

“Extra- and Within-System Electoral Volatility”

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CODEBOOK

Coding Rules for Electoral Volatility and New Parties: Party Mergers, Schisms, Electoral Coalitions

Party mergers and schisms and the formation and dissolution of electoral coalitions alter the membership of a party system. These changes should be reflected but not overstated when we track electoral volatility and extra-system volatility. Our coding rules are intended to achieve these objectives.

Splits and mergers

1. When a party splits into two or more parties from one election (T_1) to the next (T_2), we regard the party that kept the original name as the continuation of the original party. If no post-schism organization kept the name of the original party, we regarded the largest post-schism organization as the continuation of the original party and treated the smaller splinter party as if it did not exist in T_1 .
2. When two or more parties merged and created a new organization, we calculated volatility using the original party with the highest percentage in T_1 as the same party as the new one in T_2 . We coded the party with fewer votes in T_1 as disappearing in election T_2 .

Coalitions

3. Where possible, we disaggregate electoral coalitions into the parties that constitute them. This is possible, for example, in Brazil and Chile, where vote totals are recorded for the individual parties. If the electoral authorities do not tabulate separate vote totals for the individual parties, then we treat the coalition as if it were a party.

Coalition formation

4. With previously established parties: When two or more parties, at least one of which ran previously, ran in a coalition, we compared the coalition's percentage in election T_1 with the percentage in T_0 of the largest party that formed that T_1 coalition.
5. If none of the coalition partners ran in the elections at T_0 , but at least one did prior to T_0 , we treat the T_1 coalition as the successor to the largest member of the coalition that ran in the most recent election. This allows us to look at the vote share of parties running before a founding election and treat a coalition in a new regime as the continuation of a party in the previous democratic regime.
Exception to Rule 5: we take into account only parties that ran for the last time in the 15 years before the election under consideration, and at least once in the current regime. Example: In El Salvador 1991, the coalition called Convergencia Democrática is treated as a new entity. The last time any of its members had run was in 1970 (MNR), and no members of the CD coalition ran in the first two elections of the regime. (Because of the Polity score, the 1985 election is considered the founding election.)

¹ María Victoria de Negri helped create the database and the codebook.

6. If the coalition remained intact for more than one election, we give the coalition vote share in all following elections to the same party to which we gave the votes for the first election.

7. If one member of this coalition had run in a coalition in T_0 that gained a larger vote share than a party running on its own in T_0 , we allocate the vote share in T_1 to whichever party or coalition was larger in T_0 . One or some of the parties in the T_1 coalition might have run in a coalition at T_0 , so its vote share in T_0 could be hidden in the spreadsheet. For example, Perú 2011: Gana Perú was a coalition of the Partido Nacionalista Peruano (PNP), Partido Socialista, and other small parties. The PS was the only party among these that ran on its own in 2006. But the PNP (Ollanta Humala's party), which ran in the 2006 elections with UPP, was much larger in 2006 (as a coalition) than the PS. The UPP ticket (UPP +PNP) won 21% in 2006, while the PS only won 1.25%. So the Gana Perú votes (2011) go to PNP.

There might be rare cases in which a judgment call is necessary if a coalition at T_0 wins only a marginally higher vote share than a party. If in the above Peruvian example of 2006-11, the PS had won 20.9% in 2006 and the UPP coalition had won 21%, we would allocate the 2011 coalition total to the PS rather than the PNP. Restated: if it seems highly likely that at T_0 , Party X, which ran on its own, won more votes than the largest party in coalition Y, which won more votes than Party X, we would allocate the votes in T_0 to Party X. (We are not aware of any such cases.) The default is always to allocate these votes to whichever (Party X or Coalition Y) won more votes at T_0 .

Exception to Rule 7: If the members of a coalition in T_0 make up more than one coalition in T_1 , we treat the coalition that wins the largest vote share in T_1 as the continuation of the T_0 coalition. For the other (smaller) coalition(s) at T_1 that were part of the T_0 coalition, we follow Rule 4.

Example: Rule 7 indicates that we would normally treat Alianza Unidad (1996) in Nicaragua as the continuation of UNO (1990) because the PSD (one of the members of the Alianza Unidad) was part of UNO in 1990. However, because the Alianza Liberal (1996) coalition won a vastly higher vote share than the Alianza Unidad, we treat the former as the continuity of UNO.

