

## Web Appendix

This supplementary appendix shows additional analyses and robustness checks that were not included in the main text due to space limitations.

**Appendix A** shows descriptive statistics of variables used in the analysis.

**Appendix B** shows the results of robustness checks. Broadly, the tables and figures of the robustness checks contain the following methodological issues: (1) replication of Roberts (2015) (**Table B-1**), (2) heteroskedasticity within regions (**Table B-2**), (3) time dependence (**Table B-3**), (4) additional controls (**Table B-4**), (5) exclusion of the leaders' tenure variable (**Table B-5**), (6) alternative measures of multi-party competition (**Table B-6**), and (7) re-coding of the executive selection system variable (**Table B-7**).

**Appendix C** presents the results of additional analyses to test the causal mechanisms. Specifically, the tables report the determinants of party personalism (**Table C-1, Figure C-1**) and electoral fraud concern (**Table C-2, Figure C-2**).

**Appendix D** shows a list of electoral authoritarian countries (1946-2012) analyzed in the paper.

**Appendix E** lists data sources for the cross-national statistical analyses. **E1** shows data sources for identifying executive selection systems. **E2** shows data sources for other variables.

**Appendix F** reports (1) estimation results of the first model in the instrumental variables estimations (Models 2- 6 in Table 1, **Table F-1**) and (2) further tests for the validity of the instruments (**Table F-2**).

**Appendix A: Descriptive Statistics of the Cross-National Statistical Analysis**

Variables	Number of Observations	Mean	SD	Min	Max	Data Sources
Democracy (Geddes, Wright, and Frantz)	1,476	0.029	0.168	0	1	Geddes, Wright, and Franz (2014) Authors' Coding based on DPI
Executive Selection System (ESS)	1,471	0.321	0.467	0	1	(2012)
Neighbors' Colonial Legacy	1,356	0.276	0.225	0	1	COW
Neighbor's ESS	1,355	0.324	0.320	0	1	COW and the ESS data
Logged GDP Per capita	1,231	7.67	0.842	5.49	10.24	World Development Indicators
Neighbors' Democracy	1,353	0.329	0.257	0	1	COW and Geddes et al. (2014)
Neighbors' Electoral Autocracy	1,356	0.320	0.229	0	1	COW and Svolic (2012)
Trade Openness	1,354	71.51	52.00	4.53	433.04	World Development Indicators
Logged Oil-Gas Value per capita	1,289	2.02	2.63	0	9.764	Ross (2012)
Leader Tenure	1,146	8.47	7.73	0	37	Archigos version 2.9

Note: For more detail information on the data sources, see Appendix E.

## Appendix B: Robustness Checks

To ensure that these statistical results are robust, we investigate additional issues: (1) replication of Roberts (2015), (2) potential heteroscedasticity within regions, (3) an alternative method to deal with time dependence, (4) inclusion of additional control variables, (5) alternative measures of multi-party competition in electoral autocracies, and (6) recoding the executive selection system variable in light of power relationships between the chief executive and legislature.<sup>i</sup>

Democratization is an authoritarian breakdown form, and thus, whether executive selection systems explain autocratic breakdown in general remains unclear, as has been argued by Roberts.<sup>ii</sup> Using our dataset, which covers a more extensive period (1946–2012) than that of Roberts, we test the relationship between executive selection systems and autocratic breakdown. We include an almost identical set of control variables as Roberts<sup>iii</sup> and use the same estimation method (a random-effects logit model) and then estimate IV models. Consequently, negative associations between Parliament-based systems and authoritarian breakdown do not reach the 10% statistical significance level (Table B-1), suggesting that executive selection systems are more relevant to explain democratic transitions than authoritarian breakdown.

As Eichengreen and Leblang and Levitsky and Way have argued, the likelihood of democratic transition may change depending on geographical proximity to the “West” or the country’s regional location.<sup>iv</sup> This may make measurement errors correlate within each region, possibly inducing an underestimation of standard errors. We adopt robust standard errors clustered by region (Table B-2). The results are not sensitive to region-clustered standard errors.

Instead of employing cubic splines,<sup>v</sup> we use cubic time polynomials (Table B-3).<sup>vi</sup> The alternative method of coping with time dependence of the dependent variable does not alter our conclusion.

We include economic growth and Ethno-Linguistic Fractionalization. The estimation results are not sensitive to these additional controls. Further, Presidential systems have been frequently observed in military dictatorships, and military dictatorships are more likely to break down.<sup>vii</sup> To consider this omitted variables bias issue, we control for authoritarian regime types to check whether these influence our main results. Even after controlling for regime types,<sup>viii</sup> Parliament-based systems still have a statistically significant negative effect on democratic transition (Table B-4).

