SUPPLEMENTARY MATERIAL

THE POPULARITY OF AUTHORITARIAN LEADERS
A Cross-National Investigation

By Sergei Guriev and Daniel Treisman

World Politics

doi: 10.1017/S0043887120000167

Replication data and Stata codes are available at:

Guriev, Sergei, and Daniel Treisman. 2020. "Replication data for: The Popularity of Authoritarian Leaders; A Cross-National Investigation." Harvard Dataverse, V l. doi: 10.7910/DVN/8NGKDS.

For Gallup World Polls data for replication, please contact: datainquiry@gallup.com

Appendix A: Additional Tables

Table A1. Data sources

Approval	"Do you approve or disapprove of the job performance of the leadership of this country?" % "yes."	Gallup World Poll
Interstate war	Dummy for state involved in episode of "interstate warfare" or "interstate violence"	Major Episodes of Political Violence and Conflict Regions, 1946-2012 (Monty Marshall, Center for Systemic Peace) www.systemicpeace.org/warlist.htm (MEPVCR)
Civil war	State involved in episode of "civil war," "ethnic war," "civil violence," or "ethnic violence."	MEPVCR
Homicide rate	Intentional homicides per 100,000 people	United Nations Office on Drugs and Crime, supplemented by data on individual countries from the Igarapé Institute's *Homicide Monitor* https://homicide.igarape.org.br/.
Growth rate of GDP per capita	Growth rate of real GDP per capita	World Bank, World Development Indicators.
Log GDP per capita	Natural log of GDP per capita at PPP in 2011 dollars	World Bank, World Development Indicators.
Log inflation rate	Natural log of (5 + inflation rate). (5 added to prevent exclusion of cases with negative inflation.)	World Bank, World Development Indicators, when available, plus IMF, World Economic Outlook database.
Unemployment	Unemployment rate	World Bank, World Development Indicators, when available, plus IMF, World Economic Outlook database.
Economic conditions good or excellent	"How would you rate economic conditions in this country today—as excellent, good, only fair, or poor?" Percent saying "excellent" or "good."	Gallup World Poll
Percent who felt safe walking alone at night	"Do you feel safe walking alone at night in the city or area where you live?" Percent saying yes.	Gallup World Poll
Percent who thought media had a lot of freedom	"Do the media in this country have a lot of freedom, or not?" % "yes."	Gallup World Poll
Press freedom	Press freedom index; adjusted so 0 = completely unfree, 100 = completely free.	Freedom House
Requests by governments or courts to Twitter to block tweets	Note that data begin in 2012.	Twitter
Requests by governments or courts to Google to "remove information from Google products, such as blog posts or Youtube videos."	Note that data begin in 2009	Google Transparency Report
Leader's years in office	Number of years the head of executive had been in office	DPI, see: Cruz, C., P. Keefer and C. Scartascini (2016). "Database of Political Institutions Codebook, 2015 Update (DPI2015)." IADB. Plus our updates.
Legislative or executive election year	Either legislative or execuutive election held this year	DPI
Amnesty	Political terror score, based on Amnesty International Reports	Amnesty International, from Political Terror Score database (PTS) (Gibney, Mark, Linda Cornett, Reed Wood, Peter Haschke, and Daniel Arnon. 2015. The Political Terror Scale 1976-2015. Date Retrieved, from the Political Terror Scale website: http://www.politicalterrorscale.org.)
State Department	Political terror score, based on US State Department Reports	US State Department, from PTS.
Polity2 score	Score. -10 = "pure autocracy," +10 = "pure democracy"	Polity IV dataset, Monty Marshall, Center for Systemic Peace,

		http://www.systemicpeace.org/polityproject.html.
V-Dem democracy scores	Using e_v2x_api_4C, we code the bottom two categories ("Autocratic" and "Electoral Authoritarian") as non-democracies.	"V-Dem Codebook v.6." Varieties of Democracy (VDem) Project.
Deaths from natural disasters		EM-DAT Database, D. Guha-Sapir, R. Below, Ph. Hoyois – "EM-DAT: The CRED/OFDA International Disaster Database" – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium.
Deaths from terrorist attacks		Global Terrorism Database, https://www.start.umd.edu/gtd/.
Share of seats of opposition parties	At least one seat in parliament held by opposition party. More than 10 percent of seats in parliament held by opposition parties.	DPI
Percent with internet access at home.	Percent of respondents who said their home had access to Internet. In 2016, since GWP replaced this question, we use predictions from regression of this "home internet access" on lag of "home internet access", percent who said they had access to the Internet in some way, and percent who said they used Internet in previous 7 days (R^2=.98)	Gallup World Poll
Freedom of the Net Index	Index of Internet freedom. We use the 2007-08 pilot study figures for 2007 and 2008.	Freedom House
Perceived fear	Percent saying "most" or "many" afraid to discuss their political views	Gallup World Poll
Number killed in one-sided violence by the state	"Best estimate" of fatalities, one-sided violence, only cases with > 25 fatalities counted.	Uppsala Conflict Data Program, Department of Peace and Conflict Research, Uppsala University.

Table A2: Non-democracies (Polity2 at start of year < 6) with GWP current and lagged approval data

Country	*Years in data*	*Type*	*Estimated state political killings per year under incumbent leader (as of end of year, where IA or OD)*
Belarus	2007-10, 2014-16	IA (2007-15), U (2016)	0.2
Djibouti	2009	IA	0.3
Guinea	2012-16	IA (2012-15), U (2016)	8.2
Kazakhstan	2008-16	IA (2008-15), U (2016)	0.6
Mozambique	2008	IA	3.0
Russia	2008-16	IA (2008-15), U (2016)	2.3 [a]
Singapore	2008-11, 2014-16	IA (2008-15), U (2016)	0
Tanzania	2008-16	IA (2008-15), U (2016)	0.2
Burkina Faso	2008, 2011-15	IA (2008-14), U (2015)	1.4
Mauritania	2008-17	IA (2009-15), U (2008, 2016-7)	0.1
Ecuador	2008-16	IA (2008-15), U (2016)	0
Gabon	2012-16	IA (2012-15), U (2016)	0.8
Armenia	2008-16	IA (2008-15), U (2016)	1.1
Azerbaijan	2008-9, 2012-16	IA (2008-15), U (2016)	0.3
Venezuela	2009-16	IA (2009-11), U (2012-16)	0.5
Vietnam	2008-13	IA (2008-10), U (2011-13)	0.6
Yemen	2010-14	IA (2010-11), U (2012-14)	0.2
Angola	2012	OD	594.4
CAR	2011	OD	11.9
Chad	2008-16	OD (2008-15), U (2016)	61.0
Congo Brazzaville	2012-16	OD (2012-15), U (2016)	62.1
Congo Kinshasa	2012-16	OD (2012-15), U (2016)	40.3
Sri Lanka	2010-15	OD (2011-14), U (2015)	5750.0
Togo	2015-16	OD (2015), U (2016)	45.2
Uganda	2008-16	OD (2008-15), U (2016)	12.0
Cambodia	2008-17	OD (2008-15), U (2016-7)	16.1
Cameroon	2008-17	OD (2008-15), U (2016-7)	14.8
Zimbabwe	2008-16	OD (2008-15), U (2016)	880.4
Bangladesh	2008-16	OD (2009-15), U (2008, 2016)	53.3
Kyrgyzstan	2008-11	OD (2008-9), U (2010-11)	18.2
Nigeria	2008-15	OD (2010-14), U (2008-9, 2015)	240.0
Pakistan	2008-10	U	
Tunisia	2011-14	U	
Afghanistan	2015-16	U	
Bhutan	2014-15	U	
Egypt	2013-16	U	
Iraq	2011-14	U	
Haiti	2011-16	U	
Ivory Coast	2014-16	U	
Madagascar	2012-14	U	
Malaysia	2008, 2015	U	
Mali	2014-16	U	
Myanmar (Burma)	2013-16	U	
Niger	2010-11	U	
Ethiopia	2014-16	U	
Somalia	2015-16	U	
Sudan-North	2015-16	U	
Thailand	2008-11, 2015-16	U	
Turkey	2015-16	U	
Ukraine	2015-16	U	
Zambia	2008	U	

Source: Gallup World Poll, Polity IV, Guriev and Treisman (2019).

Notes: IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Types based on killings under leader in power at end of year (unless he took power after GWP finished polling, in which case killings under his predecessor).

[a] political killings per year 2007-15 (before that country had Polity2>= 6).

Table A3: Imputed variables

Variable	*Percent of observations used in regressions that are imputed*	*Mean data with imputations (SD data with imputations)*	*Mean original data (SD original data)*
Percent who thought economic conditions "good" or "excellent" (GWP)	20	28.5 (16.6)	27.2 (16.2)
Unemployment rate	2	6.7 (5.1)	6.7 (5.0)
Log inflation rate	8	2.4 (.6)	2.4 (.6)
Percent who believe media have a "lot" of freedom (GWP)	18	52.1 (15.3)	51.1 (15.4)
Homicide rate	36	9.8 (9.8)	8.4 (10.4)
Political Terror Score (Amnesty International)	28	3.0 (1.1)	3.1 (1.0)
Political Terror Score (State Department)	14	3.2 (.9)	3.2 (.9)
Freedom House Freedom on the Net index	65	48.4 (13.2)	51.0 (12.7)
Percentage who think others afraid to express political opinions (GWP)	25	55.5 (14.3)	55.9 (14.3)

Source: Authors, Sources in Table A1.

Table A4: Over-time correlation coefficients between repression indicators and percent approval in individual non-democracies, years included in the GWP regressions

Country	*PTS (State Dep.)*	*Country*	*PTS (AI)*	*Country*	*Ln number killed in one-sided violence by state (UCDP)*	*Country*	*Perceived fear (GWP)*
Iraq	0.9098	Sri Lanka	0.8817	Congo	0.5896	Azerbaijan	0.9201
Sri Lanka	0.7431	Thailand	0.7206	Nigeria	0.383	Bangladesh	0.876
Chad	0.5126	Chad	0.5623	Armenia	0	Kyrgyzstan	0.8587
Armenia	0.471	Cambodia	0.5132	Azerbaijan	0	Singapore	0.8148
Uganda	0.2787	Singapore	0.4699	Bangladesh	0	Cambodia	0.6468
Kazakhstan	0.196	Tanzania	0.4228	Belarus	0	Armenia	0.582
Cambodia	0.1538	Nigeria	0.2247	Burkina	0	Vietnam	0.5197
Tanzania	0.1397	Bangladesh	0.1455	Cambodia	0	Kazakhstan	0.0565
Azerbaijan	0	Ecuador	0	Cameroon	0	Thailand	0.0019
Bangladesh	0	Mauritania	0	Chad	0	Uganda	-0.0408
Gabon	0	Uganda	0	Congo	0	Belarus	-0.0761
Guinea	0	Venezuela	0	Ecuador	0	Nigeria	-0.0979
Haiti	0	Vietnam	-0.0263	Gabon	0	Mauritania	-0.1272
Russia	0	Belarus	-0.0538	Guinea	0	Cameroon	-0.1484
Singapore	0	Yemen	-0.066	Haiti	0	Burkina	-0.1743
Vietnam	0	Cameroon	-0.3324	Iraq	0	Chad	-0.2063
Ecuador	-0.0757	Kyrgyzstan	-0.4062	Kazakhstan	0	Tanzania	-0.6629
Yemen	-0.1594	Armenia	-0.4069	Kyrgyzstan	0	Russia	-0.726
Thailand	-0.1939	Burkina	-0.4077	Mauritania	0	Ecuador	-0.8072
Kyrgyzstan	-0.2834	Russia	-0.5413	Russia	0	Haiti	-0.9228
Mauritania	-0.2959	Zimbabwe	-0.8578	Singapore	0	Zimbabwe	-0.9293
Belarus	-0.3275	Kazakhstan	-0.9759	Sri Lanka	0	Venezuela	-0.9864
Venezuela	-0.3383	Azerbaijan	-0.2026	Tanzania	0		
Burkina	-0.3472	Congo		Thailand	0		
Nigeria	-0.538	Gabon		Tunisia	0		
Congo	-0.724	Guinea		Uganda	0		
Zimbabwe	-0.7593	Haiti		Venezuela	0		
Cameroon	-0.7764	Iraq		Vietnam	0		
Tunisia	-0.9392	Tunisia		Egypt	0		
				Yemen	-0.6334		
				Myanmar	-0.6877		
				Zimbabwe	-0.8293		
% positive	28%		35%		6%		41%

Note: Only countries for which at least four years of data available. 0's represent cases in which one variable did not change.

