1949	2001
ITALY	1861	2001
JAMAICA	1959	2001
JAPAN	1890	2001
JORDAN	1950	1973
KENYA	1964	2001
KIRIBATI	1979	2001
KOREA REP	1960	2001
KUWAIT	1963	1975
LATVIA	1919	2001
LEBANON	1953	2001
LESOTHO	1966	1997
LIBERIA	1848	1945
LIECHTSTEIN	1975	2001
LITHUANIA	1918	2001
LUXEMBOURG	1890	2001
MACEDONIA	1991	2001
MADAGASCAR	1992	2001
MALAGASY R	1961	1971
MALAWI	1965	2001
MALAYSIA	1963	2001
MALDIVE IS	1965	1974
MALI	1992	2001
MALTA	1964	2001
MARSHALL IS	1986	2001
MAURITIUS	1968	2001
MEXICO	1827	2001
MICRONESIA	1986	2001
MOLDOVA	1991	2001
MONACO	1975	1999
MONGOLIA	1990	2001
MOROCCO	1978	2001
MOZAMBIQUE	1994	2001

Country	Min_year	Max_year
NAMIBIA	1991	2001
NAURU	1968	2001
NEPAL	1980	2001
NETHERLANDS	1815	2001
NEW ZEALAND	1876	2001
NICARAGUA	1838	2001
NIGER	1993	1995
NIGERIA	1960	2001
NORWAY	1814	2001
OTTOMAN EMP	1876	1911
PAKISTAN	1947	1999
PALAU	1994	2001
PANAMA	1904	2001
PAPUA NEW G	1976	2001
PARAGUAY	1919	2001
PERSIA	1906	1910
PERU	1827	2001
PHILIPPINES	1935	2001
POLAND	1918	2001
PORTUGAL	1834	2001
RHODESIA	1965	1978
ROMANIA	1862	2001
RUSSIA	1993	2001
SAINT LUCIA	1980	2001
SAMOA	1998	2001
SAN MARINO	1975	2001
SAO TOME/PR	1991	1998
SAO TOMEEPR	1999	2001
SENEGAL	1993	2001
SIERRA LEO	1961	1982
SINGAPORE	1965	2001
SLOVAK REP	1993	2001
SLOVENIA	1991	2001
SO AFRICA	1910	2001
SOLOMON IS	1978	2001
SOMALIA	1960	1968
SPAIN	1820	2001
SRI LANKA	1971	2001
ST KITT/NEV	1984	2001
ST VINCENT	1980	2001
SUDAN	1954	1979
SURINAME	1976	2001
SWAZILAND	1968	1972

Country	Min_year	Max_year
SWEDEN	1812	2001
SWITZERLAND	1848	2001
SYRIA	1944	1961
TAIWAN	1949	2001
TAJKISTAN	1991	1993
TANGANYIKA	1963	1963
TANZANIA	1964	2001
THAILAND	1934	2001
TONGA	1970	2001
TRINIDAD	1962	2001
TUNISIA	1958	2001
TURKEY	1920	2001
UGANDA	1962	2001
UK	1800	2001
UKRAINE	1991	2001
URUGUAY	1864	2001
US	1800	2001
VANUATU	1980	2001
VENEZUELA	1959	1999
WESTN SAMOA	1963	1997
YUGOSLAVIA	1920	2001
ZAMBIA	1991	2001
ZIMBABWE	1980	2001

NB: values for 2000-2001 are author's subjective coding based upon the information provided in The Statesmen's Yearbook.

## L2

Effective second legislative chambers (L2=1) are found in countries where L1=1 and records on the composition of such a legislative chamber exist and where that legislative chamber is elected under a distinct electoral system and has a substantive (not merely delaying) role in the implementation of fiscal policy as documented in The Statesmen's Yearbook and The Political Handbook of the World. The following 57 countries have between the minimum and maximum years specified (though not necessarily continuously) had an effective second legislative chamber:

Country	Min_year	Max_year
ALGERIA	1998	2001
ARGENTINA	1928	2001
ARMENIA	1991	1992

Country	Min_year	Max_year
AUSTRALIA	1928	2001
AUSTRIA	1927	2001
BELGIUM	1830	2001
BOLIVIA	1895	2001
BRAZIL	1928	2001
CANADA	1928	2001
CEYLON	1966	1970
CHILE	1932	2001
COLOMBIA	1928	2001
CONGO	1993	1996
CROATIA	1991	2001
CZECH REP	1993	2001
CZECHOS'KIA	1927	1992
DENMARK	1927	1953
DOMIN REP	1928	2001
FRANCE	1927	2001
GERMANY FR	1971	1973
GREECE	1930	1934
HAITI	1957	2001
ICELAND	1929	1959
INDIA	1977	2001
IRELAND	1927	1936
ITALY	1949	1959
JAMAICA	1962	1994
JAPAN	1928	2001
JORDAN	1960	1973
LESOTHO	1966	1968
MEXICO	1946	2001
MOROCCO	1998	2001
NAMIBIA	1993	1998
NETHERLANDS	1927	2001
NEW ZEALAND	1944	1950
NICARAGUA	1931	1933
NIGERIA	1999	2001
PAKISTAN	1986	1999
PALAU	1994	2001
PARAGUAY	1928	2001
PERU	1956	1959
PHILIPPINES	1954	2001
POLAND	1922	2001
ROMANIA	1927	2001
SENEGAL	2000	2001
SO AFRICA	1928	2001