Although we use the widely cited measures of electoral authoritarian regimes and executive selection systems, both measurements might still include some ambiguous countries that are not considered electorally authoritarian or Parliament-based systems by other data sources. Therefore, we use three different measures of multi-party competition (Skaaning et al.'s LIED, Cheibub et al.'s Lparty, and Przeworski's PIPE).<sup>ix</sup> These sensitivity analyses show that Parliament-based systems are less likely to democratize (Table B-5).

Finally, using the V-Dem dataset, we recode our executive selection system variable to take into account the president's veto power and other power relationships between the executive and legislature. The recoding does not alter our main results (Table B-6).

- **Table B-1:** tests the effect of executive selection systems on autocratic breakdown, based upon Roberts' (2015) model on our dataset. **World Share of Democracy** is the yearly mean of the proportion of democratic countries in the world. **Autocratic regime breakdown** is identified using Geddes et al. (2014). Data sources of the other variables are identical with the main analysis.
- **Table B-2:** These models use region-clustered robust standard errors to deal with possible correlations within regions.
- **Table B-3:** The models employ cubic time polynomials to deal with possible time dependence in binary dependent variable models.
- **Table B-4:** These models include additional relevant control variables.

- **Economic Growth (% of GDP):** Measured by using World Development Indicators.
  - **Ethno-Linguistic Fractionalization (ELF):** Measured by Philip Roeder’s (2009) Ethnolinguistic Fractionalization (ELF) Indices for 1961 and 1985. The higher scores indicate more ethnically diverse countries.
  - **Authoritarian Regime Types (Military, Personalist, and Dominant Party Regimes):** Measured by using Geddes et al. (2014). When introducing the variables, monarchy regimes are used as the reference category.
- **Table B-5:** These models use alternative measures of limited party competition.
    - **Models B5-1:** Uses Skaaning et al.’s (2015) The Lexical Index of Electoral Democracy (LIED) to identify limited multi-party competition in autocracies. In the dataset, if legislative elections in autocracies include opposition parties and thus minimally competitive, then the country is seen as an electoral authoritarian regime.
    - **Models B5-2:** Uses Przeworski’s (2013) Political Institutions and Political Events (PIPE) dataset. We use the OPPOSITION variable to identify if a country “allows at least some political pluralism (Codebook, 15).
    - **Models B5-3:** Uses Cheibub et al. ‘s (2010) LPARTY variable, which identifies whether a country has legislature with multiple parties.
  - **Table B-6:** Removes the leader tenure variable from the list of independent variables.
  - **Table B-7:** These models use re-coded measures of the executive selection system variable.
    - **Model B7-1:** Use V-Dem variables on the president’s power of dissolving parliament and the parliament’s power of removing the president. Specifically, we use the following two variables. If a country with presidential system takes the value of either 2 or 3 in the first question and also takes the value of 3 in the second question, the country is re-coded as Parliament-based. If a Parliament-based system country takes the value of either 0 or 1, then the country is re-coded as presidential.

**1. Removal of the head of state/government by legislature in practice (v2exremhog/v2exremsp)**

**Question-** *If the legislature, or either chamber of the legislature, took actions to remove the head of government/state from office, would it be likely to succeed even without having to level accusations of unlawful activity and without the involvement of any other agency?*

**Clarification-** *The question refers to whether the legislature (or either of its chambers) is considered to hold this power of removal in practice, regardless of whether this is regulated by law and whether this power has been exercised or not. Moreover, the question refers to removal other than through an impeachment process.*

**Responses-** *0: No, under no circumstances.<sup>[SEP]</sup>1: No, unlikely, but there is a chance it would happen. 2: Yes, probably, but there is a chance it would fail.<sup>[SEP]</sup>3: Yes, most likely.*

## 2. Dissolution of legislature by the head of state/government in practice (v2exdfdshs/ v2exdfdshog)

**Question-** *If the head of state/government took actions to dissolve the legislature, would he/she be likely to succeed?*

**Clarification-** *The question refers to whether the head of state is considered to hold this power in practice, regardless of whether this is regulated by law and whether this power has been exercised or not. By “dissolving the legislature” we refer to the ability of the head of state to call a new election for the legislature.*

### **Responses:**

0: No.<sup>[SEP]</sup>1: Yes, but not at his/her own discretion, only when prompted to as a response to specific events (for example, after a certain number of votes of no confidence, or after a certain number of failed attempts to form a cabinet).<sup>[SEP]</sup>2: Yes, at his/her own discretion, but with restrictions (for example, by frequency, such as "once a year", by time point within term, such as "not within the last sixth months of the head of state's term", and by the requirement that the head of state must then himself/herself stand for election).<sup>[SEP]</sup>3: Yes, at his/her own discretion and without restrictions.

