Online Appendix for "The Strategic Origins of Electoral Authoritarianism"

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The following pages display additional information and robustness checks referenced in the text. For convenience, I list a summary of these checks:

- **Table A1** lists summary statistics for the sample of closed autocracies not experiencing state collapse.

- **Table A2** displays robustness checks from varying the definition of EA transition. All variables in Model 1 of Table 2 are included, but only select variables are shown. Model 1 recodes democratizations that may have been intended EA transitions. Model 2 recodes EA regimes to require a legislative election in the last five years. Model 3 requires transitions to retain the new regime type for five years. Model 4 recodes EA regimes to require opposition parties outside of the regime party front.

- **Table A3** extends the same robustness checks for variables included in Table 3. Horizontal lines divide the different multinomial logits.

- **Table A4** displays two further robustness checks, with the main variables of interest shown. Horizontal lines divide the different multinomial logits. Model 1 includes cases of state failure in the sample. Model 2 lags each displayed variable by five years.

- **Table A5** shows the main models after including a control for post-Cold War in Model 1. With the exception of non-significance for *Democratic IGOs* and weaker results for *Regional EA*, all results hold. Thus, the Cold War period does not act as a confounder for the main variables.

Model 2 compares the effects of several variables during and post-Cold War. For each variable shown, the variable and its interaction with a post-Cold War dummy are added to

Model 1 of Table 2. Thus, the base term measures the variable's effect during the Cold War (1946–89) and the interaction captures the difference in effects between periods. Each interaction is tested independently, with the exception of *Regional EA* and *Regional Democracy*, which are tested together. For the other democracy leverage variables, the corresponding EA measure is included, but not shown.

The results show interesting variation across periods. The negative effect of *GDP/capita* is stronger post-Cold War, whereas the positive effect of *Urbanization* is only during the Cold War. No significant difference across periods is seen for democratic leverage from trade dependence or foreign aid, but the effects of democratic allies and IGOs are stronger during the Cold War. The positive effect of *Foreign Aid* is primarily post-Cold War.

- **Table A6** compares the effects of the main variables of interest based on the age of the regime. I stratify the sample based on whether Geddes et al. (2014) rates the regime as older or younger than 10 years. The younger regimes include both newly independent regimes and those with a recent major regime change. (Since this strongly overlaps with leader change, the three leader change variables are removed.) It may be that the decision-making process for leaders adopting elections differs based on regime duration. The results are mixed, but generally do not show major differences across samples. An interesting exception is for regional regime types, which strongly predict election adoption for young regimes only. The negative effect of income is also stronger for older regimes. For the international dependence variables and foreign aid, however, results are virtually identical by sample.

- **Figure A1** displays cross-validation results, summarizing the out-of-sample predictive power of several models for EA transition (top) and democratization (bottom). Multinomial logits are run on randomly selected subsamples equal to 90% of the sample, then the predictions are compared to the transition values in the remaining 10% of the sample. This is repeated 2,000 times. For each run, predictive accuracy is calculated using the ordinal association statistic Somers' D, following Hill and Jones (2014).[1]

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[1] Hill Jr., Daniel W., and Zachary M. Jones. 2014. An empirical evaluation of explanations for state repression. *American Political Science Review* 108(3): 661-87.

The mean values are plotted for several models, with 95% confidence intervals. The top model is a base model with only duration, previous regime types, recent leader changes, ELF, economic growth, population, and year. The next six models shown add one or two variables to this base model: *Urbanization*, logged *GDP/capita*, *Regional EA* and *Regional Democracy*, *IGO Memberships*, *Democratic Trade Dependence* and *EA Trade Dependence*, and *Democratic IGOs* and *EA IGOs*. The final model includes all of these variables. The sample was chosen to omit any missing data for these variables, so the sample is identical across models.