Table A5: Determinants of government approval: overt dictatorships and informational autocracies

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.57***	0.34***	0.41***	0.47***	0.59***	0.28***
	(0.087)	(0.088)	(0.09)	(0.081)	(0.090)	(0.079)
Informational autocracy, t	20.3**	-29.6***	-9.07	4.40	10.2	-16.8
	(8.96)	(10.3)	(20.6)	(11.2)	(6.20)	(14.3)
Unclassified authoritarian, t	9.54	-29.4***	-42.0*	-19.5*	3.47	-23.8**
	(6.98)	(8.09)	(23.3)	(10.0)	(4.77)	(10.5)
Overt dictatorship, t	14.3	-40.7***	-9.05	-23.0***	11.1*	-44.5***
	(10.4)	(10.5)	(25.8)	(8.58)	(6.32)	(13.0)
Repression						
Political Terror Score (State Department), t, (IA)	-4.79**					-1.60
	(2.21)					(2.22)
Political Terror Score (State Department), t, (OD)	-2.90					-1.57
	(2.42)					(1.65)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.35***				0.29***
		(0.12)				(0.10)
Economic conditions "good" or "excellent," t, (OD)		0.34***				0.36***
		(0.11)				(0.11)
Felt safe walking alone at night, t (IA)		0.40***				0.31**
		(0.12)				(0.15)
Felt safe walking alone at night, t, (OD)		0.59***				0.69***
		(0.13)				(0.20)
Objective economic perceptions, t, (IA)			0.42***			
			(0.08)			
Objective economic perceptions, t, (OD)			0.07			
			(0.24)			
Economic misperceptions, t, (IA)			0.32**			
			(0.14)			
Economic misperceptions, t, (OD)			0.45***			
			(0.12)			
Objective safety perceptions, t, (IA)			0.05			
			(0.32)			
Objective safety perceptions, t, (OD)			0.22			
			(0.44)			
Safety misperceptions, t, (IA)			0.16			
			(0.25)			
Safety misperceptions, t, (OD)			0.79***			
			(0.12)			
Information manipulation						
Press freedom, t, (IA)				-0.45**		-0.56***
				(0.22)		(0.21)
Press freedom, t, (OD)				-0.25		-0.29*
				(0.21)		(0.17)
Percent who think media have a lot of freedom, t, (IA)				0.32**		0.36***
				(0.14)		(0.12)
Percent who think media have a lot of freedom, t, (OD)				0.74***		0.30***
				(0.10)		(0.10)
Percent with Internet access at home, t, (IA)				-0.16*		-0.16**
				(0.081)		(0.077)
Percent with Internet access at home, t, (OD)				-0.28		-0.31**
				(0.31)		(0.16)
Total requests to Google to remove content, ths , t, (IA)				5.85***		7.81***
				(2.07)		(2.16)
Total requests to Google to remove content, ths, t, (OD)				2450.2		1206.1
				(2723.1)		(2242.9)

Table A5: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-1.54	
					(4.55)	
Polling ended in 6 months before executive election (OD)					2.99	
					(4.42)	
Polling overlapped with executive election (IA)					-0.71	
					(4.02)	
Polling overlapped with executive election (OD)					-9.09	
					(11.7)	
Polling began in 6 months after executive election with turnover (IA)					19.2***	19.5***
					(4.31)	(3.35)
Polling began in 6 months after executive election with turnover (OD)					no cases	no cases
Polling began in 6 months after executive election without turnover (IA)					2.65	
					(2.75)	
Polling began in 6 months after executive election without turnover (OD)					4.85	
					(5.01)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-1.71					-1.70
	(1.71)					(1.27)
Economic conditions "good" or "excellent," t, (U)		0.58***				0.46***
		(0.12)				(0.11)
Felt safe walking alone at night, t, (U)		0.30**				0.29**
		(0.14)				(0.12)
Objective economic perceptions, t, (U)			0.56***			
			(0.17)			
Economic misperceptions, t, (U)			0.43**			
			(0.17)			
Objective safety perceptions, t, (U)			0.51			
			(0.33)			
Safety misperceptions, t, (U)			0.46**			
			(0.19)			
Press freedom, t, (U)				-0.32**		-0.29**
				(0.14)		(0.14)
Percent who think media have a lot of freedom, t, (U)				0.64***		0.34***
				(0.12)		(0.12)
Percent with Internet access at home, t, (U)				-0.14*		-0.20***
				(0.085)		(0.062)
Total requests to Google to remove content, ths, t, (U)				1.07***		1.97***
				(0.39)		(0.3.4)
Polling ended in 6 months before executive election (U)					9.12	
					(5.84)	
Polling overlapped with executive election (U)					21.1***	
					(4.04)	
Polling began in 6 months after executive election with turnover (U)					15.8***	9.78*
					(4.46)	(5.92)
Polling began in 6 months after executive election without turnover (U)					4.32	
					(5.53)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.73	0.64	0.57	0.55	0.54	0.91
Hansen test, p	0.65	0.55	0.41	0.32	0.40	0.91
No. of instruments	31	50	42	45	40	64

Sources: See Table A1. **Notes:** IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries.

Table A6: Determinants of government approval (same regressions, for democracies)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Approval, t-1	0.42***	0.41***	0.48***	0.40***	0.59***	0.48***	0.44***	0.36***
	(0.067)	(0.09)	(0.05)	(0.065)	(0.067)	(0.070)	(0.073)	(0.068)
Approval, t-2			0.079		0.13***			0.051
			(0.049)		(0.05)			(0.041)
Repression								
Political Terror Score	-0.40							-0.35
(State Department), t	(1.07)							(1.16)
Perceived performance								
Economic conditions		0.36***						
"good" or "excellent", t		(0.066)						
Percent who felt safe		-0.20*						
walking alone at night, t		(0.12)						
Objective economic			0.25***					0.44**
perceptions, t			(0.080)					(0.18)
Economic			0.36***					0.20***
misperceptions, t			(0.087)					(0.07)
Objective safety			-0.009					0.29*
perceptions, t			(0.058)					(0.15)
Safety misperceptions, t			0.037					0.20
			(0.094)					(0.12)
Information manipulation								
Press freedom, t				-0.15				-0.52***
				(0.15)				(0.16)
Percent who think media				0.42***				0.43***
have a lot of freedom, t				(0.095)				(0.10)
Percent with internet				-0.28**				-0.06
access at home, t				(0.13)				(0.09)
Total requests to Google				6.0*				-3.5*
to remove content, ths, t				(3.5)				(2.1)
Elections								
Executive election year, t					6.37***			
					(1.67)			
Legislative election year, t					1.83*			
					(0.95)			
Polling began in 6 months						10.4***		
after executive election						(1.72)		
Polling overlapped with						11.1***	11.0***	9.59**
executive election						(3.56)	(3.45)	(3.92)
Polling ended in 6 months						2.51	2.49	3.69*
before executive election						(1.85)	(1.84)	(2.07)
Polling began in 6 months							14.7***	12.1***
after election with turnover							(2.87)	(2.45)
Polling began in 6 months							5.43***	8.46***
after election without turnover							(1.98)	(2.56)
Observations	665	665	548	661	545	642	642	535
Countries	96	96	90	95	91	95	95	90
Arellano-Bond AR(2), p	0.12	0.11	0.35	0.65	0.29	0.18	0.38	0.17
Hansen test, p	0.12	0.11	0.16	0.25	0.14	0.35	0.14	0.30
No. of instruments	25	21	23	36	26	23	36	37

Sources: See Table A1. **Notes:** Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with 1st -3rd lags except: objective economic and safety perceptions treated as exogenous; (1): first to sixth lags for all; (2): approval(t-1) with 3rd lag; (3) approval(t-1) and approval(t-2) with first lag; (4),(5), and (7): 1st-4th lags for all; (6) 1st-2nd lags for all; (8) 1st lag for all but objective perceptions. Lags chosen on basis of diagnostic tests.

Table A7a: Repression: all authoritarian states

	----------DV: Approval----------				----------DV: Don't know----------				---------DV: Refused to answer----------			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Approval (t-1)	0.56***	0.54***	0.59***	0.56***								
	(0.10)	(0.11)	(0.10)	(0.11)								
Don't know on approval (t-1)					0.46***	0.48***	0.54	0.43***				
					(0.13)	(0.12)	(0.36)	(0.13)				
Refused to answer on Approval (t-1)									0.16	0.15	0.14	0.13
									(0.14)	(0.15)	(0.15)	(0.13)
Approval (t)					-0.11***	-0.11***	-0.09	-0.12***	-0.03*	-0.03*	-0.03	-0.03
					(0.032)	(0.034)	(0.08)	(0.032)	(0.02)	(0.02)	(0.02)	(0.02)
Political Terror Score (t) (State Department)	-2.03				0.40				0.13			
	(1.86)				(0.52)				(0.18)			
Political Terror Score (t) (Amnesty International)		-1.47*				-0.19				-0.05		
		(0.86)				(0.25)				(0.08)		
Ln number killed in one-sided violence by state (UCDP) (t)			-0.61				-0.29				-0.18**	
			(1.51)				(0.56)				(0.07)	
Perceived fear (Percent saying "most" or "many" afraid to discuss their political views) (t)				-0.23*				-0.08*				-0.017*
				(0.12)				(0.04)				(0.014)
Observations	261	261	261	261	261	261	261	261	261	261	261	261
Countries	51	51	51	51	51	51	51	51	51	51	51	51
Arellano-Bond AR(2), p	0.83	0.84	0.65	0.97	0.28	0.27	0.89	0.36	0.55	0.52	0.77	0.53
Hansen test, p	0.46	0.28	0.57	0.49	0.20	0.12	0.12	0.21	0.35	0.26	0.14	0.17
Number of instruments	18	18	18	18	25	22	16	28	22	22	22	22

Sources: See Table A1.

