**Supplementary Materials**

\*This appendix includes supplemental information and analysis for “Bringing the Legislature Back in: Examining the Structural Effects of National Legislatures on Effective Democratic Governance.”

Published by: *Government and Opposition*

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**Appendix 1**

Relationship between PPI Index and the WLPS Index

Pearson’s r= 0.9976



**Appendix 2**

Questions utilized in Formulating the PPI index

Derived from Fish and Kroenig (2009:5-13).

**Influence over the Executive**

1.The legislature alone, without the involvement of any agencies, cam impeach the president or replace the Prime-Minister. Ministers may serve simultaneously as members of the legislature.

2.The legislature has powers of summons over executive branch officials and hearings with executive branch officials testifying before the legislature or its committees are regularly held.

3.The legislature can conduct independent investigation of the chief executive and the agencies of the executive.

4. The legislature has effective powers of oversight over the agencies of coercion (the military, organs of law enforcement, intelligence services, and the secret police).

5. The legislature appoints the prime minister.

6. The legislature’s approval is required to confirm the appointment of ministers; or the legislature itself appoints ministers,

7. The country lacks a presidency entirely or there is a presidency, but the president is elected by the legislature.

8. The legislature can vote no confidence in the government.

**Institutional Autonomy**

10. The legislature is immune from dissolution by the executive.

11. Any executive initiative on legislation requires ratification or approval by the legislature before it takes effect; that is, the executive lacks decree power.

12. Laws passed by the legislature are veto-proof or essentially veto-proof; that is, the executive lacks veto power, or has veto power but the veto can be overridden by a majority in the legislature.

13. The legislature’s laws are supreme and not subject to judicial review.

14. The legislature has the right to initiate bills in all policy jurisdictions; the executive lacks gatekeeping authority.

15.Expenditure of funds appropriated by the legislature is mandatory; the executive lacks the power to impound funds appropriated by the legislature

16. The legislature controls the resources that finance its own internal operation and provide for the perquisites of its own members.

17. Members of the legislature are immune from arrest and/or criminal prosecution.

18.All members of the legislature are elected; the executive lacks the power to appoint any members of the legislature.

**Specified Powers**

19. The legislature alone, without the involvement of any other agencies, can change the Constitution.

20. The legislature’s approval is necessary for the declaration of war.

21. The legislature’s approval is necessary to ratify treaties with foreign countries.

22. The legislature has the power to grant amnesty.

23.The legislature has the power of pardon.

24.The legislature revies and has the right to reject appointments to the judiciary; or the legislature itself appoints members of the judiciary.

25. The chairman of the central bank is appointed by the legislature.

26. the legislature has a substantial voice in the operation of the state-owned media.

**Institutional Capacity**

27. The legislature is regularly in session.

28. Each legislature has a personal secretary.

29. Each legislature has at least one non-secretarial staff member with policy expertise.

30. Legislators are eligible for re-election without any restriction.

31. A seat in the legislature is an attractive enough position that legislators are generally interested in and seek re-election.

32. The re-election of incumbent legislators is common enough that at any given time the legislature contains a significant number of highly experienced members.

**Appendix 3**

**Variable Description of Governance Measures (World Governance Indicators)**

**Voice and Accountability** captures “the perceptions of the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media (Kauffman 2009:6).”

**Governmental effectiveness** captures “perceptions of the quality of public services; the quality of the civil service and the degree of its independence from political pressures; the quality of policy formulation and implementation; and the credibility of the government’s commitment to such policies (Kauffman 2009:6).”

**Regulatory quality** captures “perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development (Kauffman 2009:6).”

**Rule of law** captures “perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence (Kauffman 2009:6).”

**The control of corruption** “captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests (Kauffman 2009:6).”

**Source:** Kaufmann D, Kraay A and Mastruzzi M (2009) *Governance Matters VIII: Aggregate and Individual Governance Indicators 1996-2008*. New York: The World Bank.