Following Rule 4, we treat Alianza Unidad as the continuation of the PSC because in 1990 it was the larger of the two parties (not counting the PSD) that formed the Alianza Unidad in 1996.

8. If a party (call it Partido M) runs on its own in T_1 , becomes part of a coalition in T_2 , and then splits from the coalition in T_3 , if the coalition has at least one common member from T_2 to T_3 , and if the coalition wins more votes at T_3 than Partido M, then following Rule 7, we treat the coalition at T_3 as the continuity of the coalition at T_2 . We enter a new row in the Excel file for Partido M at T_3 but do not treat it as a new party. However, for the purposes of calculating electoral volatility, we compare its vote share at T_3 with 0% at T_2 .

Example: Nicaragua 1984-96. In 1990 a big coalition called UNO won 53.9% of the vote. The largest member of UNO in 1984 (the previous election) was PLI, so we treat the UNO votes (1990) as a continuity with PLI. UNO dissolved before the 1996 elections, so this calls for Rule 11 below. In 1996, a new coalition, Alianza Liberal (AL) formed. The parties in AL were PL, PLC, PLN and PLIUN. In 1990, the first two were part of UNO, PLN was new, and PLIUN got .25% running on its own. Because AL 1996 included two parties (PL and PLC) that had been part of UNO 1990, and because AL 1996 was much larger than the PLI (0.73% of the vote), we treat AL 1996 as the successor to UNO 1990. We give PLI 1996 a new row but do not treat it as a new party.

9. If some parties in a coalition are new and some are established: If the established parties had only run in coalitions or in subnational elections (hence, they are hidden in the spreadsheet), we give the vote share to the party taking part in the largest coalition running in the previous election. Example from Peru 2001: Solución Popular was a coalition between Movimiento Vamos Vecino and Con Fuerza Perú. The former had run since 1998 on its own at the municipal level and in coalition at the national level. The latter was a new party, created for these elections. We give the votes to Vamos Vecino because it took part in a coalition that ran in previous elections.

10. If no party of a new coalition had ever run before, we treat the coalition as a new party.

Coalition dissolution

11. When a coalition dissolved from one election to the next, we compared its coalition total in election T_1 with the percentage of the largest party that formed that coalition in T_2 .

12. If one member of the T_1 coalition that dissolved at T_2 ran in a different coalition in T_2 that gained a larger vote share than a party (also previously a member of the coalition at T_1) running on its own, we allocate the vote share in T_2 , to whichever party or coalition was larger in T_2 . It might be the case that one or some of the parties in the T_1 coalition run in a coalition at T_2 , so their vote share in T_2 is hidden in the spreadsheet.

13. In some cases, the members of a coalition at T_1 took part in different coalitions at T_2 . In such cases, for the smaller T_2 coalition(s), we follow the logic of Rule 7. Example: In 2006 in Nicaragua, the PCN ran in coalition with other parties. This coalition dissolved after the elections. Two members of the coalition took part in the 2011 coalition led by the FSLN, which won 60% of the vote. Because the FSLN won a larger vote share in 2006 than the PCN coalition, we treat the FSLN and its allies in 2011 as a continuation of the FLSN in 2006 (Rule 4). Therefore, we treat the PCN coalition as ending in 2006 and in 2011 we apply Rule 7: The PCN formed a coalition with PLC and PIMCA. Because PLC was the largest of these three parties in 2006 (with 1,356,513 votes), we give the PCN-PLC-PIMCA votes to PLC.

14. If none of the parties ran on their own or in a different coalition in T_2 , then we treat the parties as disappearing at T_2 .

15. In some cases, Rules 4-10 (coalition formation) and 11-14 (coalition dissolution) conflict. In such cases, we resolve the conflict by entering the data for election results twice (i.e., in two different columns). Rule 4 applies for coalition formation from electoral period T_1 to T_2 . Rule 11 applies for coalition dissolution from electoral period T_2 to T_3 . Example: Bolivia 1979-1980 and 1980-85: In 1979 and 1980 there was the UDP coalition. In 1979, by Rule 4, we gave the votes to PCB, the largest in 1966 (36%) of the 1979 UDP. In 1980, by Rule 6, we again give the votes to PCB (38.7%). Then, before the 1985 elections, the coalition dissolved. In 1985, the member of the ex-UDP with the largest vote share was MIR (10.2%), while the PCB runs on its own and gained 2.5%. We added a second column for vote share in 1980. In the first column we gave the coalition votes to PCB (by Rule 6) and in the second column we gave the coalition votes to MIR (by Rule 11). This way, we calculated 1980-85 volatility with the second column for 1980, and 1980-79 volatility with the first column.

