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Economic Development and Democracy: An Electoral Connection*

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Abstract

This study takes a new tack on the question of modernization and democracy, focused on the outcome of theoretical interest. We argue that economic development affects the electoral component of democracy but has minimal impact on other components of this diffuse concept. This is so because development (a) alters the power and incentives of top leaders and (b) elections provide a focal point for collective action. The theory is tested with two new datasets – Varieties of Democracy and Lexical Index of Electoral Democracy – that allow us to disaggregate the concept of democracy into meso- and micro-level indicators. Results of these tests corroborate the theory: only election-centered indices are correlated with economic development. This may help to account for apparent inconsistencies across extant studies and may also shed light on the mechanisms at work in a much-studied relationship.

Introduction

In the heyday of modernization theory it was widely accepted that economic development would favor a democratic form of government (Lipset 1959). In subsequent decades, this thesis was severely challenged. Early on, Barrington Moore (1966) and Guillermo O'Donnell (1973) questioned the logic of the argument. More recent challenges focus on empirical relationships discernible from the crossnational data. Adam Przeworski and collaborators argue that richer countries are more likely to maintain democratic rule but that the initial transition to democracy is unrelated to a country's level of economic development (Przeworski & Limongi 1997; Przeworski et al. 2000). Acemoglu, Johnson, Robinson & Yared (hereafter AJRY) claim that even this relationship is spurious, disappearing once country fixed-effects are incorporated into statistical models (AJRY 2008, 2009; see also Alexander, Harding & Lamarche 2011; Moral-Benito & Bartolucci 2012).[1] Countering these challenges to the orthodoxy, others argue that the relationship between economic development and democracy is restored if historical data stretching back to the nineteenth century is incorporated or if different estimators are employed (Benhabib et al. 2011; Boix 2011; Boix & Stokes 2003; Che et al. 2013; Epstein et al. 2006; Faria et al. 2014; Treisman 2015).

As things now stand, the modernization debate rests upon a complex set of modeling choices, e.g., which time-periods to include, how to overcome the censored nature of democracy indices, what temporal units of analysis to employ, what corresponding lag structure to adopt, whether to apply linear or non-linear models, and which dynamic models to employ. Left out of this long-running debate is any serious consideration of the *outcome*.

A priori, there is no reason to expect the impact of economic development to be uniform across all dimensions of democracy (Aidt & Jensen 2012). Since democracy is a broad concept, open to many interpretations and operationalizations, the issue is non-trivial. We propose that the differential response of various aspects of democracy to changes in economic development, typically operationalized by per capita GDP, may help to account for the fragility of this relationship, as well as for the ongoing and seemingly irresolvable debate about possible mechanisms at work in the development-democracy nexus. Specifically, we argue that economic development primarily affects contested elections. Its impact on other aspects of democracy is much weaker, and perhaps nonexistent.

Our explanation hinges on the incentives of leaders and the collective action dilemmas of citizens. We argue, first, that economic development enhances the power resources of citizens

[1] In this view, the correlation between income and democracy is the product of some unmeasured confounder that affects both income and democracy.

vis-à-vis leaders. We argue, second, that economic development affects the opportunity costs of a leader contemplating the prospect of relinquishing power. In rich countries these opportunity costs are lowered because leaders can obtain remunerative employment elsewhere. However, these shifts in opportunity costs and in the relative power resources of leaders versus citizens do not lead to more democratic institutions unless citizens are able to overcome their collective action dilemma. Elections, unlike other aspects of democracy, provide a focal point for collective action, allowing citizens to hold leaders accountable. This helps to explain why economic development is associated with the achievement of competitive elections but not with other institutions associated with democracy, which do not provide a convenient focal point for collective action.

If our argument is correct, indices that lump several features of democracy together (e.g., Polity and Freedom House), as well as indices that focus on non-electoral elements of democracy (e.g., constitutionalism, civil liberties, participation, deliberation, political equality), will reveal a weak or attenuated empirical relationship to economic development. Only indices that are tightly focused on the electoral component of democracy should be strongly correlated with previous levels of economic development.

Testing this set of hypotheses requires disaggregating the concept of democracy so that its component features can be separately examined. To do so we enlist two new datasets, Varieties of Democracy ("V-Dem") (Coppedge et al. 2015) and the Lexical Index of Electoral Democracy (Skaaning, Gerring & Bartusevi□ ius 2015). With these new data sources, we conduct extensive empirical tests across a global sample of countries extending back over two centuries. These analyses support our contention that only indicators tightly focused on competitive multi-party elections are robustly and positively associated with economic development. This finding not only helps to reconcile divergent results in the literature but also sheds new light on causal mechanisms that may be at work in this much-debated relationship.