**Appendix 4**

**Summary Statistics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable Name | Mean | Standard Deviation | Minimum | Maximum |
| Governmental Effectiveness | -0.060 | 0.972 | -2.23 | 2.44 |
| Regulatory Quality | -0.049 | 0.963 | -2.34 | 2.26 |
| Voice and Accountability | -0.148 | 0.978 | -2.26 | 1.80 |
| Control of Corruption | -0.112 | 1.004 | -1.72 | 2.47 |
| Rule of Law | -0.135 | 0.982 | -2.18 | 2.10 |
| Parliamentary Power Index | 0.498 | 0.191 | 0 | 0.84 |
| Weighted PPI | 3.583 | 1.370 | 0 | 5.932 |
| Natural Log of GNI | 8.330 | 1.538 | 5.018 | 11.455 |
| Natural Log of Population | 16.283 | 1.453 | 13.099 | 21.044 |
| Polity Score | 3.56 | 6.420 | -10 | 10 |
| Ethnic Fractionalization Score | 0.454 | 0.252 | 0 | 0.9302 |
| English Legal Origin | 0.280 | 0.449 | 0 | 1 |
| % population Muslim | 25.454 | 36.450 | 0 | 99.7 |
| % population Protestant | 10.924 | 19.807 | 0 | 97.8 |
| Socialist Past | 0.213 | 0.409 | 0 | 1 |
| Latitude | 0.299 | 0.185 | 0.011 | 0.711 |
| Veto Players | 0.299 | 0.210 | 0 | 0.725 |
| Parliamentary System | 0.300 | 0.458 | 0 | 1 |
| PR System Employed | 0.548 | 0.497 | 0 | 1 |
| Federalism | 0.140 | 0.347 | 0 | 1 |

**Appendix 5**

**Marginal Effect Plots**

1. Predicted Effect of Legislative Strength on Voice and Accountability



1. Predicted Effect of Legislative Strength on Governmental Effectiveness



1. Predicted Effect of Legislative Strength on Regulatory Quality



1. Predicted Effect of Legislative Strength on Control of Corruption



1. Predicted Effect of Legislative Strength on the Rule of Law



**Appendix 6**

**Sensitivity Analyses**

To ensure the robustness of results, there is a need to recognize that OLS PCSE modelling may produce biased estimates considering that it involves explanatory variables that are both variant and time-invariant. In such circumstances, Plümper and Troeger (2007:125) recommend the utilization of Fixed Effects Vector Decomposition modeling (FEVD, hereafter) a three-step procedure involving a.) Running a fixed effects models to yield specific unit-effects; b.) Establishing unit-effects that are explained solely by time-invariant or rarely changing explanatory variables; and c.) The re-estimation of the first stage OLS models correcting for panel corrected standard errors including explanatory variables that do not change (Plümper and Troeger 2011). Such FEVD modeling guarantees that models that employ historical, unchanging variables (based on several Monte Carlo Simulations) yield accurate parameter estimates that yield precise mean-squared error properties that other estimation techniques like OLS Random-Effects, Fixed- Effects, and PCSE models fail to achieve.[[1]](#footnote-1) FEVD models, that seek a more conservative approach in removing errors attributed to time-invariant variables, presented in Appendix 5 (Tables A-E), exhibit results that confirm the pervious hypotheses presented in the study. The FEVD models show that there is a strong positive relationship between legislative strength (as measured by the PPI and WLPS index) on all aspects of effective democratic governance based on standard conventions of statistical significance (ranging from *p<.01 to p<.05*), while controlling for the effect of other institutional and demographic variables. The positive effect holds in a global model and one that is restricted to a sample restricted to developing countries.

The analysis also needs to ensure that there are no prevailing interactive effects present that may influence variation on the key dependent variables. Considering that there is the possibility that other institutional variables, like parliamentarism, the prevalence of veto players, the existence of a proportional representation system, and federalism may interact with legislative strength in terms of synergetic effects[[2]](#footnote-2), the FEVD analysis also employs controls that incorporate these possible interaction effects. FEVD results that account for the possible interactive effects of institutions yield results that still demonstrate the strong positive effect of legislative strength on all aspects of governance in both the global and reduced models significant at (*p<.01* to *p<.05)*. None of the interacted institutional variables reaches statistical significance at conventional levels. This demonstrates that legislative strength is a strong predictor of effective democratic governance since the effect is clearly linear and is not at all diminished by the presence of interactive institutional effects.