Miscellaneous

16. When a party changed its name but had an obvious continuity with a previous party, we counted them as being the same organization.

17. Independents: We usually treated independents as a category because we lacked the data needed for comparing individuals' results from one election to the next.

18. "Others": If minor parties were grouped together in the original data source as "others," we treated them as one party. Where possible, however, we treated them as separate parties.

19. When organizations with different names run separately, we treat them as separate parties. In some cases, two or more different organizations claimed to be the true branch of a party and ran on separate electoral tickets. Following this rule, we treat them as separate organizations.²

19a. We do not add the votes of another party or coalition to Party A's or Coalition B's vote share; rather, we treat them as separate entities.

20. We do not distinguish between political outsiders who create their own party to run and establishment politicians who splinter from an old party to create a new one.³ For some purposes, a distinction between political outsiders and established politicians could be useful, but for our operationalization it makes no difference. Even if it is created by an established politician, the new party still represents a new challenge to existing parties.

21. We do not include the first election of a new competitive regime in the calculation of extra-system volatility (i.e., by comparing results of this founding election to those from the last election of the previous competitive regime in the same country).

Hybrid electoral systems

22. For the six countries that use two different electoral systems (usually mixed proportional systems) for the lower chamber, we calculated a combined weighted volatility score if the both parts of the electoral system were used to allocate seats. To calculate this score, we determined volatility for each electoral system, multiplied these scores by the percentage of seats allocated under each system, and added the two scores. For Mexico, we used the combined weighted volatility score with the exception of 1988, when we used the PR results because the data were not available for the single member districts. For Ecuador, we used results for deputies elected from provincial districts until 2002, after which all members of the chamber were elected in a single country-wide constituency. To calculate volatility for Ecuador for 1998-2002, we used results for legislators elected in the single country-wide constituency. Venezuela used a mixed system in the 1993 and 1998 elections. We were unable to calculate a combined weighted volatility score because we could obtain only the party list results for 1998. Accordingly, we calculated volatility for 1993-98 on the basis of the party list results. For Hungary, we

² The Colombian Liberal and Conservative parties are exceptions to this rule. These parties ran many separate lists (Pizarro Leongómez 2006), but the separate lists were clearly parts of the same party.

³ Examples of the former include Presidents Fernando Collor de Mello (1990-92) of Brazil and Hugo Chávez of Venezuela (1999-present). In contrast, Rafael Caldera of Venezuela (President, 1993-98) and Alvaro Uribe of Colombia (President, 2002-present) were well-known establishment politicians who successfully ran for president on new party labels.

calculated a combined weighted volatility score using a base of 328 seats of the country's 386 legislative seats. We excluded from our calculations the 58 seats through a national list using the residual votes from the SMD and PR formulas.

23. For Germany, Italy, and New Zealand, we used only PR list votes because the PR system largely determines the allocation of seats. In these three countries, the voting in single member districts determines which individuals get elected to the legislature, but with minor exceptions it does not affect the number of seats that parties win.

24. For Russia, we treated the "against all" category as non-valid votes.

New parties

25. We consider a party new if it meets two conditions:

a) It never ran in any previous lower chamber election, **and**

b) We are not aware that it ran in any other election prior to the penultimate lower chamber elections.

Example: Convergencia Democrática (CODE)-País Posible in Peru ran for the first time at the national level in 1995. Although it had participated in the 1993 municipal elections, because these took place after the penultimate congressional elections (in 1990), we treat it as a new party.

Exception to Rule 25: In some cases a party existed before the election under consideration, but because it ran for the last time more than 15 years before the founding election of the current regime **and** did not run in the first two elections of the new competitive regime, we treat it as new (see Rule 5). Example: In El Salvador, MNR ran for the last time in 1970 before the regime inaugurated in 1985, and it then ran in a coalition in 1991 and on its own in 1994. We treat MNR as a new party in 1994.