Note: Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with first to third lags except: (5) and (7) first to forth lags, (8) first to fifth lags, based on diagnostic tests.

Table A7b: Repression—informational autocracies and overt dictatorships

	DV: Approval				DV: Don't know				DV: Refused to answer			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Approval (t-1)	0.55***	0.54***	0.46**	0.57***								
	(0.087)	(0.082)	(0.23)	(0.092)								
Approval (t)					-0.16***	-0.061**	-0.069**	-0.076***	-0.032**	-0.031**	-0.033**	-0.032**
					(0.031)	(0.029)	(0.029)	(0.027)	(0.014)	(0.013)	(0.013)	(0.013)
Don't know on approval (t-1)					0.44***	0.48***	0.47***	0.44***				
					(0.12)	(0.11)	(0.11)	(0.12)				
Refused to answer on approval (t-1)									0.41***	0.46***	0.47***	0.42***
									(0.10)	(0.11)	(0.095)	(0.13)
Refused to answer on approval (t-2)									0.090	0.11	0.11	0.093
									(0.086)	(0.088)	(0.091)	(0.090)
Informational autocracy	19.0**	12.5	6.34	18.3**	-3.04	-2.20	-0.73	-1.83	-1.02	-1.16	-1.03	-1.76
	(9.00)	(9.94)	(9.66)	(8.42)	(3.43)	(2.75)	(2.09)	(4.10)	(0.97)	(0.89)	(0.87)	(1.13)
Overt dictatorship	14.7	3.29	3.68	15.1*	2.59	-2.97	-2.55	4.31	-1.00	-1.68*	-1.03	0.31
	(10.7)	(8.72)	(8.79)	(8.84)	(4.21)	(2.37)	(2.04)	(2.99)	(1.70)	(0.98)	(0.84)	(1.51)
Political Terror Score (t)	-4.76**				0.34				0.081			
(State Department)*IA	(2.23)				(0.79)				(0.32)			
Political Terror Score (t)	-3.37				-1.83*				0.041			
(State Department)*OD	(2.52)				(1.06)				(0.34)			
Political Terror Score (t)		-1.86				0.24				0.10		
(Amnesty International)*IA		(1.62)				(0.51)				(0.16)		
Political Terror Score (t)		0.071				-0.35				0.16		
(Amnesty International)*OD		(1.30)				(0.39)				(0.10)		
Ln number killed in one-sided			-4.05***				0.14				0.22	
violence by state (UCDP) (t)*IA			(1.16)				(0.37)				(0.16)	
Ln number killed in one-sided			-0.81				0.21				0.032	
violence by state (UCDP) (t)*OD			(1.24)				(0.24)				(0.069)	
Perceived fear (Percent saying "most" or "many"				-0.24*				0.00064				0.0096
afraid to discuss their political views) (t)*IA				(0.13)				(0.058)				(0.014)
Perceived fear (Percent saying "most" or "many"				-0.22*				-0.13***				-0.024
afraid to discuss their political views) (t)*OD				(0.13)				(0.044)				(0.024)
Memo												
Unclassified	8.17	13.2**	1.87	9.68	-2.16	0.22	-0.13	1.52	-0.91	-0.19	-0.79	0.29
	(6.85)	(6.28)	(5.54)	(8.00)	(2.34)	(1.42)	(1.20)	(2.46)	(0.78)	(0.66)	(0.53)	(1.38)
Political Terror Score (t)	-1.61				0.23				0.10			
(State Department)*U	(1.71)				(0.50)				(0.22)			
Political Terror Score (t)		-2.88**				-0.35				-0.16		
(Amnesty International)*U		(1.12)				(0.34)				(0.16)		
Ln number killed in one-sided			1.12				0.062				-0.012	
violence by state (UCDP) (t)*U			(2.45)				(0.31)				(0.12)	

Perceived fear (Percent saying "most" or "many" afraid to discuss their political views) (t)*U				-0.16 (0.13)				-0.053 (0.044)				-0.016 (0.025)
Observations	261	261	261	261	261	261	261	261	215	215	215	215
Countries	51	51	51	51	51	51	51	51	46	46	46	46
Arellano-Bond AR(2), p	0.71	0.66	0.55	0.90	0.48	0.28	0.28	0.49	0.41	0.48	0.44	0.63
Hansen test, p	0.65	0.71	0.54	0.85	0.24	0.39	0.23	0.31	0.43	0.22	0.30	0.18
Number of instruments	38	31	27	31	26	50	41	50	43	35	34	35

Sources: See Table A1.

Note: IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. (1)-(4) and (9)-(11): all explanatory variables instrumented with first and second lags; (5): just first lag; (6) and (8): first to fourth lags; (7) and (12): first to third.

Table A7c: Repression: non-linear effects

	DV: Percent Approval			
	(1)	(2)	(3)	(4)
Approval (t-1)	0.56***	0.57***	0.61***	0.52***
	(0.10)	(0.09)	(0.09)	(0.10)
Political Terror Score (t) (State Department)	7.53			
	(8.15)			
Political Terror Score squared (t) (SD)	-1.50			
	(1.23)			
Political Terror Score (t) (Amnesty International)		2.67		
		(4.17)		
Political Terror Score squared (t) (AI)		-0.71		
		(0.76)		
Ln number killed in one-sided violence by state (UCDP) (t)			2.90	
			(5.20)	
Ln number killed squared (UCDP) (t)			-0.73	
			(1.09)	
Perceived fear (Percent saying "most" or "many" afraid to discuss their political views) (t)				-0.19
				(0.49)
Perceived fear squared (t)				-0.000
				(0.004)
Observations	261	261	261	261
Countries	51	51	51	51
Arellano-Bond AR(2), p	0.69	0.95	0.70	0.91
Hansen test, p	0.83	0.49	0.43	0.41
Number of instruments	22	22	22	22

Sources: See Table A1.

Note: Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with first to third lags.

Table A8: Internet and approval

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Approval (t-1)	0.38***	0.40***	0.39***	0.38***	0.39***	0.40***	0.42***
	(0.08)	(0.08)	(0.08)	(0.10)	(0.08)	(0.08)	(0.08)
Approval (t-2)				-0.014			
				(0.059)			
Press freedom	-0.69***	-0.61***	-0.61***	-0.71**	-0.62***	-0.64***	-0.71***
(Freedom House), t	(0.23)	(0.21)	(0.21)	(0.28)	(0.23)	(0.22)	(0.23)
Percent that believe media	0.55***	0.56***	0.56***	0.56***	0.55***	0.55***	0.55***
have "lot" of freedom, t	(0.11)	(0.10)	(0.11)	(0.11)	(0.11)	(0.10)	(0.095)
Internet access at	-0.25**	-0.22**	-0.26***	-0.29***	-0.25***	-0.25**	-0.22**
home, t	(0.11)	(0.095)	(0.093)	(0.11)	(0.095)	(0.10)	(0.11)
Requests to Google,	8.9***						
ths, t	(0.34)						
Requests to Twitter		3.1***					
ths, t		(0.94)					
Ln of requests			1.48				
to Google, t			(1.05)				
More than 20				10.4**			
requests to Google, t				(5.21)			
Ln of requests					1.23		
to Twitter, t					(1.09)		
More than 20						10.3**	
requests to Twitter, t						(4.10)	
Freedom on the net							-0.18
Index (Freedom House), t							(0.15)
Observations	258	258	258	212	258	258	258
Countries	51	51	51	46	51	51	51
Arellano-Bond AR(2), p	0.13	0.15	0.13	0.81	0.17	0.14	0.23
Hansen test, p	0.55	0.51	0.67	0.44	0.46	0.66	0.60
No. of instruments	30	30	30	36	30	30	30

Sources: See Table A1.

Note: Dependent variable is percent approving of the leadership. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with first to third lags except (4) first to fourth lags.

Table A9: Explaining change in election related coefficients between (Table 1) models 7 and 8

	(1) Model 7 reproduced	(2) Adding just economic variables	(3) Adding just information-related variables
Approval, t-1	0.57*** (0.10)	0.46*** (0.09)	0.46*** (0.09)
Perceived performance			
Objective economic perceptions, t		0.62*** (0.10)	
Economic misperceptions, t		0.36*** (0.094)	
Information manipulation			
Press freedom, t			-0.52*** (0.19)
Percent who think media have a lot of freedom, t			0.49*** (0.10)
Elections			
Polling ended in 6 months before executive election	3.58 (3.03)	2.76 (2.56)	2.40 (2.79)
Polling overlapped with executive election	1.53 (5.71)	0.27 (4.12)	0.01 (4.88)
Polling began in 6 months after election with turnover	17.9*** (4.47)	14.9** (6.16)	9.06** (4.13)
Polling began in 6 months after election without turnover	4.11 (2.52)	3.90* (2.31)	4.61** (2.26)
Observations	258	252	258
Countries	51	50	51
Arellano-Bond AR(2), p	0.34	0.18	0.11
Hansen test, p	0.61	0.88	0.60
Instruments	30	35	38

Sources: See Table A1.

Notes: Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All explanatory variables instrumented with first to third lags except objective economic perceptions treated as exogenous.

Table A10a: Threshold for overt dictatorship: 2.33 killings or more

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.57***	0.35***	0.42***	0.48***	0.59***	0.28***
	(0.088)	(0.087)	(0.10)	(0.081)	(0.091)	(0.079)
Informational autocracy, t	20.4**	-29.3***	-5.3	4.41	9.98	-16.6
	(8.92)	(10.7)	(22.1)	(11.2)	(6.40)	(13.9)
Unclassified authoritarian, t	9.45	-29.0***	-50.7*	-19.1**	3.41	-23.8**
	(6.92)	(8.06)	(27.0)	(10.0)	(4.78)	(10.5)
Overt dictatorship, t	15.0	-39.6***	-5.5	-23.7***	10.8*	-42.7***
	(10.3)	(10.4)	(26.8)	(8.50)	(6.21)	(12.7)
Repression						
Political Terror Score (State Department), t, (IA)	-4.93**					-1.73
	(2.27)					(2.18)
Political Terror Score (State Department), t, (OD)	-3.09					-1.85
	(2.41)					(1.66)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.35***				0.31***
		(0.13)				(0.11)
Economic conditions "good" or "excellent," t, (OD)		0.31***				0.33***
		(0.11)				(0.10)
Felt safe walking alone at night, t (IA)		0.38***				0.31**
		(0.12)				(0.15)
Felt safe walking alone at night, t, (OD)		0.58***				0.68***
		(0.12)				(0.20)
Objective economic perceptions, t, (IA)			0.45***			
			(0.08)			
Objective economic perceptions, t, (OD)			-0.09			
			(0.32)			
Economic misperceptions, t, (IA)			0.32**			
			(0.16)			
Economic misperceptions, t, (OD)			0.41***			
			(0.14)			
Objective safety perceptions, t, (IA)			-.03			
			(0.34)			
Objective safety perceptions, t, (OD)			.24			
			(0.43)			
Safety misperceptions, t, (IA)			0.13			
			(0.25)			
Safety misperceptions, t, (OD)			0.80***			
			(0.12)			
Information manipulation						
Press freedom, t, (IA)				-0.46**		-0.57***
				(0.21)		(0.22)
Press freedom, t, (OD)				-0.24		-0.28
				(0.21)		(0.17)
Percent who think media have a lot of freedom, t, (IA)				0.30**		0.34**
				(0.15)		(0.13)
Percent who think media have a lot of freedom, t, (OD)				0.73***		0.31***
				(0.10)		(0.098)
Percent with Internet access at home, t, (IA)				-0.14		-0.14*
				(0.086)		(0.076)
Percent with Internet access at home, t, (OD)				-0.27		-0.34**
				(0.31)		(0.16)
Total requests to Google to remove content, ths, t, (IA)				5.56***		7.76***
				(2.12)		(2.15)
Total requests to Google to remove content, ths, t, (OD)				2346.9		1241.1
				(2627.2)		(2224.7)