To ensure that the results are not subject to omitted variable bias concerning a.) state capacity (See Hendrix 2010) and b.) the relative strength of the executive vis a vis the legislature, the study also controls for Tax revenue as a % of the GDP (data derived from the World Bank Development Indicators) and the Executive Constraints variable from Polity V.[[3]](#footnote-3) The former is highly correlated to the Gross National Income at Pearson’s r=0.892 used in the original models; while the latter is highly correlated to the Level of Democracy score from Polity at Pearson’s r=0.905 which is also used in the original models. Running these additional controls as stand-alone variables in the PCSE and FEVD models do not alter the main results. Even accounting for state capacity and executive constraints, legislative strength remains highly correlated with all dimensions of effective governance that achieves statistical significance between p<.01 and p<.05.

Lastly, the analysis employs two added control variables that may affect the quality of governance: the pervasiveness of internet use within a country and the effective number of political parties. Khazaeli and Stockemer (2014) posit that countries that have high internet use are more likely to have effective governance because it provides citizens with better access to political information, accommodates better representation, and can strengthen political participation through social networks. Adding this as a control variable[[4]](#footnote-4) in the modelling proves to be problematic, because it is highly correlated with GNI per capita; at Pearson’s r=0.7982. To ensure robustness, OLS PCSE and FEVD models were run that used internet accessibility as a proxy for GNI, and the main results of the analysis did not change. Similarly, the study also controls for the Effective Number of Legislative Parties[[5]](#footnote-5) considering that it may unduly influence the effective provision of public goods and the quality of governance, especially in developing countries (Chhibber and Noorudin 2004; Wilkinson 2006). However, the Effective Number of Legislative Parties is highly correlated with the veto players variable at Pearson’s r=0.6578. Running OLS PCSE and FEVD models that substituted veto players with Effective Number of Legislative Parties yields the same results as the original models that did not affect the positive statistically significant relationship between legislative strength and effective democratic governance.[[6]](#footnote-6)

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**Appendix 7**

**FEVD Models**

Panel Fixed Effects Regression with Vector Decompositions

1. **Voice and Accountability**

PPI Index Weighted PPI Index

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
|  | Global  Model | Developing  States  Only | Global Model | Developing  States Only |
| Parliamentary Power Index | 1.585\*\*\*  (0.234) | 1.405\*\*\*  (0.006) | --- | --- |
| WLPS Index | --- | --- | 0.219\*\*\*  (0.032) | 0.198\*\*\*  (0.031) |
| Parliamentary System | 0.298\*\*\*  (0.090) | -0.037  (0.093) | 0.308\*\*\*  (0.090) | -0.033  (0.092) |
| PR system | 0.102  (0.075) | 0.066  (0.069) | 0.104  (0.075) | 0.064  (0.069) |
| Veto Players | 0.591\*\*\*  (0.209) | 0.451\*\*  (0.184) | 0.580\*\*\*  (0.208) | 0.437\*\*  (0.183) |
| Federalism | 0.120  (0.075) | 0.028  (0.103) | 0.122  (0.098) | 0.027  (0.102) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ |
| Constant | -10.483  (7.555) | -10.453  (7.225) | -10.482  (7.593) | -10.461  (7.042) |
| Observations | 2550 | 1780 | 2550 | 1780 |
| Countries | 150 | 105 | 150 | 105 |
| Adjusted R-square | 0.972 | 0.943 | 0.972 | 0.940 |
| F Statistic | 156.485 | 100.000 | 156.171 | 100.416 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. **Governmental Effectiveness**