26. We recorded the data for new parties beginning with the second election after the inauguration of a new competitive regime. The reason is that in the founding election of a new competitive regime, most parties might be new, especially after a long dictatorship. The data for new parties in a founding election therefore do not indicate the fluidity of the party system in the same way that subsequent elections do.

27. If a party ran in an earlier coalition but we gave the vote share to another member of the earlier coalition, it still counts as an established party (that is, we still count it as having run in the earlier presidential or national congressional election).

28. For mixed systems, we used a weighted score to calculate the percentage of new parties. We multiplied the percentage of votes that a new party received in the first electoral system by the percentage of seats allocated in that system and added this number to the percentage of votes that a new party received in the second electoral system times the percentage of seats allocated in that system. For example, for Japan if a new party received 10.6% of the vote in the SMD list (through which .625 of seats are distributed) and 16.1% of the vote in the PR list (through which .375 of the seats are distributed), we performed the following calculation: $(10.6 * .625) + (16.1 * .375)$.

ID VARIABLES

Observation identity (obsid):

Numeric electoral period code for a given country since 1945.

Country identity (ctyid):

Numeric country code.

Country (country):

Country name.

Legislative period (legperiod):

Legislative period.

Electoral period (elecper):

The number of electoral periods for a given country since 1945.

Election year (election_year):

The electoral year for which volatility was measured.

DEPENDENT VARIABLES:

Electoral volatility (volatility):

Pederson's Index of electoral volatility (1979): the sum of the net change in the percentage of votes gained or lost by each party from one election to the next, divided by two.

Sources: See Country Notes.

New parties (new_p):

The percentage of votes new parties received, for the second period of an electoral period. See Rules 25-28 above for the operationalization of a new party. We recorded this data beginning with the second election after the inauguration of a new competitive regime.

Sources: see Country Notes.

Within-system volatility (ws_volatility):

The share of the vote transferred from one previously existing party to another, measured as the difference between volatility and extra system volatility.

INDEPENDENT VARIABLES:**Gross domestic product growth per capita (gdp_growth):**

The geometric mean of per capita GDP growth, averaged per electoral period: from the year of the first election in the electoral period to the year before the second election. When more than one election took place in the same year (Denmark 1953; Greece 1989; Ireland 1982; Sri Lanka 1960; UK 1974) we used per capita GDP growth for that election year for the second of the two elections. For example, in 1953 Denmark had two elections and its growth rate for that year was 6.32%. For the first election, we used the geometric mean for the 1950-52 electoral period (-1.01%) and for the second election we used the growth rate for 1953 (6.32%).

Sources:

Heston, Alan, Robert Summers and Bettina Aten. 2006. *Penn World Table Version 6.2*. Pennsylvania: Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania. (Accessed 2008). [For: most countries 1951-1959, Taiwan 1992-2001, Poland 1989-1990 and Sri Lanka 1951].

Madison, Angus. 2001. *The World Economy: A Millennial Perspective*. Paris: Development Centre of the Organization for Economic Co-operation and Development. [Averages for the 1940s: Austria, Belgium, Canada, Denmark, Finland, France, Ireland, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, USA, UK; Germany 1940s-1970; and Colombia 1950s].

World Bank. 2007. *World Development Indicators*. Washington, D.C: World Bank. Available at: <http://web.worldbank.org> (indicator name: GDP per capita growth (annual %)). (For most countries, accessed June 18, 2008. For Guatemala, Nicaragua, Panama, Lithuania, Moldova, Slovakia, Slovenia, Ukraine and Namibia, accessed October 5, 2013. For 2006-2014, accessed Aug. 2015). [For: most countries 1961-2014].

Inflation (infl_geomean):

The geometric mean of inflation for the electoral period from the year of the first election in the electoral period to the year before the second election. When more than one election took place in the same year (Denmark 1953; Greece 1989; Ireland 1982; Sri Lanka 1960; UK 1974), for the second election, we used the inflation rate for that election year since theoretically we expect the current inflation rate, not the previous year rate, to have an effect. For example, in 1953 Denmark had two elections and its inflation rate for that year was 1.01%. For the first election, we used the geometric mean for 1950-52 (6.48%) and for the second election we used the inflation rate for 1953 (1.01%).