Country	Min_year	Max_year
SPAIN	1978	2001
SRI LANKA	1971	1971
SWEDEN	1927	1959
SWITZERLAND	1848	2001
TAIWAN	1997	2001
TRINIDAD	1962	2001
URUGUAY	1928	2001
US	1800	2001
VENEZUELA	1960	1999
YUGOSLAVIA	1960	2001
ZIMBABWE	1980	1982

NB: values for 2000-2001 are author's subjective coding based upon the information provided in The Statesmen's Yearbook.

## J

The existence of an independent judiciary (J=1) is determined through the joint existence of a POLITY score on executive constraints (*XCONST*) of at least 3 (see definition below) and, where data is available, an ICRG score on Law & Order of at least 4 (see definition below). Scores are only computed in the period after 1960.

The following 83 countries have between the minimum and maximum years specified (though not necessarily continuously) had an effective judiciary:

Country	Min_year	Max_year
ALBANIA	1991	1997
ARGENTINA	1993	2001
ARMENIA	1998	2001
AUSTRALIA	1960	2001
AUSTRIA	1960	2001
BELGIUM	1960	2001
BENIN	1991	2001
BOTSWANA	1966	2001
BRAZIL	1960	1993
BULGARIA	1990	2001
CANADA	1960	2001
CHILE	1960	2001
COSTA RICA	1960	2001
CUBA	1960	1960
CYPRUS	1991	2001
CZECH REP	1993	2001
CZECHOS'KIA	1968	1992



Country	Min_year	Max_year
DENMARK	1960	2001
DOMIN REP	1994	2001
ECUADOR	1979	2001
EL SALVADOR	1994	1994
ESTONIA	1991	2001
FED MALAYA	1960	1962
FINLAND	1960	2001
FRANCE	1969	2001
GAMBIA	1986	1993
GERMANY	1990	2001
GERMANY FR	1960	1989
GREECE	1991	2001
GUYANA	1995	2001
HUNGARY	1989	2001
ICELAND	1960	2001
INDIA	1994	2001
IRAN	1996	1999
IRELAND	1960	2001
ISRAEL	1992	2001
ITALY	1960	2001
JAPAN	1960	2001
KENYA	1995	1998
KOREA REP	1992	2001
LEBANON	1994	1998
LITHUANIA	1999	1999
LUXEMBOURG	1960	2001
MALAWI	1996	2001
MALAYSIA	1963	2001
MEXICO	1985	1985
MOLDOVA	1999	1999
MONGOLIA	1994	2001
MOROCCO	1992	1999
NAMIBIA	1992	2001
NETHERLANDS	1960	2001
NEW ZEALAND	1960	2001
NICARAGUA	1995	2001
NORWAY	1960	2001
PAKISTAN	1997	1997
PAPUA NEW G	1976	1990
PARAGUAY	1992	2001
PHILIPPINES	1994	2001
POLAND	1989	2001
PORTUGAL	1974	2001

Country	Min_year	Max_year
ROMANIA	1993	2001
RUSSIA	1996	1998
SINGAPORE	1985	1999
SLOVAK REP	1993	2001
SLOVENIA	1999	1999
SO AFRICA	1995	1997
SPAIN	1975	2001
SRI LANKA	1996	1997
SWEDEN	1960	2001
SWITZERLAND	1960	2001
TAIWAN	1985	2001
TANZANIA	1996	1999
THAILAND	1989	2001
TRINIDAD	1962	2001
TUNISIA	1995	1998
TURKEY	1992	2001
UGANDA	1997	1999
UK	1960	2001
UKRAINE	1999	1999
US	1960	2001
VENEZUELA	1961	1999
ZAMBIA	1996	1999
ZIMBABWE	1994	1999

NB: Values for 2000-2001 are author's subjective coding based upon the information provided in The Statesmen's Yearbook.

## F

Independent sub-federal entities (states, provinces, regions, ...) are coded (F=1) when these institutions impose substantive constraints on national fiscal policy as indicated in The Statesmen's Yearbook or The Political Handbook of the World. Scores are only computed in the period after 1960.

The following 13 countries have between the minimum and maximum years specified (though not necessarily continuously) had effective sub-federal veto players:

Country	Min_year	Max_year
AUSTRALIA	1960	2001
BELGIUM	1960	2001
BRAZIL	1960	2001
CANADA	1960	2001
CZECHOS'KIA	1991	1992

Country	Min_year	Max_year
FIJI	1970	1999
GERMANY	1990	2001
GERMANY FR	1960	1989
SO AFRICA	1994	2001
SWITZERLAND	1960	2001
TRINIDAD	1987	2001
UA EMIRATES	1971	2001
US	1960	2001

NB: Values for 2000-2001 are author's subjective coding based upon the information provided in The Statesemen's Yearbook.