PPI Index Weighted PPI Index

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
|  | Global  Model | Developing  States  Only | Global Model | Developing  States Only |
| Parliamentary Power Index | 1.019\*\*\*  (0.372) | 0.833\*\*\*  (0.302) | --- | --- |
| WLPS Index | --- | --- | 0.136\*\*\*  (0.051) | 0.115\*\*\*  (0.041) |
| Parliamentary System | 0.807\*\*\*  (0.144) | 0.259\*\*  (0.123) | 0.819\*\*\*  (0.143) | 0.264\*\*  (0.123) |
| PR system | 0.176  (0.120) | 0.143  (0.092) | 0.182  (0.143) | 0.143  (0.092) |
| Veto Players | 0.485  (0.332) | 0.332  (0.244) | 0.486  (0.330) | 0.325  (0.243) |
| Federalism | 0.255  (0.157) | 0.085  (0.137) | 0.256  (0.157) | 0.085  (0.137) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction  Terms Present | ✓ | ✓ | ✓ | ✓ |
| Constant | -10.114  (7.168) | -10.159  (7.135) | -10.104  (7.168) | -10.160  (7.135) |
| Observations | 2550 | 1780 | 2550 | 1780 |
| Countries | 150 | 105 | 150 | 105 |
| Adjusted R-square | 0.961 | 0.880 | 0.961 | 0.880 |
| F Statistic | 124.667 | 70.399 | 124.601 | 70.382 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. **Regulatory Quality**

PPI Index Weighted PPI Index

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
|  | Global  Model | Developing  States  Only | Global Model | Developing  States Only |
| Parliamentary Power Index | 1.739\*\*\*  (0.355) | 1.864\*\*\*  (0.300) | --- | --- |
| WLPS Index | --- | --- | 0.236\*\*\*  (0.049) | 0.258\*\*\*  (0.041) |
| Parliamentary System | 0.541\*\*\*  (0.137) | 0.011  (0.122) | 0.558\*\*\*  (0.137) | 0.021  (0.122) |
| PR system | 0.131  (0.115) | 0.106  (0.092) | 0.138  (0.115) | 0.108  (0.092) |
| Veto Players | 0.555\*  (0.317) | 0.571\*\*  (0.243) | 0.552\*  (0.316) | 0.557\*\*  (0.024) |
| Federalism | 0.098  (0.150) | -0.055  (0.136) | 0.100  (0.150) | -0.055  (0.136) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ |
| Constant | -10.369  (7.161) | -10.576  (7.134) | -10.357  (7.161) | -10.576  (7.134) |
| Observations | 2550 | 1780 | 2550 | 1780 |
| Countries | 150 | 105 | 150 | 105 |
| Adjusted R-square | 0.954 | 0.889 | 0.954 | 0.889 |
| F Statistic | 130.915 | 78.857 | 128.894 | 78.810 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. **Control of Corruption**

PPI Index Weighted PPI Index

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
|  | Global  Model | Developing  States  Only | Global Model | Developing  States Only |
| Parliamentary Power Index | 0.656\*\*  (0.221) | 0.384\*\*  (0.128) | --- | --- |
| WLPS Index | --- | --- | 0.084\*\*  (0.028) | 0.052\*\*  (0.017) |
| Parliamentary System | 0.858\*\*\*  (0.154) | 0.229\*  (0.119) | 0.871\*\*\*  (0.153) | 0.232\*  (0.118) |
| PR system | 0.141  (0.128) | 0.116  (0.089) | 0.149  (0.129) | 0.117  (0.089) |
| Veto Players | 0.181  (0.355) | 0.034  (0.235) | 0.189  (0.353) | 0.036  (0.234) |
| Federalism | 0.210  (0.168) | -0.015  (0.132) | -0.211  (0.168) | -0.015  (0.132) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ |
| Constant | -10.919  (7.179) | -10.905  (7.130) | -10.904  (7.180) | -10.015  (7.130) |
| Observations | 2550 | 1780 | 2550 | 1780 |
| Countries | 150 | 105 | 150 | 105 |
| Adjusted R-square | 0.962 | 0.869 | 0.962 | 0.869 |
| F Statistic | 119.235 | 73.862 | 119.224 | 73.846 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. **Rule of Law**