When information was missing, we used the data from the remaining years as the basis for the mean.

Log of inflation (ln_infl):

The natural log of the geometric mean of inflation, averaged per electoral period. There is no clear theoretical reason to expect an inflation rate of under 1% per year to affect electoral volatility differently than an inflation rate of 1% does. We therefore treated all of these cases the same as an inflation rate of 1%, meaning that we set the natural log equal to 0.

Effective number of parties (enp):

Calculated using Laakso and Taagepera's (1979) formula, measured in votes: 1 divided by the sum of the square of all parties' vote shares. The calculation is based on the first election of an electoral period. We measured ENP at the first election of an electoral period because the value at the second election of the electoral period results from that election, and hence it could not cause electoral volatility.

For *mixed-systems* (Bolivia, Japan, Hungary, Lithuania, Guatemala, Mexico, Nicaragua 1996-2011, and Russia), we calculated ENP using the sum of votes that parties received in both voting systems.

In Benin, ENP in 1999 drops dramatically because of the high percentage of votes allocated to the "Other" category.

Sources: See Country Notes.

District magnitude (dm):

The total number of seats renewed in the election under study, divided by the number of districts. Calculated for the first election of a legislative period.

For *mixed systems* (Bolivia, Hungary, Japan, Lithuania, Mexico, Russia, Romania, Nicaragua 1996-2011, and Venezuela 1993-1998) we calculated DM using the following formula: Mean DM = (Mean for non-PR districts * % of non-PR districts) + (Mean for PR districts * % of PR districts). For example: in 2011, Guatemala had 127 seats for 22 departmental constituencies, and 31 seats for 1 multi-member national constituency. Thus: $(0.804 * 5.77) + (0.196 * 31) = 10.72$.

For *compensatory districts* (Italy, El Salvador 1985-2003, Korea 1992 and 2004, Sweden 1974-2002, Sri Lanka 1989-2004) we calculated DM using adjusted district magnitude, i.e., the total number of seats divided by the number of compensatory districts used (Tagaapera and Shugart 1989).

For *compensatory districts with thresholds* (Poland, Korea 1996-2000, Taiwan, New Zealand, and Macedonia) we calculated DM using effective district magnitude, as recommended by Tagaapera and Shugart (1989: 268). For those cases for which we could not determine historical thresholds (Austria, Belgium, Denmark, France 1986, Germany, Greece, Netherlands, Sweden, and Venezuela 1958-93), we used district magnitude or adjusted magnitude.

Notes:

Finland, we excluded the one single-member district: the Åland district. Including this district drops DM from 14.2 to 13.3.

Spain, we excluded the two single-member districts: Ceuta and Melilla.

Italy, we do not use effective district magnitude because the remainder seats vary from election to election, depending on the remaining votes.

Philippines, we do not use adjusted district magnitude because the compensatory district has not been implemented consistently (Nohlen, Grotz, and Hartmann 2001).

Argentina: Beginning in 1985, half the lower chamber seats are renewed every two years, so the total size of the Chamber of the Deputies is twice the number renewed in a given election.

Sources:

Association for Participatory Democracy "ADEPT". "Parliamentary Elections in the Republic of Moldova." Available from <http://www.e-democracy.md/en/elections/parliamentary/>. (Accessed 2008) [For: Moldova, 1994-2005].

Bolivia. 2010. "Ley del Régimen Electoral, 30 de junio de 2010." Available from: <http://www.lexivox.org/norms/BO-L-N26.html>. [For Bolivia 2010-2014].