For EA transition, all variables but *Urbanization* add to the out-of-sample predictive power. The strongest contributions are from the trade and IGO dependence variables. As seen, the full set of variables add considerably to predictive power. Results are less clear for democratization. Here, only IGO dependence and memberships and regional regime types clearly add predictive power.

Table A1: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Regional EA	0.294	0.168	0	1	2,615
Regional Democracy	0.205	0.204	0	1	2,615
GDP/capita (ln)	7.818	1.189	5.234	11.854	2,579
Economic Growth	1.536	7.19	−63.944	107.534	2,544
Recent Coup	0.214	0.41	0	1	2,614
Recent Irregular Turnover from Below	0.064	0.244	0	1	2,614
Recent Regular Turnover	0.209	0.407	0	1	2,614
Urbanization	17.586	17.06	0	97.501	2,527
ELF	0.491	0.278	0.003	0.922	2,513
Population (ln)	8.661	1.484	4.824	13.691	2,581
Prior EA Spells	0.689	0.876	0	5	2,615
Prior Democratic Spells	0.348	0.711	0	4	2,615
Resource Dependence	8.767	15.959	0	100	2,408
Economic Inequality	43.496	7.967	18.649	65.823	1,375
Democratic Trade Dependence	0.727	0.184	0	1	2,479
EA Trade Dependence	0.124	0.121	0	1	2,479
Democratic Allies	0.182	0.28	0	1	1,585
EA Allies	0.262	0.234	0	1	1,585
Democratic IGOs	0.348	0.08	0	0.541	2,377
EA IGOs	0.221	0.046	0.087	0.455	2,377
IGO Memberships	35.508	15.845	0	83	2,364
Democratic Foreign Aid	0.861	0.264	0	1	1,660
Foreign Aid (% of GDP)	5.794	9.450	−0.003	76.198	2,186
Party Founded by Ruler	0.159	0.366	0	1	2,212
Party Prior to Ruler	0.498	0.5	0	1	2,212
Legislature	0.699	0.459	0	1	2,442
Year	1977.883	14.812	1946	2010	2,615

Notes: The table shows summary statistics for the sample of closed autocracies, which are defined as autocracies without legal multiparty competition for the legislature. Cases of state failure are excluded.

Table A2: Robustness Checks Predicting Transitions to EA and Democracy

	(1) Failed EA Transitions Included		(2) EA Recoding (Recent Election)		(3) Durable Transitions		(4) Parties Outside Regime Front	
	EA	Democracy	EA	Democracy	EA	Democracy	EA	Democracy
Regional EA	2.490***	0.150	2.126**	1.867	3.025***	2.256*	2.761***	1.301
	(3.73)	(0.16)	(2.63)	(1.92)	(3.86)	(2.41)	(3.94)	(1.63)
Regional Democracy	1.444*	1.749*	1.078	3.153***	1.138	3.465**	1.747*	2.119**
	(2.20)	(2.14)	(1.52)	(4.22)	(1.46)	(3.18)	(2.54)	(2.77)
GDP/capita (ln)	−0.440***	0.420	−0.351**	0.124	−0.478***	0.430*	−0.465***	0.339*
	(−3.46)	(1.73)	(−2.94)	(0.68)	(−3.35)	(2.06)	(−3.73)	(1.98)
Recent Coup	0.448	1.121*	0.344	1.078**	0.528	1.243**	0.432	1.025**
	(1.65)	(2.50)	(1.35)	(2.94)	(1.75)	(2.11)	(1.51)	(2.60)
Recent Regular Turnover	0.465	−0.242	0.395	−0.193	0.378	−0.199	0.375	−0.132
	(1.95)	(−0.51)	(1.84)	(−0.46)	(1.30)	(−0.39)	(1.58)	(−0.33)
Urbanization	0.017*	0.009	0.020**	0.007	0.032***	0.004	0.017*	0.001
	(2.02)	(0.78)	(2.84)	(0.73)	(3.37)	(0.42)	(2.09)	(0.11)
Additional Controls?	Y	Y	Y	Y	Y	Y	Y	Y
N	2,367		2,567		2,306		2,681	
Countries	106		114		106		111	
Pseudo R^2	0.172		0.134		0.177		0.175	