Table A10a: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-3.42 (5.19)	
Polling ended in 6 months before executive election (OD)					3.88 (4.09)	
Polling overlapped with executive election (IA)					-0.67 (4.02)	
Polling overlapped with executive election (OD)					-8.95 (11.8)	
Polling began in 6 months after executive election with turnover (IA)					19.4*** (4.32)	20.3*** (3.45)
Polling began in 6 months after executive election with turnover (OD)					no cases	no Cases
Polling began in 6 months after executive election without turnover (IA)					2.91 (2.80)	
Polling began in 6 months after executive election without turnover (OD)					4.57 (5.01)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-1.69 (1.70)					-1.67 (1.25)
Economic conditions "good" or "excellent," t, (U)		0.57*** (0.12)				0.46*** (0.11)
Felt safe walking alone at night, t, (U)		0.30** (0.14)				0.29** (0.12)
Objective economic perceptions, t, (U)			0.59*** (0.19)			
Economic misperceptions, t, (U)			0.44** (0.18)			
Objective safety perceptions, t, (U)			0.63 (0.39)			
Safety misperceptions, t, (U)			0.46** (0.19)			
Press freedom, t, (U)				-0.32** (0.14)		-0.29** (0.14)
Percent who think media have a lot of freedom, t, (U)				0.63*** (0.12)		0.33*** (0.12)
Percent with Internet access at home, t, (U)				-0.14* (0.084)		-0.20*** (0.062)
Total requests to Google to remove content, ths, t, (U)				1.05*** (0.39)		1.96*** (0.34)
Polling ended in 6 months before executive election (U)					9.47 (5.83)	
Polling overlapped with executive election (U)					21.4*** (4.14)	
Polling began in 6 months after executive election with turnover (U)					15.5*** (4.50)	9.48 (5.95)
Polling began in 6 months after executive election without turnover (U)					4.19 (5.50)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.73	0.66	0.59	0.54	0.53	0.92
Hansen test, p	0.68	0.55	0.36	0.14	0.37	0.98
No. of instruments	31	50	42	45	40	64

Sources: See Table A1. **Notes:** IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries.

Table A10b: Threshold for overt dictatorship: 9.2 killings or more

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.57***	0.34***	0.41***	0.47***	0.59***	0.28***
	(0.087)	(0.088)	(0.09)	(0.081)	(0.090)	(0.079)
Informational autocracy, t	20.3**	-29.6***	-9.07	4.40	10.2	-16.8
	(8.96)	(10.3)	(20.6)	(11.2)	(6.20)	(14.3)
Unclassified authoritarian, t	9.54	-29.4***	-42.0*	-19.5*	3.47	-23.8**
	(6.98)	(8.09)	(23.3)	(10.0)	(4.77)	(10.5)
Overt dictatorship, t	14.3	-40.7***	-9.0	-23.0***	11.1*	-44.5***
	(10.4)	(10.5)	(25.8)	(8.58)	(6.32)	(13.0)
Repression						
Political Terror Score (State Department), t, (IA)	-4.79**					-1.60
	(2.21)					(2.22)
Political Terror Score (State Department), t, (OD)	-2.90					-1.57
	(2.42)					(1.65)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.35***				0.29***
		(0.12)				(0.10)
Economic conditions "good" or "excellent," t, (OD)		0.34***				0.36***
		(0.11)				(0.11)
Felt safe walking alone at night, t (IA)		0.40***				0.31**
		(0.12)				(0.15)
Felt safe walking alone at night, t, (OD)		0.59***				0.69***
		(0.13)				(0.20)
Objective economic perceptions, t, (IA)			0.42***			
			(0.08)			
Objective economic perceptions, t, (OD)			.07			
			(0.24)			
Economic misperceptions, t, (IA)			0.32**			
			(0.14)			
Economic misperceptions, t, (OD)			0.45***			
			(0.12)			
Objective safety perceptions, t, (IA)			0.05			
			(0.32)			
Objective safety perceptions, t, (OD)			0.22			
			(0.44)			
Safety misperceptions, t, (IA)			0.16			
			(0.25)			
Safety misperceptions, t, (OD)			0.79***			
			(0.12)			
Information manipulation						
Press freedom, t, (IA)				-0.45**		-0.56***
				(0.22)		(0.21)
Press freedom, t, (OD)				-0.25		-0.29*
				(0.21)		(0.17)
Percent who think media have a lot of freedom, t, (IA)				0.32**		0.36***
				(0.14)		(0.12)
Percent who think media have a lot of freedom, t, (OD)				0.74***		0.30***
				(0.10)		(0.10)
Percent with Internet access at home, t, (IA)				-0.16*		-0.16**
				(0.081)		(0.077)
Percent with Internet access at home, t, (OD)				-0.28		-0.31**
				(0.31)		(0.16)
Total requests to Google to remove content, ths, t, (IA)				5.85***		7.81***
				(2.07)		(2.16)
Total requests to Google to remove content, ths, t, (OD)				2450.2		1206.1
				(2723.1)		(2242.9)

Table A10b: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-1.54 (4.55)	
Polling ended in 6 months before executive election (OD)					2.99 (4.42)	
Polling overlapped with executive election (IA)					-0.71 (4.02)	
Polling overlapped with executive election (OD)					-9.09 (11.7)	
Polling began in 6 months after executive election with turnover (IA)					19.2*** (4.31)	19.5*** (3.35)
Polling began in 6 months after executive election with turnover (OD)					no cases	no cases
Polling began in 6 months after executive election without turnover (IA)					2.65 (2.75)	
Polling began in 6 months after executive election without turnover (OD)					4.85 (5.01)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-1.71 (1.71)					-1.70 (1.27)
Economic conditions "good" or "excellent," t, (U)		0.58*** (0.12)				0.46*** (0.11)
Felt safe walking alone at night, t, (U)		0.30** (0.14)				0.29** (0.12)
Objective economic perceptions, t, (U)			0.56*** (0.17)			
Economic misperceptions, t, (U)			0.43** (0.17)			
Objective safety perceptions, t, (U)			0.51 (0.33)			
Safety misperceptions, t, (U)			0.46** (0.19)			
Press freedom, t, (U)				-0.32** (0.14)		-0.29** (0.14)
Percent who think media have a lot of freedom, t, (U)				0.64*** (0.12)		0.34*** (0.12)
Percent with Internet access at home, t, (U)				-0.14* (0.085)		-0.20*** (0.062)
Total requests to Google to remove content, ths, t, (U)				1.07*** (0.39)		1.97*** (0.34)
Polling ended in 6 months before executive election (U)					9.12 (5.84)	
Polling overlapped with executive election (U)					21.1*** (4.04)	
Polling began in 6 months after executive election with turnover (U)					15.8*** (4.46)	9.78* (5.92)
Polling began in 6 months after executive election without turnover (U)					4.32 (5.53)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.73	0.64	0.57	0.55	0.54	0.91
Hansen test, p	0.65	0.55	0.41	0.32	0.40	0.96
No. of instruments	31	50	42	45	40	64

Sources: See Table A1. **Notes:** IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries.

Table A10c: Threshold for overt dictatorship: 0.33 killings or more

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.57***	0.35***	0.41***	0.47***	0.58***	0.27***
	(0.096)	(0.095)	(0.09)	(0.094)	(0.092)	(0.078)
Informational autocracy, t	24.7***	-29.8	-18.2	-6.96	5.55	-18.3
	(9.26)	(23.8)	(36.8)	(12.3)	(9.23)	(19.7)
Unclassified authoritarian, t	9.30	-28.5***	-24.7	-23.3**	3.35	-25.0**
	(6.80)	(7.93)	(21.9)	(9.62)	(4.66)	(10.3)
Overt dictatorship, t	16.9*	-34.6***	-11.9	-17.8**	11.7**	-38.5***
	(9.54)	(9.30)	(20.1)	(8.01)	(5.76)	(10.2)
Repression						
Political Terror Score (State Department), t, (IA)	-8.37***					-2.37
	(3.20)					(4.50)
Political Terror Score (State Department), t, (OD)	-3.34					-0.40
	(2.19)					(1.54)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.26				0.14
		(0.18)				(0.17)
Economic conditions "good" or "excellent," t, (OD)		0.35***				0.27***
		(0.10)				(0.092)
Felt safe walking alone at night, t (IA)		0.34				0.25
		(0.37)				(0.30)
Felt safe walking alone at night, t, (OD)		0.50***				0.55***
		(0.13)				(0.14)
Objective economic perceptions, t, (IA)			0.36***			
			(0.09)			
Objective economic perceptions, t, (OD)			0.55***			
			(0.21)			
Economic misperceptions, t, (IA)			0.05			
			(0.12)			
Economic misperceptions, t, (OD)			0.35***			
			(0.13)			
Objective safety perceptions, t, (IA)			0.21			
			(0.58)			
Objective safety perceptions, t, (OD)			0.03			
			(0.31)			
Safety misperceptions, t, (IA)			-0.01			
			(0.33)			
Safety misperceptions, t, (OD)			0.71***			
			(0.10)			
Information manipulation						
Press freedom, t, (IA)				-0.16		-0.18
				(0.24)		(0.29)
Press freedom, t, (OD)				-0.26		-0.45***
				(0.16)		(0.14)
Percent who think media have a lot of freedom, t, (IA)				0.14		0.092
				(0.24)		(0.23)
Percent who think media have a lot of freedom, t, (OD)				0.61***		0.42***
				(0.098)		(0.088)
Percent with Internet access at home, t, (IA)				0.050		0.071
				(0.11)		(0.16)
Percent with Internet access at home, t, (OD)				-0.082		-0.14
				(0.069)		(0.091)
Total requests to Google to remove content, ths, t, (IA)				2948.2		2302.2**
				(1860.4)		(1047.1)
Total requests to Google to remove content, ths, t, (OD)				5.05**		7.70***
				(2.0)		(2.90)

Table A10c: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-3.30 (3.91)	
Polling ended in 6 months before executive election (OD)					4.20 (3.74)	
Polling overlapped with executive election (IA)					2.08 (2.28)	
Polling overlapped with executive election (OD)					-5.52 (6.72)	
Polling began in 6 months after executive election with turnover (IA)					no cases	no cases
Polling began in 6 months after executive election with turnover (OD)					18.9*** (4.32)	20.9*** (4.17)
Polling began in 6 months after executive election without turnover (IA)					2.71 (3.78)	
Polling began in 6 months after executive election without turnover (OD)					4.08 (3.76)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-1.67 (1.67)					-1.66 (1.28)
Economic conditions "good" or "excellent," t, (U)		0.55*** (0.12)				0.46*** (0.11)
Felt safe walking alone at night, t, (U)		0.29** (0.14)				0.27** (0.13)
Objective economic perceptions, t, (U)			0.57*** (0.13)			
Economic misperceptions, t, (U)			0.42*** (0.14)			
Objective safety perceptions, t, (U)			0.25 (0.32)			
Safety misperceptions, t, (U)			0.42** (0.18)			
Press freedom, t, (U)				-0.27* (0.15)		-0.27** (0.13)
Percent who think media have a lot of freedom, t, (U)				0.65*** (0.12)		0.35*** (0.13)
Percent with Internet access at home, t, (U)				-0.12 (0.096)		-0.18*** (0.071)
Total requests to Google to remove content, ths, t, (U)				0.97** (0.46)		1.95*** (0.38)
Polling ended in 6 months before executive election (U)					8.86 (6.00)	
Polling overlapped with executive election (U)					21.6*** (4.62)	
Polling began in 6 months after executive election with turnover (U)					15.5*** (4.31)	10.2* (5.76)
Polling began in 6 months after executive election without turnover (U)					4.32 (5.45)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.67	0.69	0.64	0.66	0.55	0.95
Hansen test, p	0.84	0.57	0.53	0.76	0.38	0.83
No. of instruments	31	50	42	45	40	64

Sources: See Table A1.