Golder, Matt. 2007. "Replication Data for: Democratic Electoral Systems Around the World, 1946-2000." [For: Argentina 1983-1999; Australia 1946-1998; Austria 1949-1999; Belgium 1946-1999; Benin 1991-1999; Bolivia 1985-1993; Brazil 1986-1998; Bulgaria 1991-1997; Canada 1949-2000; Chile 1989-1997; Colombia 1974-1998; Costa Rica 1949-1998; Denmark 1947-1998; Dominican Republic 1978-1998; El Salvador 1985-2000; France: 1946-1997; Germany 1949-1998; Guatemala 1985-1999; Honduras 1985-1997; India 1951-1998; Ireland 1948-1997; Israel 1949-1999; Italy 1945-2000; Jamaica 1962-1997; Japan 1952-1993; Latvia 1993-1998; Macedonia 1994; Mongolia 1992-2000; Namibia 1994-1999; Netherlands 1946-2000; New Zealand 1946-1993; Nicaragua 1990-1996; Norway 1949-1997; Panama 1994-1999; Papua New Guinea 1977-1997; Philippines 1987-1998; Portugal 1975-2000; Russia; Slovakia 1994-1998; Slovenia 1992-2000; Sri Lanka 1952-2000; Sweden 1948-1968; Switzerland 1949-2000; Trinidad & Tobago 1966-2000; Turkey 1983-1999; Ukraine 1998; United States of America 1946-2000; United Kingdom 1950-2000; Uruguay 1984-1999; and Venezuela 1963- 2000].

International Inter-Parliamentary Union. "PARLINE database." Available at: <http://www.ipu.org/parline-e/parlinesearch.asp> (Accessed: June 10-24, 2008). [For: Argentina 2001-2003; Australia 2001-2004; Austria 2002; Belgium 2003; Bolivia 1985-1993; Brazil 2002-2006; Bulgaria 2001-2005; Canada 2004-2006; Chile 1989-1997; Colombia 2002-2006; Costa Rica 2002-2006; Denmark 2001-2005; Dominican Republic 2002-2006; Estonia: 1992-2003; Finland 1948-2003; France: 2002; Germany 2002-05; Greece 1974-2004; Guatemala 2003; Honduras 2001-2005; Hungary; India 2004; Ireland 2002; Israel 2003; Italy 2001; Jamaica 2002; Latvia 2002; Lithuania 1992-2004; Japan 1996-2005; Mexico; Mongolia 2004; Namibia 2004; New Zealand 1996-2005; Nicaragua 2001-2006; Norway 2001-2005; Panama 2004; Papua New Guinea 1977-1997; Philippines 1987-1998; Slovakia 2002-2006; Slovenia 1992-2004; South Korea 1988-2000; Spain

1977-2006; Sri Lanka 2001-2004; Sweden 1970-2002; Switzerland 2002; Trinidad & Tobago 2001-2002; Turkey: 2002; Ukraine 2002-2006; United States of America 2002-2004; United Kingdom 2001-2005; Uruguay 2004; and Venezuela 2005].

Jones, Mark. 1995. "A Guide to the Electoral Systems of the Americas." *Electoral Studies* 14(1): 5-21 [For Ecuador 1979-1994].

Nohlen, Dieter. 2005. *Elections in the Americas*. Vol. 2., South America. Oxford: Oxford University Press. [For Bolivia 1997-2010; Ecuador 2005].

Nohlen, Dieter, Florian Grotz, and Christof Hartmann. 2001. *Elections in Asia and the Pacific: a data handbook*. New York: Oxford University Press. [For: Malaysia, Korea 1988-2000, and Taiwan 1992-98].

Schafferer, Christian. 2003. "The Legislative Yuan Election, Taiwan 2001" *Electoral Studies* 22(3): 532-537. [For Taiwan 2001].

Schmidt, Gregory D. 2002. "The Presidential Election in Peru, April 2000." *Electoral Studies* 21(2): 346-357. [For Peru 1995 and 2000].

Shugart, Matthew Sjøberg, and Martin P. Wattenberg. 2001. *Mixed-Member Electoral Systems* New York: Oxford University Press. [For Macedonia 1990-98].

Wonbin Cho. 2005. "The General Election in South Korea, April 2004" *Electoral Studies* 24(3): 525-530. [For Korea 2004].

Log of district magnitude (log_dm):

The natural log of district magnitude.

Presidential and parliamentary systems (type_gvt):

The defining features for each system as follows:

a) presidential or semi-presidential systems (coded as 1): when the head of government has a limited term in office and when he/she is elected through direct popular vote or through an electoral college that does not have the powers to overlook electoral results.

b) parliamentary systems (coded as 0): When the head of government is elected indirectly through a legislative majority, which in turn is elected directly by popular vote, and who may be removed from office by this same body. Hybrid systems in which there are both a president and a prime minister are considered parliamentary systems if the presidential powers are considered ceremonial or limited in scope.

Sources:

Freedom House. "Map of Freedom." Available at:

<http://www.freedomhouse.org/template.cfm?page=363&year=2008> (Accessed August 25, 2008).