- **Model B7-2:** Use V-Dem variables on the president's veto power. Under presidential systems, if the president does not hold the veto power, then it should be recoded as powerless president and therefore it may be hard to define the country as a presidential country. To take into account veto power of presidents, we used the following question from the V-Dem:

## 3. The head of state/government's power of veto (v2exdfvths, v2exdfvhg)

**Question-** *If the head of state took actions to veto a piece of legislation, would he/she be likely to succeed?*

**Clarification-** *By "veto", we mean either a partial veto (concerning any parts of a bill) or package vetoes (concerning whole bills) of bills that have already been passed by the legislature. The question refers to whether the head of state is considered to hold this power in practice, regardless of whether this is regulated by law and whether this power has been exercised or not.*

**Responses-** 0: No.<sup>[SEP]</sup>1: Yes, but the legislature can override the veto by a simple majority vote (a vote of more than half of those voting).<sup>[SEP]</sup>2: Yes, but the legislature can override the veto by an absolute majority vote (a vote of more than half of the members of the legislature).<sup>[SEP]</sup>3: Yes, but the legislature can override the veto by a qualified/extraordinary majority vote (a super-majority e.g., 2/3 or 3/4 of those voting). 4: Yes, with no possibility of override.

**Table B-1: Executive Selection Systems and Authoritarian Breakdown (Based on Roberts [2015])**

Estimation Method	Model B1-1 RE Logit	Model B1-2 IV Probit
Parliament-based System	-0.392 (0.481)	-0.477 (0.433)
Logged GDP per capita	-0.253 (0.249)	-0.0823 (0.128)
Growth	-0.0868*** (0.0219)	-0.0393*** (0.0147)
World Democracy	-2.653 (1.852)	-1.416* (0.839)
Logged Oil per capita	-0.129 (0.0868)	-0.0642* (0.0369)
Neighboring Democracy	1.423 (0.915)	0.453 (0.477)
Neighboring Electoral Autocracy	0.647 (1.023)	0.0700 (0.537)
Constant	-0.11 (2.05)	-0.192 (1.019)
Time Polynomials	Yes	Yes
Number of Observations	1,036	1,036
Number of Countries	74	74
Log Likelihood	-164.05	-441.37

Note: Standard errors in parentheses. For the logit model, we use random-effects logit models with time polynomials, following Roberts (2015). For the IV models, we use neighbors' colonial legacies and neighbors' executive selection systems as instruments. In the IV model, we also control for neighbors' proportions of democracy and electoral autocracy to ensure the exclusion restrictions of the instruments, following our main analysis.

**Table B-2: Region-Clustered Robust Standard Errors**

Estimation Method	Model B2-1 IV Probit
Parliament-based System	-1.923*** (0.255)
Logged GDP per capita	0.264** (0.111)
Neighboring Democracy	-0.980* (0.569)
Neighboring Electoral Autocracy	-1.520*** (0.303)
Trade Openness	0.000807 (0.00151)
Logged Oil per capita	-0.0576** (0.0294)
Leader Tenure	-0.0131*** (0.00504)
Constant	-1.856*** (0.546)
Number of Observations	999
Number of Countries	79
Log Likelihood	-345.99

Note: Country-clustered robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year.



**Table B-3: Time Dependence**

Estimation Method	Model B3-1 IV Probit
Parliament-based System	-1.886*** (0.432)
Logged GDP per capita	0.255 (0.172)
Neighboring Democracy	-1.181 (0.807)
Neighboring Electoral Autocracy	-1.480*** (0.524)
Trade Openness	4.67e-05 (0.00193)
Logged Oil per capita	-0.0543 (0.0535)
Leader Tenure	-0.0139 (0.0122)
Constant	-4.63 (1.66)
Number of Observations	999
Number of Countries	79
Log Likelihood	-381.75

Note: Country-clustered robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year.