Notes: IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries.

Table A10d: Threshold for overt dictatorship: 40.29 killings or more

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.55***	0.32***	0.42***	0.44***	0.56***	0.29***
	(0.092)	(0.088)	(0.083)	(0.082)	(0.090)	(0.072)
Informational autocracy, t	18.5**	-30.9***	-12.1	-5.84	11.9*	-22.4**
	(8.12)	(9.61)	(17.0)	(10.1)	(6.25)	(11.0)
Unclassified authoritarian, t	9.97	-30.0***	-42.5	-22.0**	4.04	-25.6**
	(6.93)	(8.03)	(22.0)	(9.73)	(4.86)	(10.4)
Overt dictatorship, t	9.13	-40.7***	-4.86	-25.9***	11.4*	-39.4***
	(12.8)	(11.7)	(16.2)	(8.21)	(6.26)	(10.3)
Repression						
Political Terror Score (State Department), t, (IA)	-4.06**					-1.08
	(1.84)					(1.67)
Political Terror Score (State Department), t, (OD)	-2.16					-1.81
	(3.16)					(1.52)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.36***				0.32***
		(0.12)				(0.11)
Economic conditions "good" or "excellent," t, (OD)		0.26**				0.22**
		(0.13)				(0.11)
Felt safe walking alone at night, t (IA)		0.42***				0.33**
		(0.12)				(0.14)
Felt safe walking alone at night, t, (OD)		0.62***				0.51***
		(0.14)				(0.18)
Objective economic perceptions, t, (IA)			0.48***			
			(0.12)			
Objective economic perceptions, t, (OD)			-0.06			
			(0.30)			
Economic misperceptions, t, (IA)			0.31**			
			(0.13)			
Economic misperceptions, t, (OD)			0.45***			
			(0.17)			
Objective safety perceptions, t, (IA)			0.08			
			(0.27)			
Objective safety perceptions, t, (OD)			0.16			
			(0.27)			
Safety misperceptions, t, (IA)			0.31			
			(0.20)			
Safety misperceptions, t, (OD)			0.84***			
			(0.11)			
Information manipulation						
Press freedom, t, (IA)				-0.48**		-0.51***
				(0.22)		(0.19)
Press freedom, t, (OD)				-0.17		-0.29**
				(0.16)		(0.13)
Percent who think media have a lot of freedom, t, (IA)				0.51***		0.36***
				(0.13)		(0.082)
Percent who think media have a lot of freedom, t, (OD)				0.85***		0.68***
				(0.15)		(0.18)
Percent with Internet access at home, t, (IA)				-0.16**		-0.13*
				(0.074)		(0.070)
Percent with Internet access at home, t, (OD)				-0.36		-0.60***
				(0.29)		(0.18)
Total requests to Google to remove content, ths, t, (IA)				5.73***		7.61***
				(2.05)		(2.01)
Total requests to Google to remove content, ths, t, (OD)				501.3		1472.7
				(1992.1)		(2105.7)

Table A10d: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-0.034 (4.29)	
Polling ended in 6 months before executive election (OD)					0.61 (3.48)	
Polling overlapped with executive election (IA)					0.99 (3.65)	
Polling overlapped with executive election (OD)					-25.0*** (3.68)	
Polling began in 6 months after executive election with turnover (IA)					18.4*** (4.15)	19.8*** (3.21)
Polling began in 6 months after executive election with turnover (OD)					no cases	no cases
Polling began in 6 months after executive election without turnover (IA)					-0.0023 (2.78)	
Polling began in 6 months after executive election without turnover (OD)					10.8** (4.91)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-1.84 (1.72)					-1.48 (1.24)
Economic conditions "good" or "excellent," t, (U)		0.59*** (0.13)				0.43*** (0.10)
Felt safe walking alone at night, t, (U)		0.30** (0.13)				0.30** (0.13)
Objective economic perceptions, t, (U)			0.57*** (0.16)			
Economic misperceptions, t, (U)			0.44*** (0.17)			
Objective safety perceptions, t, (U)			0.52* (0.31)			
Safety misperceptions, t, (U)			0.46** (0.18)			
Press freedom, t, (U)				-0.30** (0.14)		-0.27** (0.14)
Percent who think media have a lot of freedom, t, (U)				0.66*** (0.12)		0.35*** (0.12)
Percent with Internet access at home, t, (U)				-0.14 (0.087)		-0.19*** (0.061)
Total requests to Google to remove content, ths, t, (U)				1.16*** (0.41)		1.91*** (0.34)
Polling ended in 6 months before executive election (U)					8.74 (5.95)	
Polling overlapped with executive election (U)					21.1*** (4.16)	
Polling began in 6 months after executive election with turnover (U)					15.9*** (4.19)	10.7* (6.09)
Polling began in 6 months after executive election without turnover (U)					4.13 (5.50)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.72	0.65	0.54	0.68	0.78	0.95
Hansen test, p	0.79	0.58	0.51	0.59	0.31	0.85
No. of instruments	31	50	42	45	40	64

Sources: See Table A1.

Notes: IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries.

Table A11: Determinants of government approval (OLS with country and year fixed effects)

	(1)	(2)
Approval, t-1	0.20***	
	(0.07)	
Repression		
Political Terror Score (Amnesty International), t	-1.28	-1.28*
	(1.00)	(0.72)
Perceived performance		
Objective economic perceptions, t	0.47***	0.48***
	(0.14)	(0.12)
Economic misperceptions, t	0.19**	0.26***
	(0.08)	(0.07)
Objective safety perceptions, t	0.53***	0.59***
	(0.14)	(0.13)
Safety misperceptions, t	0.61***	0.62***
	(0.08)	(0.09)
Information manipulation		
Press freedom, t	-0.34**	-0.31***
	(0.13)	(0.07)
Percent who think media have a lot of freedom, t	0.26***	0.24***
	(0.06)	(0.06)
Percent with internet access at home, t	-0.32**	-0.31**
	(0.13)	(0.13)
Total requests to Google to remove content, ths, t	0.81***	1.0***
	(0.28)	(0.29)
Elections		
Polling ended in 6 months before executive election	2.15	1.56
	(2.03)	(1.73)
Polling overlapped with executive election	-2.20	-3.67***
	(1.91)	(1.34)
Polling began in 6 months after election with turnover	8.49**	5.01
	(3.42)	(3.07)
Polling began in 6 months after election without turnover	2.91	3.30**
	(1.91)	(1.62)
Observations	252	308
R^2	.884	.873

Sources: See Table A1.

Note: OLS regressions. Robust standard errors, clustered by country and year, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$.

Table A12: Various robustness checks

	(1) Reducing instrum-ents	(2) Additional controls	(3) Excluding regime transitions	(4) VDEM non-democ-racies	(5) Controlling for Polity2	(6) No year dummies	(7) After 2011
Approval, t-1	0.35***	0.42***	0.35***	0.32***	0.34***	0.33***	0.24**
	(0.07)	(0.08)	(0.07)	(0.07)	(0.07)	(0.07)	(0.10)
Repression							
Political Terror Score	-1.38	-0.80	-0.63	-0.32	-0.82	-0.59	-0.56
(Amnesty International), t	(1.02)	(1.28)	(1.08)	(1.29)	(1.25)	(1.37)	(1.16)
Perceived performance							
Objective economic	0.56***	0.49***	0.59***	0.56***	0.61***	0.56***	0.65***
perceptions, t	(0.13)	(0.15)	(0.15)	(0.12)	(0.13)	(0.10)	(0.18)
Economic	0.30***	0.30***	0.35***	0.27***	0.27***	0.32***	0.42***
misperceptions, t	(0.08)	(0.10)	(0.09)	(0.07)	(0.07)	(0.08)	(0.10)
Objective safety	0.19**	0.19	0.25***	0.25***	0.21**	0.21**	0.22
perceptions, t	(0.09)	(0.12)	(0.08)	(0.08)	(0.09)	(0.10)	(0.13)
Safety misperceptions, t	0.41***	0.52***	0.46***	0.44***	0.36***	0.44***	0.37***
	(0.13)	(0.13)	(0.12)	(0.11)	(0.11)	(0.10)	(0.13)
Information manipulation							
Press freedom, t	-0.39**	-0.42*	-0.19	-0.45***	-0.45**	-0.38**	-0.32
	(0.18)	(0.23)	(0.22)	(0.16)	(0.18)	(0.17)	(0.20)
Percent who think media	0.31***	0.30***	0.28***	0.37***	0.32***	0.33***	0.37***
have a lot of freedom, t	(0.09)	(0.11)	(0.10)	(0.09)	(0.08)	(0.09)	(0.12)
Percent with internet	-0.21*	-0.22*	-0.16	-0.23**	-0.25**	-0.19**	-0.18
access at home, t	(0.11)	(0.12)	(0.12)	(0.10)	(0.11)	(0.09)	(0.16)
Total requests to Google	1.5***	1.5***	1.6***	1.4***	1.4***	1.6***	1.7***
to remove content, ths, t	(0.46)	(0.48)	(0.46)	(0.42)	(0.42)	(0.44)	(0.56)
Elections							
Polling began in 6 months	9.81*	19.9***	14.1**	9.00*	8.81*	10.6**	10.4
after election with turnover	(5.02)	(6.4)	(5.5)	(4.93)	(4.96)	(5.11)	(6.91)
Polling began in 6 months	4.59**	4.44**	4.21*	3.20	4.27**	3.98**	2.59
after election without turnover	(2.02)	(1.99)	(2.31)	(2.16)	(1.90)	(1.96)	(2.05)
Polling overlapped with	1.70	3.24	2.47	1.00	0.88	0.63	4.83
executive election	(2.99)	(3.28)	(2.95)	(3.05)	(2.82)	(2.69)	(2.96)
Polling ended in 6 months	3.08	5.54**	2.13	1.36	2.57	3.01	3.63
before executive election	(2.52)	(2.59)	(2.65)	(2.62)	(2.38)	(2.09)	(3.00)
Leader changed, t		-5.59**					
		(2.84)					
Leader's years in office, t		-0.37					
		(0.33)					
International war, t		11.06**					
		(4.44)					
Civil war, t		-1.29					
		(3.43)					
Democracy (Polity2), t-1					0.23		
					(0.59)		
Observations	252	242	228	228	252	252	156
Countries	50	49	47	47	50	50	43
Arellano-Bond AR(2), p	0.53	0.41	0.39	0.37	0.53	0.31	0.47
Hansen test, p	0.61	0.71	0.58	0.76	0.80	0.91	0.14
Instruments	38	44	38	47	50	38	33

Sources: See Table A1.