Notes: The table displays robustness checks of this paper's main results, predicting transitions to electoral authoritarianism (EA) and democracy from a sample of closed autocracies. Model 1 recodes democratic transitions as EA if the ruling party may have intended EA transition. Model 2 recodes EA to require a recent legislative election. Model 3 only counts transitions that retain the regime type for at least five years. Model 4 redefines EA to require opposition parties outside the regime front. t statistics (based on robust standard errors clustered by country) are shown in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A3: Robustness Checks Predicting Transitions to EA and Democracy

	(1) Failed EA Transitions Included		(2) EA Recoding (Recent Election)		(3) Durable Transitions		(4) Parties Outside Regime Front	
	EA	Democracy	EA	Democracy	EA	Democracy	EA	Democracy
Resource Dependence	−0.023[+]	−0.009	−0.021	−0.028	−0.035[+]	−0.044	−0.045**	−0.022
	(−1.76)	(−0.61)	(−1.43)	(−1.11)	(−1.88)	(−1.03)	(−2.98)	(−1.11)
Economic Inequality	0.037[+]	−0.003	0.035[+]	−0.018	0.055**	−0.008	0.046*	−0.026
	(1.79)	(−0.12)	(1.83)	(−0.69)	(2.64)	(−0.18)	(2.30)	(−0.91)
Democratic Trade Dependence	4.147***	−0.423	3.831***	−0.067	4.903**	−0.419	4.786***	−0.275
	(3.91)	(−0.24)	(3.67)	(−0.05)	(2.91)	(−0.23)	(4.06)	(−0.20)
EA Trade Dependence	2.564	0.390	2.877[+]	1.389	2.273	3.895[+]	2.320	2.251
	(1.57)	(0.15)	(1.79)	(0.76)	(0.92)	(1.66)	(1.20)	(1.20)
Democratic Allies	1.879***	0.721	1.947**	1.322	1.999*	1.900	2.265***	0.895
	(3.58)	(0.60)	(3.22)	(1.43)	(2.49)	(1.28)	(3.47)	(0.95)
EA Allies	0.506	−0.342	1.386*	0.197	0.550	−0.269	1.071	0.041
	(0.71)	(−0.22)	(1.97)	(0.17)	(0.60)	(−0.13)	(1.34)	(0.03)
Democratic IGOs	4.925*	0.335	3.616[+]	4.729	3.701	7.694	4.255*	7.091[+]
	(2.38)	(0.06)	(1.78)	(1.17)	(1.57)	(1.47)	(2.08)	(1.73)
EA IGOs	0.617	−7.805	2.951	−11.460[+]	3.125	16.300*	3.523	−17.310*
	(0.18)	(−0.97)	(0.90)	(−1.72)	(0.79)	(−1.96)	(1.04)	(−2.32)
Democratic Foreign Aid	2.755**	0.916	2.203**	2.405	1.990*	1.231	2.704**	2.482
	(3.03)	(0.54)	(3.10)	(1.11)	(2.02)	(0.79)	(2.88)	(1.18)
Foreign Aid (% of GDP)	0.030**	0.038	0.013	0.062***	0.016	0.057*	0.028*	0.050*
	(2.68)	(1.31)	(1.26)	(3.90)	(0.94)	(2.33)	(2.52)	(2.39)
Party Founded by Ruler	1.912***	1.024	1.934***	0.694	1.628***	1.145	1.575***	1.363[+]
	(4.89)	(1.06)	(4.44)	(0.81)	(3.49)	(1.26)	(4.23)	(1.61)
Party Prior to Ruler	1.527***	0.617	1.609***	1.503[+]	1.390**	1.142	1.160**	1.796*
	(4.47)	(0.54)	(4.71)	(1.95)	(2.91)	(1.16)	(3.29)	(2.11)
Legislature	−0.470	−0.719	−0.521[+]	−0.100	−0.850*	0.358	−0.473	−0.154
	(−1.57)	(−1.14)	(−1.86)	(−0.17)	(−2.17)	(0.45)	(−1.50)	(−0.26)