**Table B-4: Additional Controls**

Method	Model B4-1 IV Probit	Model B4-2 IV Probit	Model B4-3 IV Probit	Model B4-4 IV Probit
Parliament-based System	-2.077*** (0.405)	-1.829*** (0.331)	-2.087*** (0.253)	-1.524** (0.628)
Logged GDP per capita	0.218 (0.170)	0.220 (0.174)	-0.162 (0.213)	0.0677 (0.142)
Neighboring Democracy	-1.074 (0.657)	-0.856 (0.603)	-0.846 (0.535)	-0.321 (0.623)
Neighboring Electoral Autocracy	-1.743*** (0.476)	-1.593*** (0.447)	-1.540*** (0.393)	-1.334** (0.552)
Trade Openness	0.000843 (0.00196)	0.000818 (0.00190)	0.00457 (0.00280)	0.000632 (0.00203)
Logged Oil per capita	-0.0438 (0.0511)	-0.0630 (0.0564)	0.00369 (0.0529)	-0.0441 (0.0555)
Leader Tenure	-0.0186 (0.0137)	-0.00861 (0.0126)	0.0238 (0.0155)	-0.0112 (0.0126)
Growth	-0.00247 (0.0181)			
ELF		0.464 (0.546)		
Party-Based Regime			-0.772*** (0.296)	
Personalist Regime			-1.438*** (0.344)	
EA Duration				0.00131 (0.00918)
Constant	-1.489 (1.008)	-1.58 (1.08)	1.532 (1.43)	-0.624 (1.02)
Number of Observations	931	999	974	966
Number of Countries	76	79	76	78
Log Likelihood	-334.58	-378.72	-342.05	-381.85

Note: Country-clustered robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year.

**Table B-5: Removing the Leader Tenure Variable**

Estimation Method	Model B5-1
Sample	IV-Probit EA
Parliament-based System	-1.678*** (0.363)
Logged GDP per capita	0.199 (0.144)
Neighboring Democracy	-1.171 (0.745)
Neighboring Electoral Autocracy	-1.707*** (0.511)
Trade Openness	2.11e-05 (0.00177)
Logged Oil per capita	-0.0601 (0.0468)
Constant	-1.475 (0.940)
Number of Observations	1,159
Number of Countries	81
Log Likelihood	-420.43

**Table B-6: Alternative Measures of Multi-Party Competition**

Estimation Method Data	Model B6-1	Model B6-2	Model B6-3
	IV-Probit LIED	IV-Probit PIPE	IV-Probit LPARTY
Parliament-based System	-1.152* (0.590)	-1.395*** (0.353)	-1.562*** (0.287)
Logged GDP per capita	0.283 (0.232)	0.423** (0.183)	0.160 (0.158)
Neighboring Democracy	-0.481 (0.587)	-0.798 (0.542)	-0.696* (0.382)
Neighboring Electoral Autocracy	-1.036** (0.513)	-0.944** (0.439)	-1.022 (0.631)
Trade Openness	-0.00337 (0.00221)	-0.00374 (0.00228)	0.000756 (0.00221)
Logged Oil per capita	-0.0179 (0.0480)	-0.0247 (0.0479)	-0.0926 (0.0620)
Leader Tenure	-0.0258** (0.0106)	-0.0226** (0.0107)	-7.56e-05 (0.0135)
Constant	-3.16 (1.17)	-3.84 (1.1)	-1.6 (1.31)
Number of Observations	1,227	1,050	866
Number of Countries	99	100	71
Log Likelihood	-655.57	-585.51	-268.24

Note: Country-clustered robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year.

**Table B-7: Recoding of the Executive Selection Systems Variable**

Estimation Method	Model B7-1 IV Probit	Model B7-2 IV Probit
Parliament-based System	-1.452*** (0.391)	-1.742*** (0.540)
Logged GDP per capita	0.126 (0.151)	0.238 (0.186)
Neighboring Democracy	-0.584 (0.648)	-0.468 (0.846)
Neighboring Electoral Autocracy	-1.359*** (0.455)	-1.088* (0.632)
Trade Openness	0.00102 (0.00201)	0.00133 (0.00235)
Logged Oil per capita	-0.0522 (0.0559)	-0.0562 (0.0520)
Leader Tenure	-0.0118 (0.0126)	-0.0143 (0.0139)
Constant	-1.368 (1.018)	-2.386** (1.070)
Number of Observations	992	992
Number of Countries	78	78
Log Likelihood	-383.22	-323.94

Note: Country-clustered robust standard errors in parentheses. Model B6-1 re-codes the executive selection system variable based on V-Dem variables on the president's power of dissolving the legislature and legislature's power of removing the president. Model B6-2 recodes by focusing on the veto power that the president holds. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year.

## Appendix C: Additional Data Analyses for the Causal Mechanisms

- **Table C-1:** Shows the results of determinants of the degree of party personalism. All the three models employ Preis-Winsten regressions with panel corrected standard errors. The dependent variable, **Party personalism**, is continuous taken from Geddes et al. (2018), while the main independent variable is the executive selection system. We expect that the Parliament-based systems are negatively correlated with party personalism.
  - In the first model, we estimate the model with control variables that may affect party personalism.
  - In the second model, we use instrumental variables estimation in which the executive selection system variable is instrumented by neighbors' colonial origins and neighbors' executive selection systems.
  