Note: Dependent variable is percent approving of the leadership. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. Instruments: All columns: objective perceptions and international and civil war treated as exogenous. Columns (1)-(3) and (7): PTS also treated as exogenous; (1)-(3) and (7): press freedom, perceived media freedom, internet access: first and second lags, others: just first lag; (4)-(6) lagged approval: just first lag, others first and second lags.

Table A13: Model as in Table 1, column 8, dropping countries from Table A4 with possible preference falsification

	(1)	(2)	(3)	(4)	(5)
Approval, t-1	0.33***	0.27***	0.34***	0.37***	0.26***
	(0.069)	(0.084)	(0.082)	(0.070)	(0.072)
Repression					
Political Terror Score	-1.10	-0.82	-0.76	-0.81	-1.69
(State Department), t	(1.34)	(1.53)	(1.65)	(1.40)	(1.67)
Perceived performance					
Objective economic	0.59***	0.50***	0.59***	0.58***	0.50***
perceptions, t	(0.12)	(0.17)	(0.13)	(0.12)	(0.15)
Economic	0.29***	0.23***	0.34***	0.29***	0.26***
misperceptions, t	(0.075)	(0.087)	(0.093)	(0.076)	(0.073)
Objective safety	0.20**	0.30***	0.17	0.18**	0.24*
perceptions, t	(0.088)	(0.099)	(0.10)	(0.088)	(0.12)
Safety misperceptions, t	0.38***	0.42***	0.30***	0.34***	0.42***
	(0.11)	(0.14)	(0.11)	(0.11)	(0.13)
Information					
Press freedom, t	-0.40**	-0.28	-0.33*	-0.38**	-0.55***
	(0.16)	(0.18)	(0.18)	(0.15)	(0.20)
Percent who think media	0.31***	0.27**	0.33***	0.29***	0.33***
have a lot of freedom, t	(0.089)	(0.11)	(0.098)	(0.091)	(0.12)
Percent with Internet	-0.23**	-0.13	-0.19*	-0.22**	-0.17
access at home, t	(0.10)	(0.12)	(0.10)	(0.099)	(0.11)
Total requests to Google	1.5***	1.3***	1.6***	1.4***	1.1**
to remove content, ths, t	(0.44)	(0.50)	(0.52)	(0.42)	(0.46)
Elections					
Polling began in 6 months	2.66	3.05	3.52	2.96	1.82
before executive election	(2.37)	(3.02)	(2.83)	(2.43)	(2.44)
Polling overlapped with	1.29	0.75	1.57	1.58	-0.87
executive election	(2.93)	(3.08)	(2.74)	(3.02)	(3.88)
Polling began in 6 months	9.76**	11.0*	16.2***	13.0**	8.71
after election with turnover	(4.93)	(6.14)	(4.38)	(5.14)	(6.03)
Polling began in 6 months	4.64**	3.95	2.19	3.85*	5.98***
after election without turnover	(1.97)	(2.73)	(1.80)	(1.97)	(2.30)
Observations	252	188	189	239	186
Countries	50	42	42	48	41
Arellano-Bond AR(2), p	0.53	0.78	0.086	0.079	0.75
Hansen test, p	0.78	0.26	0.36	0.88	0.97
No. of instruments	43	43	43	43	43

Sources: See Table A1.

Notes: Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. (1) reproduces Table 1, model 8, for comparison. (2) drops countries in which approval correlated positively over time with PTS (State Department). (3) drops countries in which approval correlated positively over time with PTS (AI). (4) drops countries in which approval correlated positively over time with natural log of number killed in one-sided violence by state (UCDP). (5) drops countries in which approval correlated positively over time with perceived fear. In all models, objective perceptions treated as exogenous; lagged approval and election variables instrumented with first lag, others with first and second lags.

Table A14: Determinants of government approval: 4-year threshold for inclusion

	(1)	(2)	(3)	(4)	(5)	(6)
Approval, t-1	0.55***	0.30***	0.38***	0.45***	0.62***	0.25***
	(0.088)	(0.087)	(0.097)	(0.079)	(0.093)	(0.078)
Informational autocracy, t	11.6	-31.5***	-11.8	-0.48	10.4**	-24.1*
	(10.6)	(8.89)	(15.8)	(10.2)	(5.85)	(13.0)
Unclassified authoritarian, t	8.17	-34.5***	-45.4**	-14.6	0.97	-14.8
	(7.53)	(8.07)	(21.7)	(10.4)	(4.47)	(11.9)
Overt dictatorship, t	12.6	-45.3***	-26.3	-23.0***	10.9	-45.9***
	(10.3)	(10.7)	(25.0)	(8.39)	(6.63)	(12.5)
Repression						
Political Terror Score (State Department), t, (IA)	-1.97					-1.60
	(2.66)					(2.22)
Political Terror Score (State Department), t, (OD)	-2.96					-1.57
	(2.44)					(1.65)
Perceived performance						
Economic conditions "good" or "excellent," t, (IA)		0.38***				0.28***
		(0.11)				(0.093)
Economic conditions "good" or "excellent," t, (OD)		0.34***				0.36***
		(0.11)				(0.11)
Felt safe walking alone at night, t (IA)		0.39***				0.21
		(0.13)				(0.13)
Felt safe walking alone at night, t, (OD)		0.63***				0.67***
		(0.13)				(0.20)
Objective economic perceptions, t, (IA)			0.50***			
			(0.085)			
Objective economic perceptions, t, (OD)			0.14			
			(0.22)			
Economic misperceptions, t, (IA)			0.35**			
			(0.14)			
Economic misperceptions, t, (OD)			0.41***			
			(0.11)			
Objective safety perceptions, t, (IA)			0.029			
			(0.25)			
Objective safety perceptions, t, (OD)			0.47			
			(0.43)			
Safety misperceptions, t, (IA)			0.18			
			(0.22)			
Safety misperceptions, t, (OD)			0.81***			
			(0.13)			
Information manipulation						
Press freedom, t, (IA)				-0.40*		-0.40*
				(0.23)		(0.21)
Press freedom, t, (OD)				-0.23		-0.28
				(0.21)		(0.17)
Percent who think media have a lot of freedom, t, (IA)				0.35***		0.32***
				(0.13)		(0.10)
Percent who think media have a lot of freedom, t, (OD)				0.69***		0.30**
				(0.11)		(0.12)
Percent with Internet access at home, t, (IA)				-0.12		-0.11
				(0.078)		(0.10)
Percent with Internet access at home, t, (OD)				-0.27		-0.26
				(0.31)		(0.17)
Total requests to Google to remove content, ths , t, (IA)				5.22**		5.80**
				(2.06)		(2.37)
Total requests to Google to remove content, ths, t, (OD)				2299.6		1015.2
				(2766.1)		(2132.0)

Table A14: cont.

Elections						
Polling ended in 6 months before executive election (IA)					-1.91 (5.25)	
Polling ended in 6 months before executive election (OD)					2.58 (4.60)	
Polling overlapped with executive election (IA)					2.45 (4.09)	
Polling overlapped with executive election (OD)					-9.08 (11.7)	
Polling began in 6 months after executive election with turnover (IA)					19.2*** (4.15)	18.3*** (3.14)
Polling began in 6 months after executive election with turnover (OD)					No cases	No cases
Polling began in 6 months after executive election without turnover (IA)					2.55 (2.57)	
Polling began in 6 months after executive election without turnover (OD)					5.04 (5.15)	
Coefficients at interaction terms with dummy for unclassified non-democracies (U)						
Political Terror Score (State Department), t, (U)	-2.01 (1.81)					-1.94 (1.42)
Economic conditions "good" or "excellent," t, (U)		0.63*** (0.17)				0.51*** (0.17)
Felt safe walking alone at night, t, (U)		0.33** (0.15)				0.25* (0.13)
Objective economic perceptions, t, (U)			0.65*** (0.22)			
Economic misperceptions, t, (U)			0.49** (0.24)			
Objective safety perceptions, t, (U)			0.50* (0.30)			
Safety misperceptions, t, (U)			0.47** (0.20)			
Press freedom, t, (U)				-0.44*** (0.15)		-0.52*** (0.12)
Percent who think media have a lot of freedom, t, (U)				0.60*** (0.13)		0.30** (0.14)
Percent with Internet access at home, t, (U)				-0.14 (0.089)		-0.21*** (0.067)
Total requests to Google to remove content, ths, t, (U)				0.97** (0.39)		1.87*** (0.35)
Polling ended in 6 months before executive election (U)					11.0** (5.64)	
Polling overlapped with executive election (U)					21.8*** (3.76)	
Polling began in 6 months after executive election with turnover (U)					18.2*** (5.73)	10.8* (5.76)
Polling began in 6 months after executive election without turnover (U)					4.93 (5.81)	
Observations	261	261	252	258	258	258
Countries	51	51	50	51	51	51
Arellano-Bond AR(2), p	0.73	0.62	0.59	0.57	0.56	0.83
Hansen test, p	0.59	0.43	0.51	0.27	0.44	0.92
No. of instruments	31	50	42	45	40	64

Sources: See Table A1. **Notes:** IA: Informational autocracies; OD: Overt dictatorships; U: Unclassified non-democracies. Subtype classifications as at start of year. Robust standard errors, clustered by country, in parentheses. *$p < 0.10$, **$p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. All variables instrumented with first to third lags except: objective economic and safety perceptions treated as exogenous; (1) first to second lags; (3) type dummies and lagged approval first lag, economic and safety misperceptions first and second lags; (4) Internet access first and second lags, others just first lag; (5 and 6) all just first lags. Model (6) should be interpreted with caution since the number of instruments is unavoidably large relative to the number of countries. Classifying all leaders in power in a non-democracy for at least four years.