Notes: The table displays robustness checks of additional predictors of transitions to electoral authoritarianism (EA) and democracy. Each set of variables between the horizontal dashed lines represents a separate multinomial logit, with the variables added to Model 1 of Table 2. Model 1 recodes democratic transitions as EA if the ruling party may have intended EA transition. Model 2 recodes EA to require a recent legislative election. Model 3 only counts transitions that retain the regime type for at least five years. Model 4 redefines EA to require opposition parties outside the regime front. t statistics (based on robust standard errors clustered by country) are shown in parentheses.

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A4: Robustness Checks Predicting Transitions

	(1) With State Failure		(2) Lagged Five Years	
	EA	**Democracy**	**EA**	**Democracy**
Regional EA	2.244**	0.712	0.415	0.998
	(3.18)	(0.78)	(0.51)	(1.04)
Regional Democracy	1.179+	2.522**	−0.651	1.036
	(1.76)	(3.25)	(−0.77)	(1.16)
GDP/capita (ln)	−0.298*	0.361+	−0.562***	0.032
	(−2.35)	(1.82)	(−3.48)	(0.16)
Recent Coup	0.496+	1.296**	0.426	1.074***
	(1.80)	(3.22)	(1.53)	(3.34)
Recent Regular Turnover	0.479+	−0.064	0.275	0.258
	(1.95)	(−0.15)	(0.94)	(0.72)
Urbanization	0.012	0.003	0.022*	0.001
	(1.33)	(0.29)	(2.10)	(0.11)
Resource Dependence	−0.017	−0.020	−0.023+	−0.043
	(−1.22)	(−1.07)	(−1.70)	(−1.37)
Economic Inequality	0.035+	0.002	0.041+	−0.028
	(1.74)	(0.08)	(1.77)	(−0.98)
Democratic Trade Dependence	4.204***	0.094	3.372**	−0.797
	(4.07)	(0.06)	(2.96)	(−0.74)
EA Trade Dependence	1.763	1.609	0.783	0.418
	(1.10)	(0.82)	(0.42)	(0.21)
Democratic Allies	2.420***	0.549	1.937**	2.024*
	(4.94)	(0.52)	(2.85)	(2.57)
EA Allies	0.831	−1.360	−0.722	0.289
	(1.25)	(−1.09)	(−0.81)	(0.21)
Democratic IGOs	4.448*	4.063	8.823**	11.030***
	(2.14)	(0.88)	(3.18)	(3.58)
EA IGOs	0.609	−13.650+	−9.116*	−28.120***
	(0.18)	(−1.78)	(−2.14)	(−4.88)
Democratic Foreign Aid	2.623**	1.978	2.051**	1.881
	(3.05)	(1.03)	(2.98)	(1.38)
Foreign Aid (% of GDP)	0.030+	0.029	0.029+	0.051*
	(1.93)	(1.39)	(1.76)	(2.26)
Party Founded by Ruler	1.778***	1.214	0.696+	0.715
	(4.53)	(1.47)	(1.67)	(1.19)
Party Prior to Ruler	1.361***	1.311	0.900*	0.182
	(3.86)	(1.50)	(2.30)	(0.35)
Legislature	−0.627*	0.001	−0.811*	−0.251
	(−2.09)	(0.00)	(−2.00)	(−0.53)

Notes: The table displays robustness checks of additional predictors of transitions to electoral authoritarianism (EA) and democracy. Each set of variables between the horizontal dashed lines represents a separate multinomial logit, with the variables added to Model 1 of Table 2. Model 1 includes cases of state failure. Model 2 lags variables by five years instead of one year. t statistics (based on robust standard errors clustered by country) are shown in parentheses. $^+ p < 0.10$, $^* p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$