- **Table C-2:** Shows the results of determinants of blatant electoral fraud in electoral authoritarian regimes. Using a country-election year dataset, all the three models employ probit regression. The dependent variable, **Electoral Fraud Concern**, is binary taken from Hyde and Marinov's (2012) NELDA 11. NELDA 11 provides a dichotomous assessment of whether there are significant concerns that elections will not be free and fair before elections. Based on previous work on electoral manipulation, we introduce the following control variables.
  - **Logged GDP per capita (one year lagged):** Measured by using World Development Indicators.
  - **Economic Growth (% of GDP, one year lagged):** Measured by using World Development Indicators.
  - **Freedom House Index (3 year moving average lagged by one year):** Higher value indicates less repressive countries. According to Hafner-Burton et al. (2014), extent of political repression in non-election years affects electoral fairness.
  - **Election Administrative Capacity:** Measured by Kelley's (2012) Quality of Elections (QOE) Dataset. Independent, professional electoral management bodies improve the quality of elections (Hartlyn, McCoy, and Mustillo. 2008). Higher values indicate better election administrative capacity.
  - **Leader's Tenure Length (one year lagged):** Measured by using Goemans et al. (2009) Archigos 2.9.
  - **Rural Population (% of total population, one year lagged):** Measured by World Development Indicators. In rural societies authoritarian governments find it easier to engage in electoral fraud (Burch 2011, 62).
  - **Domestic Election Monitoring:** Measured by using Kelley's (2012) QOE. Domestic Election Monitoring is effective to lower the level of fraud (Ichino and Schuendeln 2012).

We use Kelley's (2012) dummy variable identifying whether domestic election monitoring exists in a given election.

- **International Election Monitoring:** Measured by using Kelley's (2012) QOE. The presence of international election monitoring tends to improve election fairness (Hyde 2007; Kelley 2012). We use Kelley's (2012) dummy variable identifying whether international election monitoring exists in a given election.
- **Foreign Aid (% of GDP, one year lagged):** Measured by Ahmed (2012). The more dependent a country is on foreign aid, the more likely it may be to hold less fraudulent elections due to their concerns of international reputation.
- **Authoritarian Regimes Types (Party, Military, and Personalist, one year lagged):** Measured by Geddes et al. (2014). Military dictators are more likely to step down and thus may allow fair and free elections (Geddes 1999).

**Table C-1: Determinants of Party Personalism**

	Model C1-2	Model C1-3
Estimation Method	PCSEs	IV-GMM
Sample	EA	EA
Parliament-based System	-0.0795*** (0.0274)	-0.509** [0.212]
Lagged Party Personalism		0.598*** [0.0700]
Logged GDP per capita	-0.0858** (0.0396)	0.156* [0.0838]
Neighboring Democracy	0.0594 (0.0522)	0.0357 [0.0414]
Neighboring Electoral Autocracy	0.0447 (0.0435)	-0.0395 [0.0363]
Trade Openness	-0.000419 (0.000294)	-0.000675** [0.000331]
Logged Oil per capita	0.000244 (0.00614)	-0.000905 [0.00820]
Leader Tenure	-0.000556 (0.00145)	-0.00631*** [0.00239]
Region Fixed Effects	Yes	Yes
Half-Decade Fixed Effects	Yes	Yes
Number of Observations	944	943
Number of Countries	75	75

Note: Figure 2a is drawn based on Model C1-2. Panel corrected standard errors in parentheses and Driscoll-Kraay standard errors (DKSE) in brackets. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year. Model C1-3 estimate an IV-GMM model by using neighbors' colonial legacy and neighbors' executive selection systems as instruments for the executive selection system dummy.



**Table C-2: Determinants of Electoral Fraud Concern in Electoral Autocracies**

	Model C2-1	Model C2-2
Estimation Method	Probit	Probit
Legislative Elections in Parliamentarism	-0.568** (0.253)	-0.751** (0.310)
Other Elections <sup>^</sup>	-0.0334 (0.082)	-0.049 (0.098)
Logged GDP per capita		0.0177 (0.310)
Growth		-0.0138 (0.015)
Freedom House Index (3 years MA)		-0.181*** (0.052)
Administrative Capacity		-0.247** (0.105)
Leader Tenure		0.020 (0.012)
Rural Population		0.00703 (0.011)
Domestic Election Monitoring		-0.065 (0.215)
International Election Monitoring		0.0296 (0.196)
Foreign Aid (% of GDP)		-0.0241 (0.016)
Party Regimes		0.218 (0.274)
Military Regimes		-0.0198 (0.331)
Constant	0.308** (0.124)	1.982 (2.964)
Number of Observations	368	323
Number of Countries	83	74
Log Likelihood	-245.82	-183.42

Note: Figure 2b is drawn based on Model C2-2. <sup>^</sup>“Other Elections” include both “legislative elections in presidentialism” and “presidential elections in parliamentarism.” The reference category of the election variables is “presidential elections in presidentialism.” Robust standard errors clustered by country in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level.