Marshall, Monty G., and Keith Jagers. 2007. *Polity IV Project*. Center for Global Policy, School of Public Policy, George Mason University, and Center for Systemic Peace.

Shugart, Soberg Matthew, and Stephen Haggard. 2001. "Institutions and Public Policy in Presidential Systems." In Stephens Haggard and Mathew D. McCubbins ed., *Presidents, Parliaments and Policy*, pp. 64-102. Cambridge: Cambridge University Press.

Birthyear (birthyear):

The year the competitive regime was established. Countries with a combined Polity score of 2 or higher on a continuous basis are considered democracies. The birthyear is the first year the country's combined Polity score was 2 or higher.

In some cases (Chile, Uruguay, Macedonia, Guatemala, and Namibia) the first year of the first legislative period is a year earlier than the birthyear. This is because the elections that led to the inauguration of the latest competitive regime took place at the end of the year, and the regime was in fact inaugurated the following year.

Birth of democracy (birth_demo):

The age of democracy as of 2006, a constant value for all electoral periods for a given country.

Source:

Marshall, Monty G., and Keith Jagers. 2007. *Polity IV Project*. Center for Global Policy, School of Public Policy, George Mason University, and Center for Systemic Peace.

Log of birth of democracy (ln_birth_demo):

The natural log of birth of democracy.

Age of democracy (age_demo):

The years of democracy since inauguration measured for each electoral period. This value changes for each electoral period in a given country. Countries with a Polity score of 2 or higher are considered democracies.

Source:

Marshall, Monty G., and Keith Jagers. 2007. *Polity IV Project*. Center for Global Policy, School of Public Policy, George Mason University, and Center for Systemic Peace.

Log of age of democracy (ln_age_demo):

The natural log of age of democracy.

GDP per capita (per_cap_gdp)

Gross domestic product per capita for the first year of the electoral period. The name of the variable in the original source (World Development Indicators, see below) is "GDP per capita, PPP (constant 2011 international \$)" (Code: NY.GDP.PCAP.PP.KD).

As the source (WDI) does not have figures for years before 1950, earlier years were imputed by projecting back 1950 figures via the growth rates implied by the Maddison Project Database (see sources below). These growth rates were used retrospectively to estimate 1945-1949 figures on the bases of the 1959 PWT figure. As Maddison does not have data for Israel until 1950, the 1950 GDP per capita figure was used for the 1949-1951 period. As there are no figures for Germany before 1970, we imputed the average of three neighboring countries of similar level of development, Austria, Denmark and France. Likewise, because there is no data for Lithuania 1992, we used the GDP figures for 1993.

Sources:

Bolt, J., and J. L. van Zanden. 2013. *The First Update of the Maddison Project; Re-Estimating Growth Before 1820*. Maddison Project Working Paper 4.

Feenstra, Robert C., Robert Inklaar, and Marcel P. Timmer. 2015. "The Next Generation of the Penn World Table." Forthcoming *American Economic Review*, available for download at www.ggdnc.net/pwt (Variable: rgdpe, divided by the population (in millions)). [For Argentina 1980-2014]-

Heston, Alan, Robert Summers and Bettina Aten. *Penn World Table Version 7.1*. Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, July 2012. Available at: https://pwt.sas.upenn.edu/php_site/pwt71/pwt71_form.php (Accessed March 20, 2013).

Maddison Project. Available at <http://www.ggdnc.net/maddison/maddison-project/home.htm> (accessed March 25, 2013).

World Bank. 2011. *World Development Indicators*. Washington, D.C: World Bank. Available at: <http://web.worldbank.org> (Indicator name: GDP per capita, PPP (constant 2011 international \$)). (Accessed Aug. 26, 2015). [For most countries except Argentina 1980-2014].

Log of GDP per capita (log_gdp_pc)

Natural logarithm of the gross domestic product per capita (GDP per capita, PPP (constant 2011 international \$)) for the first year of the electoral period.

Polity Score (polity):

The lowest Polity score for the electoral period, except for the last year of the electoral period.

Source:

Marshall, Monty G. and Keith Jagers (2007). *Polity IV Project*. Center for Global Policy, School of Public Policy, George Mason University, and Center for Systemic Peace.