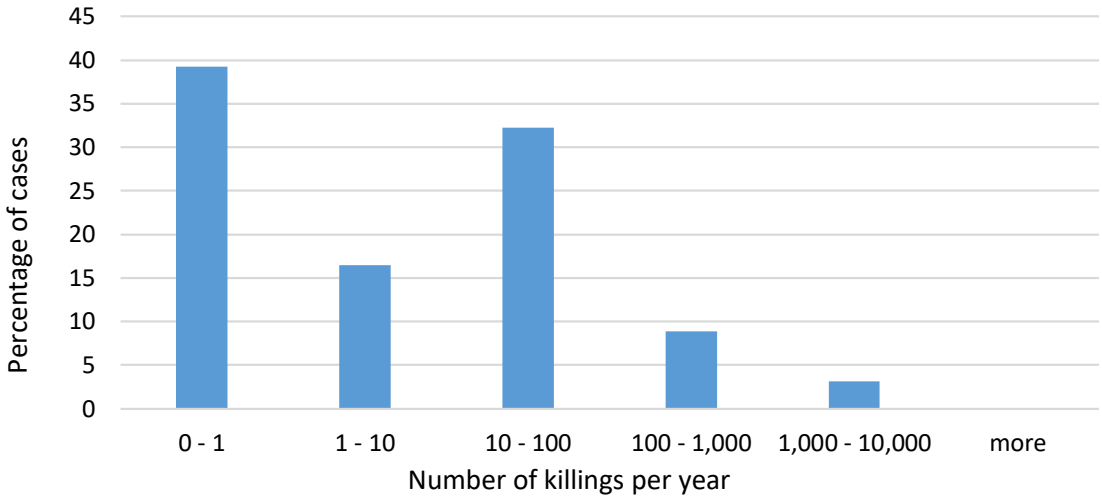
Table A15: Determinants of approval (adding controls for opposition parties)

	(1)	(2)
Approval, t-1	0.35***	0.35***
	(0.071)	(0.069)
Repression		
Political Terror Score (State Department), t	-0.85	-0.17
	(1.38)	(1.53)
Perceived performance		
Objective economic perceptions, t	0.55***	0.58***
	(0.15)	(0.16)
Economic misperceptions, t	0.28***	0.27***
	(0.09)	(0.09)
Objective safety perceptions, t	0.20**	0.21**
	(0.10)	(0.098)
Safety misperceptions, t	0.32***	0.34***
	(0.12)	(0.13)
Information manipulation		
Press freedom, t	-0.11	-0.10
	(0.25)	(0.25)
Percent who think media have a lot of freedom, t	0.39***	0.37***
	(0.08)	(0.08)
Percent with internet access at home, t	-0.089	-0.14
	(0.11)	(0.13)
Total requests to Google to remove content, ths, t	1.2**	1.4**
	(0.54)	(0.63)
Elections		
Polling overlapped with executive election	2.15	2.22
	(2.86)	(3.01)
Polling ended in 6 months before executive election	3.59	3.46
	(2.48)	(2.50)
Polling began in 6 months after election with turnover	10.3**	11.5**
	(4.78)	(5.4)
Polling began in 6 months after election without turnover	4.18*	3.79*
	(2.17)	(2.22)
Opposition party in legislature, t-1	2.54	
	(6.43)	
Opposition party has > 10 percent of seats, t-1		-2.15
		(4.29)
Observations	244	244
Countries	50	50
Arellano-Bond AR(2), p	0.61	0.62
Hansen test, p	0.73	0.74
No. of instruments	38	38

Sources: See Table A1.

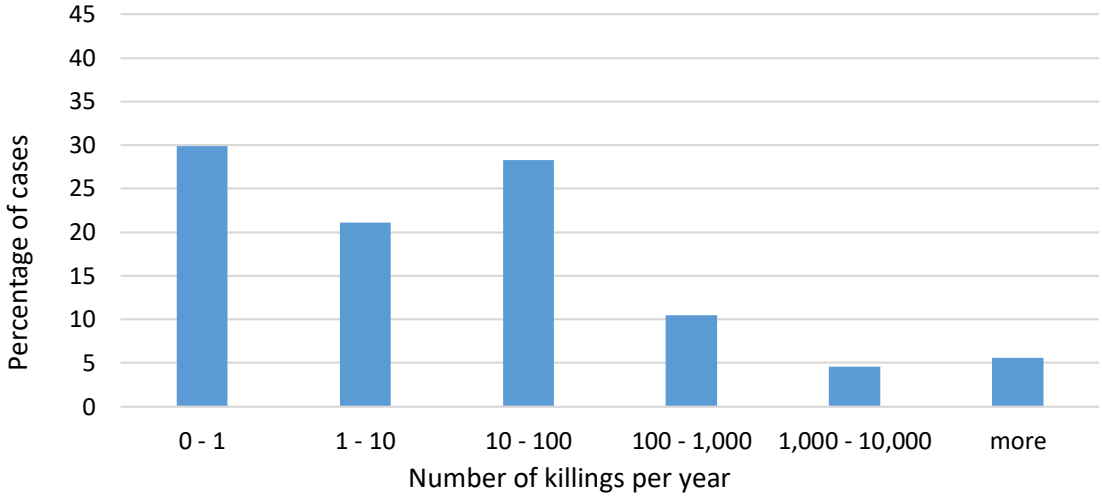
Note: Dependent variable is percent approving of the leadership. Robust standard errors, clustered by country, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Estimated with xtabond2, collapse option to economize on instruments. All models include year dummies. Objective perceptions treated as exogenous, all other variables instrumented with first lag.

Figure A1: Distribution of estimated state political killings per year under dictators in power (for at least 5 years), 2006-16



Source: Guriev and Treisman (2019).

Figure A2: Distribution of estimated state political killings per year under dictators in power (for at least 5 years), all 1945-2016 cases



Source: Guriev and Treisman (2019).

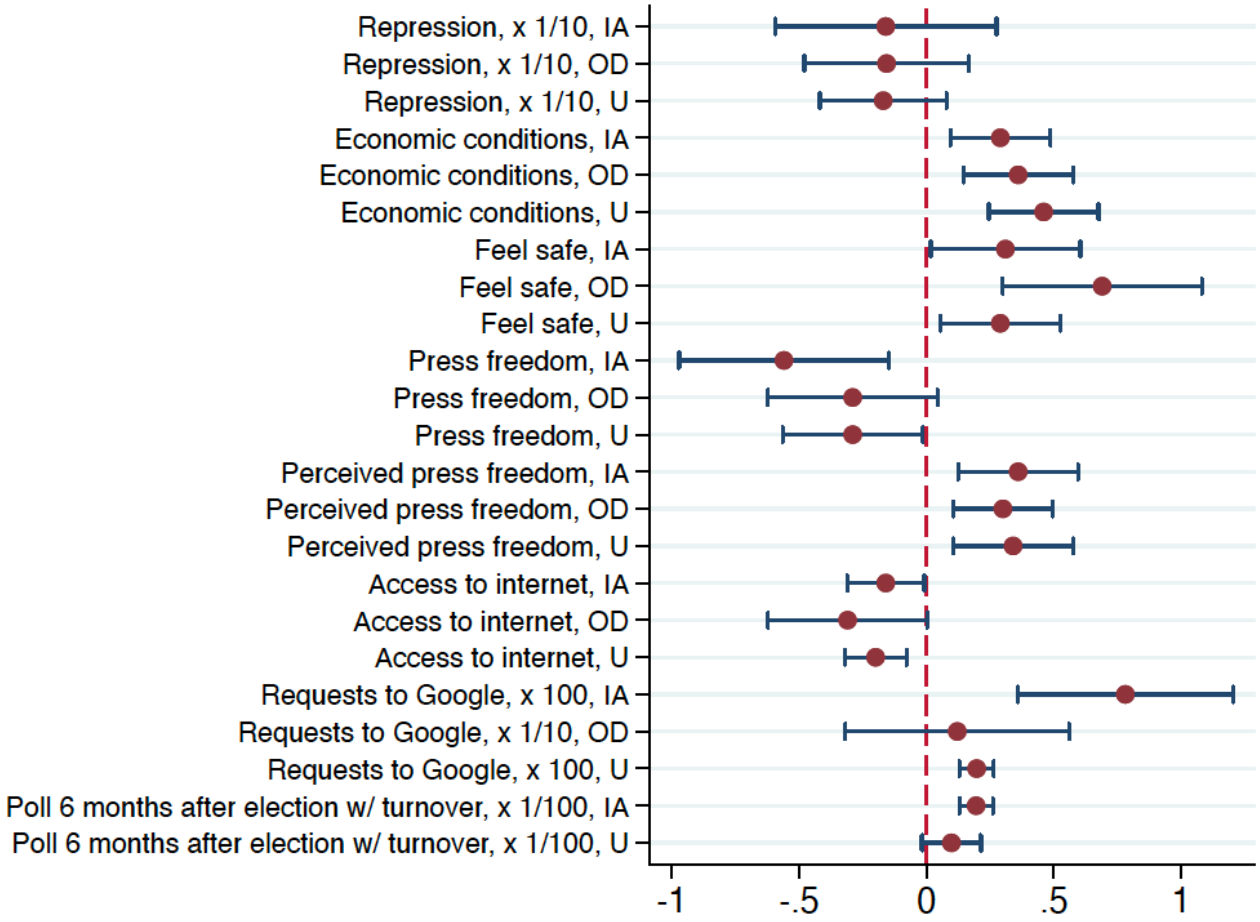


Figure A3. Correlates of government approval, broken down among "informational autocracies," "overt dictatorships," and "unclassified" non-democracies. Each point represents the estimated effect on approval of a one-unit increase in the given variable. Lines represent 95% confidence intervals. See Table A5, column 6 for full regressions.

Online Appendix B: Simulations

Methodology

To simulate, we use the model in Table 1, column 8. The simplest way to simulate would be to use model predictions. Since the model estimated is:

$$r_{i,t} = \alpha r_{i,t-1} + \boldsymbol{X}'_{i,t}\boldsymbol{\beta} + \gamma_i + \delta_t + \varepsilon_{i,t} ,$$

the predictions $\hat{r}_{it}$ can be generated in the standard way:

$$\hat{r}_{i,t} = \hat{\alpha} r_{i,t-1} + \boldsymbol{X}'_{i,t}\widehat{\boldsymbol{\beta}} + \hat{\gamma}_i + \hat{\delta}_t .$$

Forecasts thus calculated are shown in Figure B2.

However, predictions calculated in the standard way include in each period the actual value of the lagged dependent variable, $r_{i,t-1}$. They are thus anchored to the actual series. A stronger test is to proceed iteratively, using the prediction as of year *t-1* as the lagged dependent variable when calculating the predicted value for year t. That is, we calculate "iterative predictions," $\tilde{r}_{i,t}$, where

$$\begin{aligned}
\tilde{r}_{i,1} &= \hat{r}_{i,1} , \\
\tilde{r}_{i,2} &= \hat{\alpha}\tilde{r}_{i,1} + \boldsymbol{X}'_{i,2}\widehat{\boldsymbol{\beta}} + \hat{\gamma}_i + \hat{\delta}_2 , \\
\tilde{r}_{i,3} &= \hat{\alpha}\tilde{r}_{i,2} + \boldsymbol{X}'_{i,3}\widehat{\boldsymbol{\beta}} + \hat{\gamma}_i + \hat{\delta}_3 ,
\end{aligned}$$

and so on. In this method, errors cumulate over time, allowing the simulated series to stray far from the correct values. We show predictions calculated in this way in Figure B1.