PPI Index Weighted PPI Index

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
|  | Global  Model | Developing  States  Only | Global Model | Developing  States Only |
| Parliamentary Power Index | 0.977\*\*  (0.378) | 0.768\*\*  (0.302) | --- | --- |
| WLPS Index | --- | --- | 0.127\*\*  (0.052) | 0.104\*\*  (0.041) |
| Parliamentary System | 0.776\*\*\*  (0.146) | 0.193  (0.123) | 0.792\*\*\*  (0.146) | 0.199  (0.123) |
| PR system | 0.035  (0.122) | -0.024  (0.092) | 0.044  (0.122) | -0.021  (0.092) |
| Veto Players | 0.309  (0.338) | 0.155  (0.244) | 0.317  (0.336) | 0.152  (0.243) |
| Federalism | 0.137  (0.160) | -0.042  (0.137) | 0.139  (0.160) | -0.042  (0.137) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ |
| Constant | -10.061  (7.171) | -10.084  (7.135) | -10.044  (7.171) | -10.081  (7.135) |
| Observations | 2550 | 1780 | 2550 | 1780 |
| Countries | 150 | 105 | 150 | 105 |
| Adjusted R-square | 0.967 | 0.890 | 0.967 | 0.890 |
| F Statistic | 125.464 | 78.079 | 125.391 | 77.995 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

Appendix 8

The Effect of Legislative Strength by Regime Type (as operationalized by Polity V)



Democracies are nation-states with an average polity score of +6 to +10

Non-Democracies are nation-state with average polity score of -10 to +5 (includes Anocracies and Autocracies)

Appendix 9

FEVD Models: Panel Fixed Effects Regression with Vector Decompositions by PPI Dimensions

1. Voice and Accountability

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | Global  Model | Global  Model | Global Model | Global  Model | Developing States | Developing States | Developing States | Developing States |
| Influence Over the Executive | 0.100\*\*\*  (0.021) | ---- | --- | --- | 0.742\*\*\*  (0.021) | ---- | --- | --- |
| Degree of Institutional Autonomy | --- | 0.067\*\*\*  (0.020) | --- | --- | --- | 0.050\*\*  (0.020) | --- | --- |
| Specified Powers | --- | --- | 0.059\*\*\*  (0.021) | --- | --- | --- | 0.050\*\*  (0.000) | --- |
| Institutional Capacity | --- | --- | --- | 0.165\*\*\*  (0.007) | --- | --- | --- | 0.131\*\*\*  (0.028) |
| Parliamentary System | 0.224\*\*  (0.111) | 0.504\*\*\*  (0.086) | 0.555\*\*\*  (0.084) | 0.483\*\*\*  (0.081) | 0.013  (0.118) | 0.213\*\*  (0.098) | 0.241\*\*  (0.098) | 0.206\*\*  (0.095) |
| PR system | 0.238\*\*\*  (0.071) | 0.218\*\*\*  (0.076) | 0.218\*\*\*  (0.080) | 0.215\*\*\*  (0.072) | 0.184\*\*  (0.073) | 0.167\*\*  (0.076) | 0.153\*  (0.079) | 0.148\*\*  (0.074) |
| Veto Players | 0802\*\*\*  (0.236) | 0.832\*\*\*  (0.230) | 0.859\*\*\*  (0.236) | 0.693\*\*\*  (0.229) | 0.644\*\*\*  (0.233) | 0.641\*\*\*  (0.222) | 0.650\*\*\*  (0.228) | 0.437\*\*  (0.183) |
| Federalism | 0.131  (0.102) | 0.108  (0.105) | 0.155  (0.105) | 0.147  (0.099) | 0.015  (0.113) | 0.004  (0.116) | 0.040  (0.116) | 0.031  (0.111) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | -12.223  (11.782) | -11.453  (10.223) | -11.122  (10.220) | -15.086  (14.042) | -11.117  (10.681) | -11.099  (10.250) | -10.448  (9.772) | -10.343  (9.181) |
| Observations | 2550 | 2550 | 2550 | 2550 | 1780 | 1780 | 1780 | 1780 |
| Countries | 150 | 150 | 150 | 150 | 105 | 105 | 105 | 105 |
| Adjusted R-square | 0.972 | 0.972 | 0.972 | 0.972 | 0.949 | 0.949 | 0.952 | 0.949 |
| F Statistic | 151.176 | 149.813 | 147.924 | 157.423 | 108.200 | 107.448 | 106.232 | 109.541 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. Governmental Effectiveness