Table A5: Predictors of EA Transitions During and Post-Cold War

	(1)	(2)	
DV = *EA Transition*	**Post-Cold War Added**	**Base Term**	**Post-Cold War ×**
GDP/capita (ln)	−0.439***	−0.193	−0.657**
	(−3.37)	(−1.46)	(−2.99)
Urbanization	0.015⁺	0.035**	−0.037*
	(1.68)	(2.95)	(−2.48)
Regional EA	1.216⁺	1.319	−0.853
	(1.74)	(1.56)	(−0.61)
Regional Democracy	0.417	1.670*	−3.210*
	(0.60)	(2.08)	(−2.26)
Post-Cold War	1.562**		
	(3.24)		
Democratic Trade Dependence	3.860***	3.988***	−0.722
	(3.57)	(3.64)	(−0.43)
Democratic Allies	2.268***	2.812***	−3.562**
	(4.49)	(4.92)	(−2.98)
Democratic IGOs	3.038	8.616**	−25.140***
	(1.26)	(3.06)	(−4.88)
Democratic Foreign Aid	2.635**	2.657*	−0.027
	(2.98)	(2.01)	(−0.02)
Foreign Aid (% of GDP)	0.027*	0.006	0.043⁺
	(2.26)	(0.39)	(1.74)

Notes: The table shows the effects of several variables on transition to EA, adding a post-Cold War control (Model 1) and dividing by period (Model 2). For Model 2, the first column shows the effect of each variable in the Cold War period (1946–89). The second column shows results for the interaction with post-Cold War, capturing the difference between effects during and post-Cold War. Separate multinomial logits are indicated by the dashed lines. t statistics (based on robust standard errors clustered by country) are shown in parentheses.
⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A6: Predictors of EA Transitions by Regime Age

DV = *EA Transition*	(1) Young Regimes	(2) Older Regimes
GDP/capita (ln)	−0.149	−0.690***
	(−0.70)	(−3.40)
Urbanization	0.011	0.019
	(0.76)	(1.34)
Regional EA	4.389***	−0.466
	(4.80)	(−0.47)
Regional Democracy	2.581**	−1.019
	(2.61)	(−0.78)
Democratic Trade Dependence	2.923*	4.339**
	(2.16)	(2.93)
Democratic Allies	2.438*	2.633**
	(2.25)	(2.82)
Democratic IGOs	2.037	3.772
	(0.53)	(1.08)
Democratic Foreign Aid	1.738	3.248*
	(1.23)	(2.38)
Foreign Aid (% of GDP)	0.016	0.023
	(0.80)	(0.81)