For convenience, in the calculations we use the fact that for all $t > 2$

$$\tilde{r}_{i,t} = \hat{r}_{i,t} + \hat{\alpha}\left(\tilde{r}_{i,t-1} - r_{i,t-1}\right)$$

Because there are some gaps in the approval series, we interpolate linearly to fill internal gaps before calculating the predictions. (The regressions themselves do not involve any interpolations or imputations in the dependent variable). Since the World Bank data on growth and GDP per capita in Venezuela are missing for 2014-16, we use growth rates from the IMF's World Economic Outlook database to generate these missing observations for the simulations.

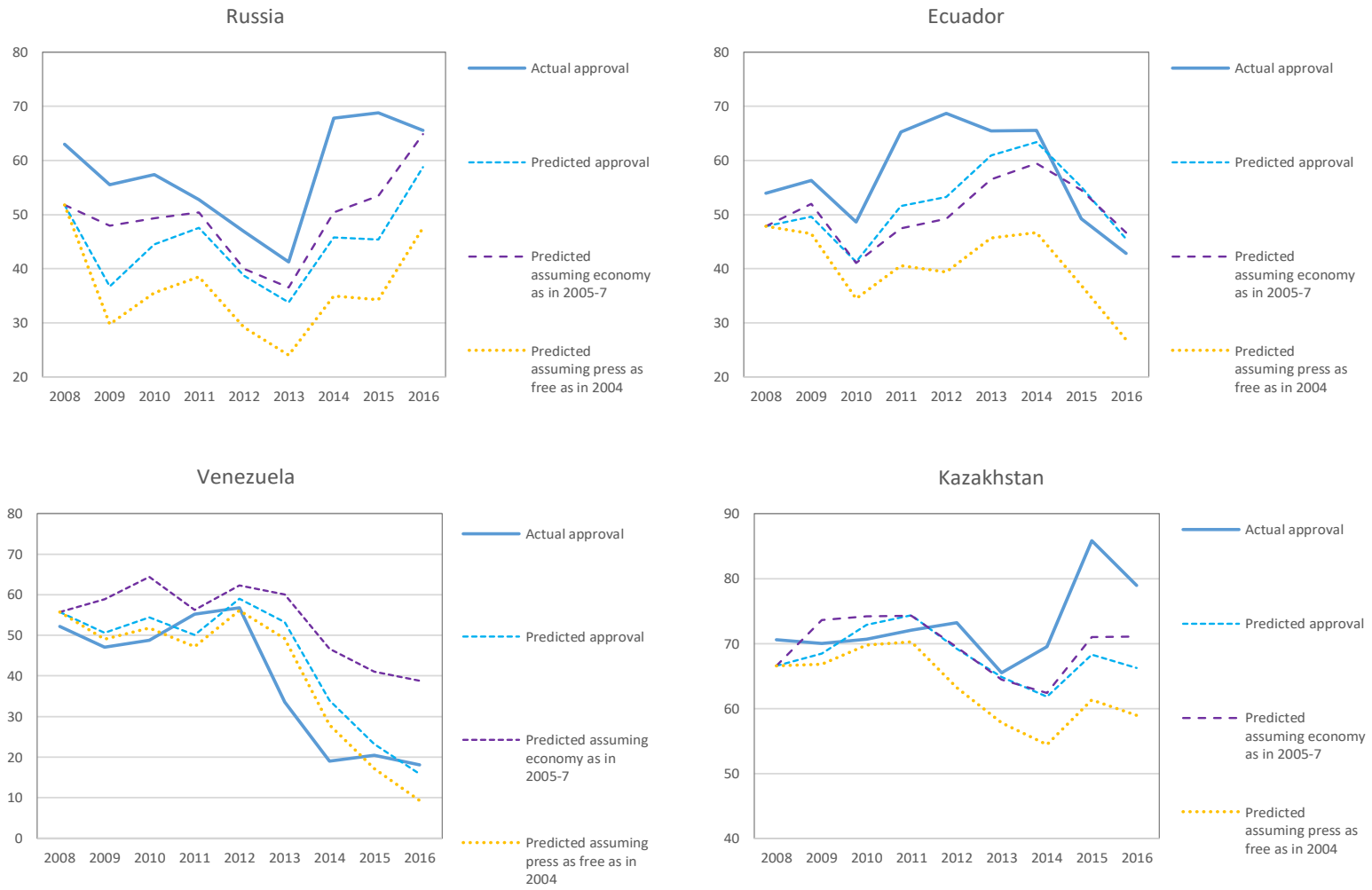
Iterative predictions generated in this more demanding way (see blue dashed line in Figure B1) are more accurate for some countries than for others. For Russia, the predictions capture the trend well, although they do not capture the full leap in approval in 2014 that we associate with the Russian annexation of Crimea. Venezuela's forecast is also quite accurate. Note, however, that actual approval is above the prediction during the Chavez presidency, but immediately falls below it once Maduro takes over in 2013, suggesting the importance of individual leaders. Turnover of leaders has been shown to have various other consequences—from institutional change (Jones and Olken 2009) to economic growth (Jones and Olken 2005). For Ecuador, the model gets the trend right, but the rise is more gradual than in reality. The plot for Kazakhstan suggests that we have missed some factor that helps to account for Nazarbaev's surge in 2015; this might be a very large election effect.

The purple dashed lines show simulated values recalculated supposing that economic performance in 2008-14 had remained at the average level for 2005-7. That is, we imagine away the effects of the global economic crisis of 2008-9. Specifically, we calculate the average "objective" economic perception for 2005-7—that is the value for economic perceptions that could be predicted from the country's income level, growth rate, and inflation and unemployment rates. We then fix objective economic perceptions at this level in the following years, and calculate model predictions based on this.

This casts light on the influence of economic factors on government approval. In Russia and Venezuela, the models suggest the government would have been substantially more popular in the post-crisis years had economic growth remained strong (the purple dashed line is above the blue dashed line). For Kazakhstan, economic performance only deteriorated significantly in 2015-16, and in Ecuador, performance was actually better after 2008 than before.

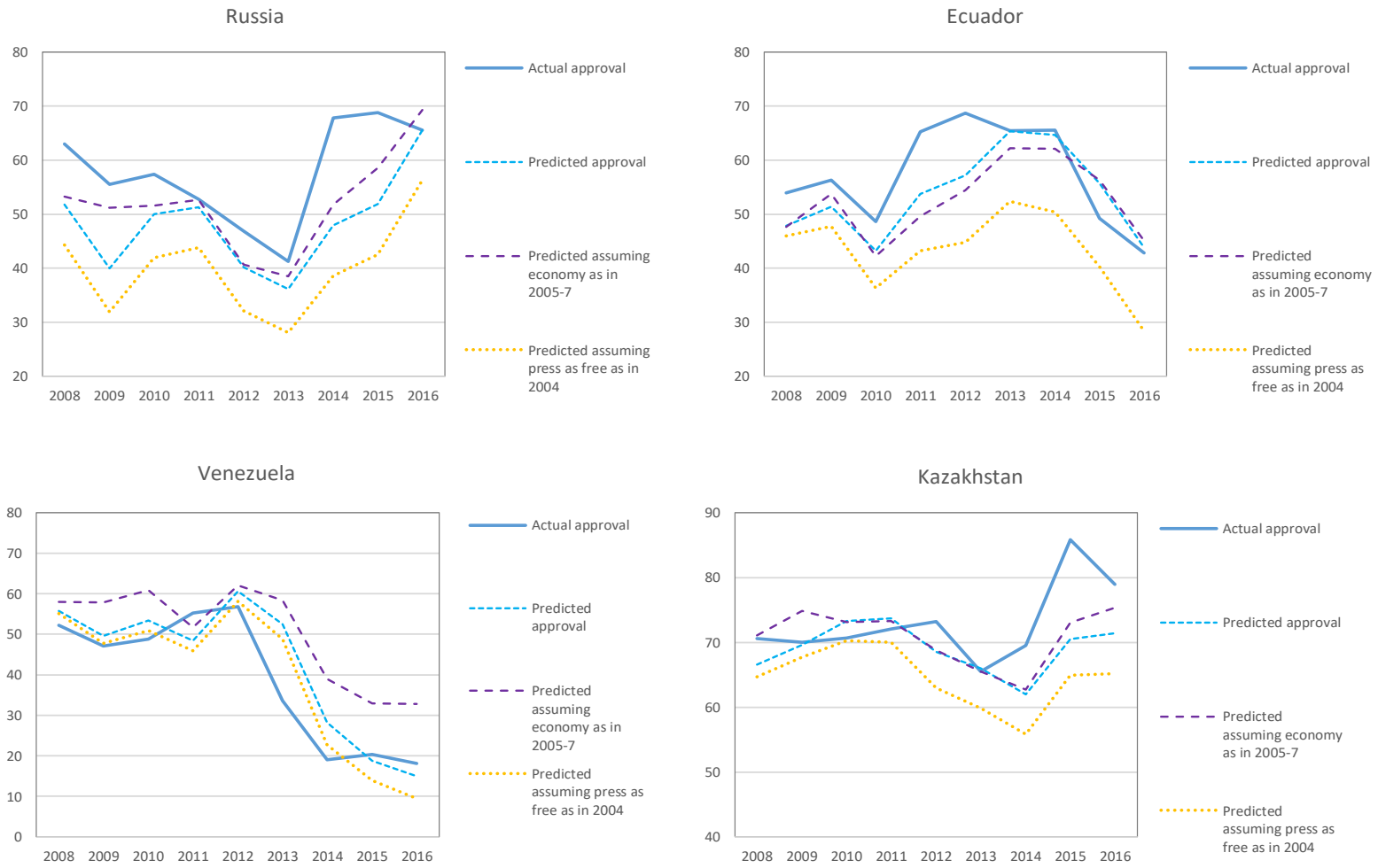
Finally, the yellow dotted line is calculated fixing the level of media freedom at its 2004 value. In other words, it shows predicted approval had there been no subsequent tightening of press restrictions. Both Putin in Russia and Correa in Ecuador appear to have received a significant boost from their manipulation of the media (there is a sizeable gap between the blue dashed line and the yellow dotted one). In Ecuador, the contribution of such manipulation rises from 2011, as President Correa's rating soars alongside tightening press restrictions. The coefficient is significant and gradually increasing in Kazakhstan as well after 2011. In Venezuela, too, decreasing press freedom made a small but growing contribution to the leader's approval.

Figure B1: Simulating government approval ratings (iterative predictions)



Sources: Gallup World Poll, World Bank, Google, Freedom House, authors' calculations. **Notes**: "Predicted assuming economy as in 2005-07": simulated assuming the objective economic indicators were average for 2005-7 in each subsequent year. "Predicted assuming no internet controls and press as free as in 2004": simulated subtracting out the estimated effect of Google request and fixing press freedom index at 2004 level.

Figure B2: Simulating government approval ratings: predictions using actual lagged dependent variable



Sources: Gallup World Poll, World Bank, Google, Freedom House, authors' calculations. **Notes**: "Predicted assuming economy as in 2005-07": simulated assuming the objective economic indicators were average for 2005-7 in each subsequent year. "Predicted assuming no internet controls and press as free as in 2004": simulated subtracting out the estimated effect of Google request and fixing press freedom index at 2004 level.