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | Global  Model | Global  Model | Global Model | Global  Model | Developing States | Developing States | Developing States | Developing States |
| Influence Over the Executive | 0.858\*\*\*  (0.032) | ---- | --- | --- | 0.039\*\*  (0.016) | ---- | --- | --- |
| Degree of Institutional Autonomy | --- | 0.032\*\*  (0.010) | --- | --- | --- | 0.006\*\*  (0.002) | --- | --- |
| Specified Powers | --- | --- | 0.024\*\*  (0.010) | --- | --- | --- | 0.055\*  (0.032) | --- |
| Institutional Capacity | --- | --- | --- | 0.209\*\*\*  (0.042) | --- | --- | --- | 0.149\*\*\*  (0.042) |
| Parliamentary System | 0.684\*\*\*  (0.172) | 0.952\*\*\*  (0.131) | 0.999\*\*\*  (0.127) | 0.865\*\*\*  (0.123) | 0.374\*\*  (0.176) | 0.512\*\*\*  (0.146) | 0.528\*\*\*  (0.143) | 0.444\*\*  (0.142) |
| PR system | 0.249\*\*  (0.110) | 0.266\*\*  (0.116) | 0.348\*\*\*  (0.121) | 0.190\*  (0.109) | 0.166  (0.109) | 0.202\*  (0.112) | 0.283\*\*  (0.116) | 0.094  (0.110) |
| Veto Players | 0.581  (0.362) | 0.665\*  (0.349) | 0.790\*\*  (0.356) | 0.367\*\*  (0.346) | 0.262  (0.347) | 0.329  (0.327) | 0.421  (0.332) | 0.103  (0.339) |
| Federalism | 0.259  (0.157) | 0.253  (0.160) | 0.265\*  (0.159) | 0.274\*  (0.151) | 0.520  (0.170) | 0.063  (0.172) | 0.050  (0.169) | 0.061  (0.165) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | -9.886  (8.112) | -9.052  (8.200) | -10.482  (9.107) | -14.432  (14.027) | -7.892  (7.225) | -9.935  (8.042) | -9.214  (7.225) | -10.142  (9.027) |
| Observations | 2550 | 2550 | 2550 | 2550 | 1780 | 1780 | 1780 | 1780 |
| Countries | 150 | 150 | 150 | 150 | 105 | 105 | 105 | 105 |
| Adjusted R-square | 0.961 | 0.961 | 0.961 | 0.961 | 0.922 | 0.922 | 0.922 | 0.922 |
| F Statistic | 125.070 | 124.754 | 125.754 | 128.774 | 114.219 | 114.451 | 115.673 | 115.787 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. Regulatory Quality

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | Global  Model | Global  Model | Global Model | Global  Model | Developing States | Developing States | Developing States | Developing States |
| Influence Over the Executive | 0.101\*\*\*  (0.031) | ---- | --- | --- | 0.054\*  (0.032) | ---- | --- | --- |
| Degree of Institutional Autonomy | --- | 0.067\*\*  (0.030) | --- | --- | --- | 0.033\*\*  (0.014) | --- | --- |
| Specified Powers | --- | --- | 0.046\*\*  (0.019) | --- | --- | --- | 0.030\*\*  (0.013) | --- |
| Institutional Capacity | --- | --- | --- | 0.247\*\*\*  (0.040) | --- | --- | --- | 0.194\*\*\*  (0.043) |
| Parliamentary System | 0.490\*\*\*  (0.167) | 0.774\*\*\*  (0.128) | 0.831\*\*\*  (0.125) | 0.705\*\*\*  (0.118) | 0.261  (0.181) | 0.413\*\*\*  (0.149) | 0.432\*\*\*  (0.148) | 0.363\*\*  (0.142) |
| PR system | 0.287\*\*  (0.107) | 0.268\*\*  (0.113) | 0.287\*\*  (0.118) | 0.217\*\*  (0.104) | 0.237\*\*  (0.111) | 0.231\*\*  (0.115) | 0.225\*  (0.120) | 0.145  (0.111) |
| Veto Players | 0.802\*\*  (0.354) | 0.834\*\*  (0.340) | 0.887\*\*  (0.349) | 0.548\*  (0.332) | 0.537  (0.356) | 0.543  (0.336) | 0.554  (0.344) | 0.334  (0.342) |
| Federalism | 0.110  (0.153) | 0.088  (0.156) | 0.132  (0.156) | 0.128  (0.144) | -0.090  (0.174) | - 0.096  (0.176) | -0.073  (0.175) | -0.078  (0.166) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | -11.065  (10.757) | -11.046  (10.351) | -9.425  (8.711) | -11.592  (10.536) | -8.895  (7.228) | -8.744  (7.613) | -8.342  (7.349) | -10.350  (9.118) |
| Observations | 2550 | 2550 | 2550 | 2550 | 1780 | 1780 | 1780 | 1780 |
| Countries | 150 | 150 | 150 | 150 | 105 | 105 | 105 | 105 |
| Adjusted R-square | 0.954 | 0.954 | 0.954 | 0.954 | 0.914 | 0.914 | 0.914 | 0.914 |
| F Statistic | 129.762 | 129.525 | 129.386 | 135.540 | 118.281 | 118.291 | 118.306 | 110.421 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. Control of Corruption