Notes: The table shows the effects of the main variables of interest, stratifying the sample by regime age (older or younger than 10 years, using Geddes et al. 2014). Separate multinomial logits are indicated by the dashed lines. t statistics (based on robust standard errors clustered by country) are shown in parentheses.
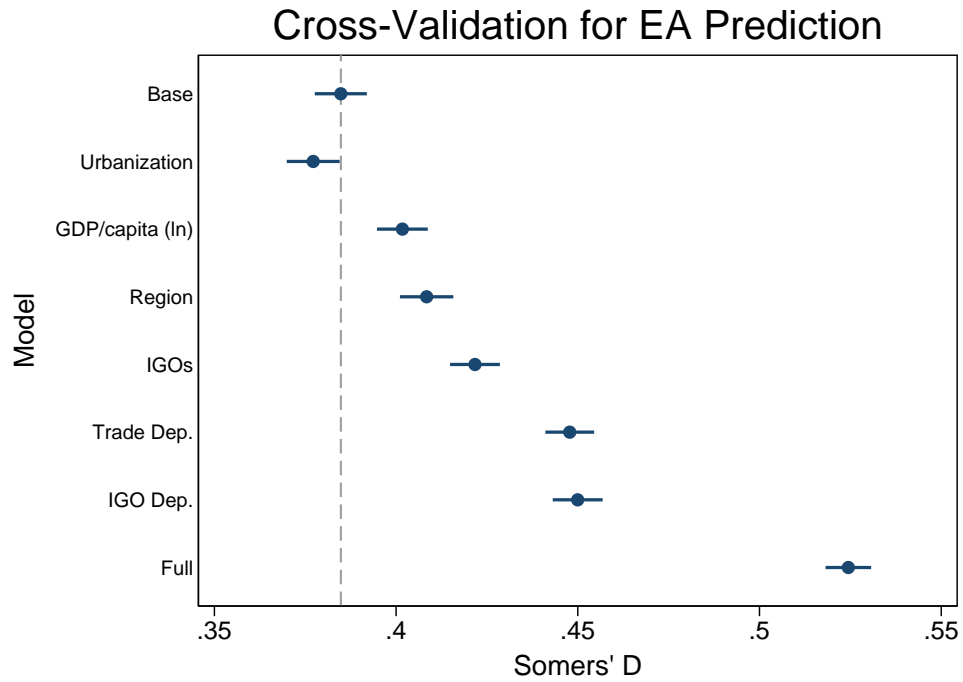$^+ p < 0.10$, $^* p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$
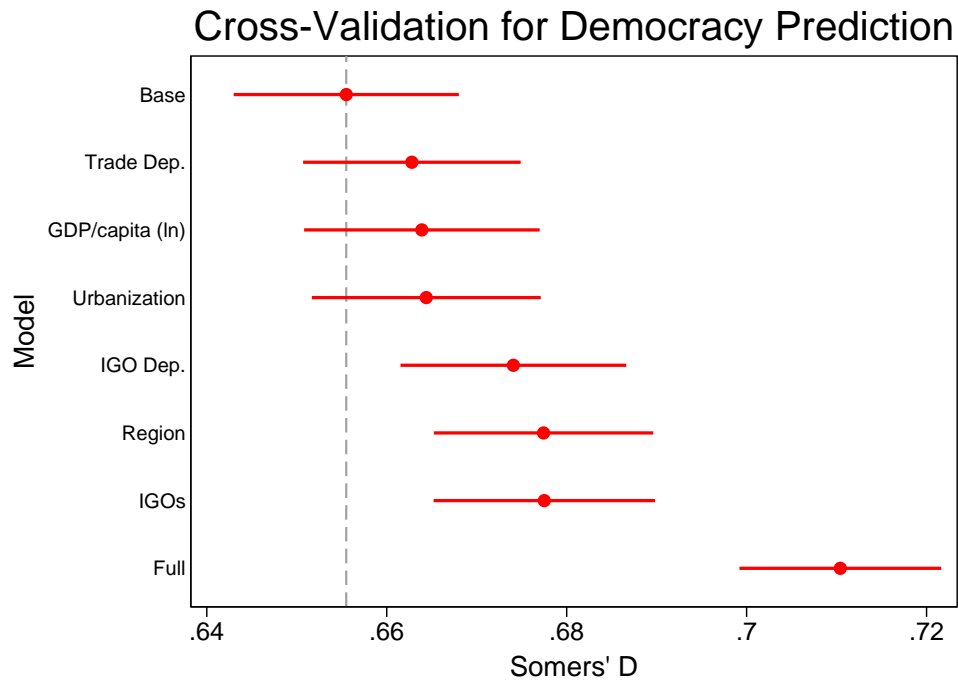
Fig. A1: The graphs summarize the out-of-sample predictive power of several models for EA transition (top) and democratization (bottom). Multinomial logits are run on randomly selected subsamples equal to 90% of the sample, then the predictions are compared to the transition values in the remaining 10% of the sample. This is repeated 2,000 times. For each run, predictive accuracy is calculated using the ordinal association statistic Somers' D. The mean values are plotted for several models, with 95% confidence intervals.