### ALIGN E L1

Alignment between the executive and the lower legislative chamber is coded (ALIGN E\_L1=1) when either the country is coded as having an Executive completely responsible to Parliament by the CNTS (definition below) or when the executive's party is the largest in Parliament.

“ S21F7 Degree of Parliamentary Responsibility

Location: 793-801 Coverage: 1815-1999

Notes: Refers to the degree to which a premier must depend on the support of a majority in the lower house of a legislature in order to remain in office.

- (0) Irrelevant. Office of premier does not exist.
- (1) Absent. Office exists, but there is no parliamentary responsibility.
- (2) Incomplete. The premier is, at least to some extent, constitutionally responsible to the legislature. Effective responsibility is, however, limited.
- (3) Complete. The premier is constitutionally and effectively dependent upon a legislative majority for continuance in office.”

### ALIGN E L2

Alignment between the executive and the upper legislative chamber is coded (ALIGN E\_L2=1) when the Executive's party is the largest in the upper legislative chamber.

### ALIGN L1 L2

Alignment between the legislative chambers is coded (ALIGN L1\_L2) when the same party or coalition of parties (when available) controls a majority in both legislative chambers.

LEGRAL and LEGRAU

Legislative fractionalization is approximately the probability that two random draws from the lower (upper) legislative chamber will be from the same party. The formula includes a modest adjustment to reflect the difficulty of maintaining a coalition as the number of parties in that coalition increases. The exact formula is:

$$1 - \sum_{i=1}^n \left[ \frac{(n_i - 1) \frac{n_i}{N}}{N - 1} \right]$$

where  $n$  = the number of parties,  $n_i$  = seats held by  $n$ th party and  $N$  = total seats.

XCONST

As noted in the POLITY II Codebook (Gurr, 1990):

“Operationally, this variable refers to the extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities. Such limitations may be imposed by any "accountability groups." In Western democracies these are usually legislatures. Other kinds of accountability groups are the ruling party in a one-party state; councils of nobles or powerful advisors in monarchies; the military in coup-prone polities; and in many states a strong, independent judiciary. The concern is therefore with the checks and balances between the various parts of the decision-making process. A seven-category scale is used.

(1) Unlimited Authority: There are no regular limitations on the executive's actions (as distinct from irregular limitations such as the threat or actuality of coups and assassinations). Examples of evidence:

- i. Constitutional restrictions on executive action are ignored.
- ii. Constitution is frequently revised or suspended at the executive's initiative.
- iii. There is no legislative assembly, or there is one but it is called and dismissed at the executive's pleasure.
- iv. The executive appoints a majority of members of any accountability group and can remove them at will.
- v. The legislature cannot initiate legislation or veto or suspend acts of the executive.
- vi. rule by decree is repeatedly used.

Note 2.3: If the executive is given limited or unlimited power by a legislature to cope with an emergency and relents this power after the emergency has passed, this is not a change to unlimited authority.

(2) Intermediate Category

(3) Slight to Moderate Limitations on Executive Authority:

There are some real but limited restraints on the executive. Evidence:

- i. The legislature initiates some categories of legislation.
- ii. The legislature delays implementation of executive acts and decrees.

- iii. The executive fails to change some constitutional restrictions, such as prohibitions on succeeding himself, or extending his term.
- iv. The ruling party initiates some legislation or takes some administrative action independently of the executive.
- v. The legislature or party approves some categories of appointments nominated by the executive.
- vi. There is an independent judiciary.
- vii. Situations in which there exists a civilian executive, but in which policy decisions, for all practical purposes, reflect the demands of the military.

#### (4) Intermediate Category

(5) Substantial Limitations on Executive Authority: The executive has more effective authority than any accountability group but is subject to substantial constraints by them.

Examples:

- i. A legislature or party council often modifies or defeats executive proposals for action.
- ii. A council or legislature sometimes refuses funds to the executive.
- iii. The accountability group makes important appointments to administrative posts.
- iv. The legislature refuses the executive permission to leave the country.

#### (6) Intermediate Category

(7) Executive Parity or Subordination: Accountability groups have effective authority equal to or greater than the executive in most areas of activity.

Examples of evidence:

- i. A legislature, ruling party, or council of nobles initiates much or most important legislation.
- ii. The executive (president, premier, king, cabinet, council) is chosen by the accountability group and is dependent on its continued support to remain in office (as in most parliamentary systems).
- iii. In multi-party democracies, there is chronic "cabinet instability."

## LAW & ORDER

As noted in (*Political Risk Services*, 1996):

“A country with a sound law and order tradition has sound political institutions, a strong court system and provisions for an orderly succession of power. This indicator reflects the degree to which the citizens of the country are willing to accept the established institutions to make and implement laws and adjudicate disputes. A high point total means that there is a strong law and order tradition, while a low point total means that there is a tradition of depending on physical force or illegal means to settling claims.”

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