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | Global  Model | Global  Model | Global Model | Global  Model | Developing States | Developing States | Developing States | Developing States |
| Influence Over the Executive | 0.075\*\*  (0.034) | ---- | --- | --- | 0.027\*  (0.015) | ---- | --- | --- |
| Degree of Institutional Autonomy | --- | 0.022\*\*  (0.009) | --- | --- | --- | 0.016\*  (0.009) | --- | --- |
| Specified Powers | --- | --- | 0.044\*\*  (0.018) | --- | --- | --- | 0.070\*\*  (0.031) | --- |
| Institutional Capacity | --- | --- | --- | 0.143\*\*\*  (0.045) | --- | --- | --- | 0.053\*\*  (0.020) |
| Parliamentary System | 0.708\*\*\*  (0.183) | 0.949\*\*\*  (0.139) | 0.993\*\*\*  (0.134) | 0.890\*\*\*  (0.135) | 0.295\*  (0.173) | 0.401\*\*\*  (0.143) | 0.413\*\*\*  (0.139) | 0.363\*\*  (0.143) |
| PR system | 0.174  (0.117) | 0.196  (0.123) | 0.297\*\*  (0.127) | 0.145  (0.119) | 0.079  (0.107) | 0.120  (0.110) | 0.212\*  (0.113) | 0.062  (0.112) |
| Veto Players | 0.207  (0.385) | 0.292  (0.369) | 0.439  (0.376) | 0.090  (0.379) | -0.125  (0.341) | -0.053  (0.321) | -0.045  (0.324) | -0.164  (0.343) |
| Federalism | 0.210  (0.167) | 0.208  (0.169) | 0.211  (0.168) | 0.223  (0.165) | -0.035  (0.167) | -0.021  (0.168) | -0.043  (0.165) | -0.029  (0.167) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | -8.779  (7.582) | -7.902  (6.019) | -7.482  (6.002) | -11.150  (10.185) | -7.651  (6.130) | -7.551  (6.147) | -7.732  (6.127) | -7.751  (6.169) |
| Observations | 2550 | 2550 | 2550 | 2550 | 1780 | 1780 | 1780 | 1780 |
| Countries | 150 | 150 | 150 | 150 | 105 | 105 | 105 | 105 |
| Adjusted R-square | 0.962 | 0.962 | 0.962 | 0.962 | 0.916 | 0.916 | 0.916 | 0.916 |
| F Statistic | 119.579 | 119.638 | 120.999 | 120.426 | 122.488 | 122.779 | 124.161 | 122.566 |
|  |  |  |  |  |  |  |  |  |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. Rule of Law