## Appendix D: List of Non-Monarchy Electoral Authoritarian Regimes (1946-2012)

Country Name	Time Period	Country Name	Time Period
Afghanistan	2006-2012 (Pres)	Kenya	1964-1968 (Par), 1993-2002 (Pres)
Albania	1991 (Par)	Kyrgyzstan	1995-2012 (Pres)
Algeria	1996-2012 (Pres)	Laos	1960 (Pres)
Angola	1993-2012 (Pres)	Liberia	1954-1958 (Pres), 1985-1989 (Pres), 1996-2002 (Pres)
Argentina	1946 (Pres), 1952-1955 (Pres), 1959-1962 (Pres), 1964-1966 (Pres)	Madagascar	1962-1965 (Pres)
Armenia	1995-2012 (Pres)	Malaysia	1958-1968 (Par), 1971-2012 (Par)
Azerbaijan	1992 (Pres), 1994-2012 (Pres)	Mauritania	1991-2004 (Pres), 2006-2007 (Pres), 2011-2012 (Pres)
Bangladesh	1972-1974 (Par), 1978-1982 (Pres), 1988-1990 (Pres)	Mexico	1946-2000 (Pres)
Belarus	1992-2012 (Pres)	Mongolia	1991-1993 (Pres)
Benin	1961-1963 (Pres), 1970-1971 (Pres)	Mozambique	1995-2012 (Pres)
Bolivia	1956-1963 (Pres), 1966-68 (Pres)	Namibia	1991-1994 (Par), 1995-2012 (Pres)
Botswana	1967-2012 (Par)	Nicaragua	1950-1971 (Pres), 1974-1978 (Pres)
Brazil	1965-1979 (Par)	Niger	1997-1998 (Pres)
Burkina Faso	1998-2012 (Pres)	Pakistan	1985-1987 (Pres)
Burundi	1997-1999 (Pres), 2003 (Pres)	Panama	1951-1952 (Pres), 1954-1955 (Pres), 1985-1989 (Pres)
Cambodia	1972-1974 (Par), 1994-2012 (Par)	Paraguay	1975-1988 (Pres)
Cameroon	1961-1963 (Pres), 1993-2012 (Pres)	Peru	1993-2000 (Pres)
Central African Republic	1981 (Pres), 2006-2012 (Pres)	Philippines	1981-1986 (Pres)
Chad	1962 (Par), 1997-2012 (Pres)	Poland	1946-1951 (Par)
Colombia	1950-1952 (Pres)	Portugal	1946-1958 (Pres)
Comoros	1990 (Pres), 1996-1998 (Pres)	Russia	1994-2012 (Pres)
Congo Brazzaville	1961-1963 (Pres), 2003-2012 (Pres)	Rwanda	1963-1965 (Pres), 2003-2012 (Pres)
Congo Kinshasa	1961-1964 (Pres), 2006-2012 (Pres)	Senegal	1979-2000 (Pres)
Cuba	1955-1958 (Pres)	Serbia	1992-2000 (Pres)
Cyprus	1960-1962 (Pres), 1968-1972 (Pres)	Sierra Leone	1968-1970 (Par)
Djibouti	1994-2004 (Pres)	Singapore	1966-2012 (Par)
East Germany	1950-1953 (Pres)	South Africa	1946-1993 (Par)
Ecuador	1966-1967 (Pres)	South Korea	1963-1971 (Pres), 1973-1980 (Par), 1982-1987 (Par)
Egypt	1976-2005 (Par), 2006-2010 (Pres)	Sri Lanka	1979-1981 (Par), 1983-1989 (Pres)
El Salvador	1950-1960 (Pres), 1962-1978 (Pres), 1990-1994 (Pres)	Sudan	2000-2008 (Pres)
Equatorial Guinea	1968-1969 (Pres), 2003-2010 (Pres)	Syria	1954 (Pres)
Ethiopia	1996-2012 (Par)	Taiwan	1993-1994 (Par), 1995-2000 (Pres)
Fiji	1970-1987 (Par), 2001-2005 (Par)	Tajikistan	1995-2012 (Pres)
Gabon	1994-2012 (Pres)	Tanzania	1965-1976 (Pres), 1995-2012 (Pres)
Gambia	1966-1982 (Par), 1982-1993 (Pres), 1996-2012 (Pres)	Thailand	1955-1957 (Par), 1968-1972 (Par), 1975 (Par), 1980-1988 (Par)
Georgia	1992-2004 (Pres)	Togo	1993 (Par), 1994-2012 (Pres)
Ghana	1961-1963 (Pres), 1993-2000 (Pres)	Tunisia	1993 (Par), 1994-2012 (Pres)
Guinea-Bissau	1995-1998 (Pres)	Turkey	1958-1959 (Par), 1961 (Par)
Guatemala	1958-1962 (Pres), 1967-1981 (Pres), 1987-1995 (Pres)	Turkmenistan	2006-2012 (Pres)
Guinea	1993-2008 (Pres)	Uganda	1967-1968 (Par), 1997-2012 (Pres)
Guyana	1966-2010 (Par)	Uruguay	1974-1975 (Pres)
Haiti	1951-1956 (Pres), 2000-2006 (Pres)	Uzbekistan	1992-2012 (Pres)
Honduras	1965-1971 (Pres), 1973-1974 (Pres)	Venezuela	1953-1958 (Pres), 2006-2012 (Pres)
Indonesia	1955 (Par), 1957-1959 (Par), 1966-1998 (Par)	Yemen	2000-2012 (Pres)
Iran	2009-2012 (Pres)	Zambia	1968 (Pres), 1997-2010 (Pres)
Ivory Coast	1990-1992 (Pres), 1994-2012 (Pres)	Zimbabwe	1981-1990 (Par), 1991-2012 (Pres)
Kazakhstan	1992-2012 (Pres)		