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | Global  Model | Global  Model | Global Model | Global  Model | Developing States | Developing States | Developing States | Developing States |
| Influence Over the Executive | 0.096\*\*\*  (0.032) | ---- | --- | --- | 0.047\*\*  (0.230) | ---- | --- | --- |
| Degree of Institutional Autonomy | --- | 0.021\*\*  (0.009) | --- | --- | --- | 0.020\*\*  (0.008) | --- | --- |
| Specified Powers | --- | --- | 0.026\*\*  (0.011) | --- | --- | --- | 0.057\*  (0.031) | --- |
| Institutional Capacity | --- | --- | --- | 0.195\*\*\*  (0.043) | --- | --- | --- | 0.116\*\*\*  (0.042) |
| Parliamentary System | 0.606\*\*\*  (0.174) | 0.925\*\*\*  (0.134) | 0.960\*\*\*  (0.129) | 0.195\*\*\*  (0.043) | 0.215  (0.172) | 0.396\*\*\*  (0.143) | 0.398\*\*\*  (0.140) | 0.327\*\*  (0.141) |
| PR system | 0.094  (0.111) | 0.135  (0.118) | 0.204\*  (0.122) | 0.051  (0.111) | -0.024  (0.106) | 0.036  (0.110) | 0.101  (0.114) | -0.069  (0.109) |
| Veto Players | 0.375  (0.366) | 0.503  (0.354) | 0.607\*  (0.361) | 0.206  (0.355) | 0.076  (0.339) | 0.185  (0.320) | 0.251  (0.325) | 0.024  (0.336) |
| Federalism | 0.139  (0.159) | 0.140  (0.162) | 0.146  (0.162) | 0.155  (0.154) | -0.071  (0.166) | - 0.050  (0.168) | -0.072  (0.166) | -0.060  (0.164) |
| All Controls Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Institutional Interaction Terms Present | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | -9.970  (8.613) | -8.359  (7.639) | -7.353  (6.987) | -11.351  (10.593) | -7.456  (6.344) | -7.145  (6.606) | -7.387  (6.195) | -9.886  (8.245) |
| Observations | 2550 | 2550 | 2550 | 2550 | 1780 | 1780 | 1780 | 1780 |
| Countries | 150 | 150 | 150 | 150 | 105 | 105 | 105 | 105 |
| Adjusted R-square | 0.967 | 0.967 | 0.967 | 0.967 | 0.925 | 0.925 | 0.925 | 0.925 |
| F Statistic | 126.167 | 126.240 | 127.382 | 128.189 | 105.572 | 106.433 | 107.693 | 115.847 |

FEVD coefficients are presented; Standard errors in parentheses; Level of Significance: \*\*\*p<.01; \*\*p<.05; \*p<.10, two-tailed tests.

1. However, FEVD models are criticized by other methodologists for violating exogeneity assumptions and for yielding inaccurate standard errors that become smaller and unreliable over time compared to other estimation techniques (Breusch et. al. 2011). [↑](#footnote-ref-1)
2. For example, Jeong (2016) finds that presidentialism (that emphasizes higher levels of separation of powers) interacts with legislative specialization that induces higher levels of bureaucratic effectiveness; while Stapenhurst et al. (2014) also acknowledge that presidentialism with strong legislatures (that have strong oversight tools at their disposal) are better at curbing perceived levels of state corruption. [↑](#footnote-ref-2)
3. Executive Constraints is a 7-point scale where scores approaching the maximum connote lower levels of executive power in influencing political outcomes. It is defined as: “Operationally, 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 (Polity V:24).” [↑](#footnote-ref-3)
4. Data is derived from: International Telecommunication Union, World Telecommunication/ICT Development Report and Database. Accessed at: <https://data.worldbank.org/indicator/IT.NET.USER.ZS>; which is measured as Individuals Using the Internet; as a % of the population [↑](#footnote-ref-4)
5. Data derived from Golder (2005). [↑](#footnote-ref-5)
6. OLS PCSE and FEVD models were also generated that include the interactive effect between Legislative Strength and the Effective Number of Legislative parties. Its inclusion in the models did not alter the results of the main models presented in the study. It is important to note here that the PPI index and WLPS index are not correlated with the Effective Number of Legislative Parties, yielding a Pearson’s r correlation coefficient score of 0.133 and 0.137, respectively. The relationship is also positive, not negative. [↑](#footnote-ref-6)