Note: “Pres” – Presidential systems, “Par” – Parliament-based systems. Electoral authoritarian regimes are identified based on Svoboda’s (2012) dataset. The distinction between democracy and autocracy is made by using Geddes et al. (2014). Between 2010 and 2012, we use Roberts’ (2015) data.

## Appendix E: Data Sources of the Cross-National Statistical Analysis

### E1: Data Sources for Identifying Executive Selection Systems

Banks, Arthur and Thomas Muller eds. *Political Handbook of the World* (1993-2008, various volumes). CSA Publications.

Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. 2001. "[New tools in comparative political economy: The Database of Political Institutions](#)." *World Bank Economic Review* 15-1: 165-176.

Inter-Parliamentary Union. <http://www.ipu.org/parline-e/parlinesearch.asp>

Nohlen, Dieter, Michael Krennerich, and Bernard Thibaut eds. 1999. *Elections in Africa: A Data Handbook*. Oxford University Press.

Nohlen, Dieter, Florian Grotz, and Christof Hartmann eds. 2001a. *Elections in Asia and the Pacific: A Data Handbook, Volume I: The Middle East, Central Asia and South Asia*. Oxford University Press.

Nohlen, Dieter, Florian Grotz, and Christof Hartmann eds. 2001b. *Elections in Asia and the Pacific: A Data Handbook, Volume II: South East Asia, East Asia and the South Pacific*. Oxford University Press.

Nohlen, Dieter ed. 2005a. *Elections in the Americas, Volume I: North America, Central America, and the Caribbean*. Oxford University Press.

Nohlen, Dieter ed. 2005b. *Elections in the Americas, Volume II: South America*. Oxford University Press.

Nohlen, Dieter and Philip Stoeber eds. 2010. *Elections in Europe: A Data Handbook*. Nomos.

### E2: Data Sources for Other Variables

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

Cheibub, J. A., Gandhi, J., & Vreeland, J. R. 2010. Democracy and dictatorship revisited. *Public Choice*, 143(1-2), 67-101.

The Correlates of War Project. State System Membership Dataset.

<http://www.correlatesofwar.org/COW2%20Data/SystemMembership/2011/System2011.html>

Geddes, B., Wright, J., & Frantz, E. 2014. Autocratic regimes and transitions. *Perspectives on Politics*, 12(2), 313-331.

Gleditsch, Kristian S., and Michael D. Ward. 2001. "Measuring Space: A Minimum Distance Database." *Journal of Peace Research* 38:749-68

- Goemans, Hein, Kristian Skrede Gleditsch, Giacomo Chiozza. 2009. "Introducing Archigos: A Data Set of Political Leaders." *Journal of Peace Research* 46-2: 269-283. Archigos version 2.9. <http://www.rochester.edu/college/faculty/hgoemans/data.htm>
- Paul R. Hensel. 2014. "ICOW Colonial History Data Set, version 1.0." Available at <<http://www.paulhensel.org/icowcol.html>>.
- Heston, Alan, Robert Summers and Bettina Aten. 2012. *Penn World Table Version 7.1*, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania.
- Przeworski, A. (2013). Political institutions and political events dataset. Department of Politics, New York University.
- Roeder, Philip. 2001. Ethno-Linguistic Fractionalization Indices for 1961 and 1985. <http://pages.ucsd.edu/~proeder/data.htm>
- Skaaning, S. E., Gerring J., & Bartusevičius, H. "A Lexical index of electoral democracy." 48 (12), 1-35.
- World Bank. *World Development Indicators*. <http://data.worldbank.org/data-catalog/world-development-indicators>

**Appendix F: Instrumental Variables Estimations****Table F-1: First-Stage Models of the Instrumental Variables Estimations**

	First Stage (Model 4)	First Stage (Model 5)
Neighbors' colony	2.73*** (0.78)	0.483*** (0.053)
Neighbors' executive selection system (ESS)	0.264 (0.653)	0.071 (0.113)
Logged GDP per capita	1.038*** (0.274)	0.154*** (0.0342)
Neighboring Democracy	-3.079*** (0.731)	-0.423*** (0.105)
Neighboring Electoral Autocracy	-1.014 (0.669)	-0.337*** (0.0633)
Trade Openness	0.0017 (0.0035)	0.0007*** (0.0002)
Logged Oil per capita	0.022 (0.073)	0.0045 (0.0045)
Leader Tenure	-0.022 (0.073)	-0.004*** (0.0014)
Number of Observations	999	999
Number of Countries	79	79
Hansen's J Statistic (p-value)	NA	0.7267
F Test of Excluded Instruments	NA	42.18***

Note: Robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level.

**Table F-2: Including Aid and the British Colony as Controls**

Estimation Method	Model F2-1 IV Probit	Model F2-2 IV Probit
Executive Selection System	-1.944*** (0.489)	-1.869*** (0.397)
Logged GDP per capita	0.234 (0.213)	0.0224 (0.179)
Neighboring Democracy	-0.857 (0.690)	-0.823 (0.754)
Neighboring Electoral Autocracy	-1.335*** (0.419)	-1.840*** (0.533)
Trade Openness	-0.000144 (0.00188)	0.00333* (0.00185)
Logged Oil per capita	-0.0549 (0.0505)	0.00965 (0.0529)
Leader Tenure	-0.00283 (0.0119)	-0.00907 (0.0159)
Former British Colony	0.207 (0.353)	
Foreign Aid		0.00725 (0.0143)
Constant	-1.785 (1.366)	-2.307 (1.314)
Number of Observations	999	852
Number of Countries	79	72
Log Likelihood	-355.35	-321.44
Weak Identification (F Test)	21.61***	33.75***
Hansen's J Statistic (p-value)	0.571	0.6848

Note: Country-clustered robust standard errors in parentheses. \*\*\* denotes significance at the 0.01 level; \*\* denotes significance at the 0.05 level; \* denotes significance at the 0.1 level. All variables included are lagged by one year. ^Including foreign aid with year/half-decade fixed effects does not allow to converge the models. Therefore, we do not include half-decade dummies in the Models. The weak identification test and Hansen's J statistic are computed through IV-GMM regression.

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- Hafner-Burton, E. M., Hyde, S. D., & Jablonski, R. S. (2014). When do governments resort to election violence? *British Journal of Political Science*, 44(1), 149-179.
- Hartlyn, Johathan, Jennifer McCoy, and Thomas Mustillo. (2008). “Electoral Governance Matters: Explaining the Quality of Elections in Contemporary Latin America.” *Comparative Political Studies* 41: 73-98.
- Hyde, Susan. (2007). “The Observer Effect in International Politics: Evidence from a Natural Experiment.” *World Politics* 60: 37-63.

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<sup>i</sup> Our robustness tests use Model 4 in Table 1 as the baseline.

<sup>ii</sup> Roberts, “The Durability of Presidential and Parliament-based Dictatorships”

<sup>iii</sup> Different from Roberts (2015), only foreign aid per capita could not be summed up with natural resource wealth per capita to measure unearned incomes because the foreign aid variable did not cover the period before the 1970s.

<sup>iv</sup> Eichengreen and Leblang, “Democracy and Globalization”; Levitsky and Way, *Competitive Authoritarianism*.

<sup>v</sup> Beck et al., “Taking Time Seriously.”

<sup>vi</sup> Carter and Signorino, “Back to the Future.”

<sup>vii</sup> Geddes, “What Do We Know about Democratization.”

<sup>viii</sup> The reference category is personalist regimes.

<sup>ix</sup> Skaaning et al, “A Lexical Index”; Cheibub et al., “Democracy and Dictatorship”; Przeworski, “Political Institutions.”