In Section I, we present our theory. In Section II, we present the data and a benchmark model. In Section III, we probe the robustness of this result. In Section IV, we conduct head-to-head contests between electoral and composite measures of democracy. In Section V, we disaggregate the key index of electoral democracy in order to analyze its component parts, allowing us another peak into the mechanisms that may be at work. In Section VI we distinguish between democratic upturns and downturns. Section VII concludes with a brief discussion of future directions for research on the modernization thesis.

I. Economic Development and Democracy

What aspects of regime change are promoted by economic development? The question, so far as we can tell, is under-theorized and under-explored. Yet, democracy is a many-splendored concept. Although usually approached as a single entity, recent work distinguishes a variety of elements that may enable rule by the people. This includes electoral contestation, constitutionalism (horizontal accountability, rule of law, civil liberties), state capacity, participation, deliberation, and political equality (Coppedge & Gerring et al. 2011; Cunningham 2002; Diamond & Morlino 2004; Held 2006; Munck 2015). Although these features are undoubtedly correlated, they are not perfectly correlated. Countries scoring high on one dimension may score low, or middling, on another (examples include early-19th century Britain and Apartheid South Africa, which both scored relatively high on contestation but low on participation). Consequently, it is plausible to suppose that economic development might impact some dimensions more strongly than others.

We argue that economic development favors *electoral* aspects of democracy. To be clear, we are not proposing that economic development has no impact at all on the other factors listed above. What we are proposing is that this effect, if present, pales in comparison with the impact of economic development on free and fair elections. Our theoretical discussion thus focuses on explaining these differential effects rather than on factors that might apply broadly to all aspects of democracy.

To facilitate this argument we distinguish two players: *citizens* (understood here as permanent residents of a sovereign territory, whether formally recognized by the state as citizens or not) and *leaders* (those who control the executive at a particular point in time along with their entourage of family, friends, and advisors). We provide a verbal account of the argument here. (Elsewhere, we construct a formalized version modelled as a sequential game with incomplete information between citizens and a leader that can manipulate different democratic rights [authors]).

We assume, first, that citizens of a polity are more likely to prefer a democratic regime-type than its leaders, other things being equal. Thus, while the preferences of both citizens and leaders may have evolved dramatically over the past two centuries (presumably, in a democratic direction), we assume that their *relative preferences* remain constant. Note that leaders may derive rents from controlling office (Rowley et al. 1988) as well as the intrinsic rewards inhering in power and status, all of which may incline them to prefer holding onto their positions even in the face of popular opposition. By contrast, surveys of mass publics generally show strong

support for democracy, especially when contrasted with other possible options (Chu et al. 2008; Inglehart 2003; Norris 2011).

We assume, second, that economic development increases the *relative power resources* of citizens vis-à-vis leaders. A richer, better educated, more urbanized, more connected citizenry is, by virtue of these traits, more powerful (Inglehart & Welzel 2005; Rueschemeyer et al. 1992). There are many reasons for this, but all point to the idea that wealthier and better educated urbanites are in a better position to engage in oppositional activities (Glaeser et al. 2007). Although economic development may also enhance the power resources of leaders, leaders in poor countries are *already* in control of considerable resources, especially in autocratic states, where they are generally free to build up police power and to engage in predation (Bueno de Mesquita et al. 2003). Thus, we expect economic development to have a differential effect on the power resources of citizens and leaders, with citizens improving their relative position as a society develops.

In addition to altering the relative power of citizens and leaders, economic development affects the *direct costs* and *opportunity costs* for a leader as s/he ponders whether to subvert electoral democracy (e.g., by not holding elections or committing electoral fraud). Note that the ideal of electoral democracy hinges upon the willingness of the current leader to relinquish office. If the incumbent is willing to hold an election and abide by its results electoral democracy stands a strong chance of succeeding. If not, electoral democracy cannot succeed, almost by definition. It follows that any factor affecting the direct costs and opportunity costs of a leader is highly relevant (Boix & Stokes 2003; Przeworski & Limongi 1997).

Regarding direct costs, economic development increases the costs of electoral fraud. This is most obvious in the case of vote-buying, a common strategy of electoral fraud. Mired in poverty, even public-spirited citizens may sell their votes for a modest sum. Well-off citizens, by contrast, are less likely to do so, or will require larger payments. In rich countries, therefore, the direct costs associated with election manipulation are higher – even taking into account the enhanced resources available to a leader (or ruling party) in a rich society (Jensen & Justesen 2014). Electoral fraud may also be less tolerated among wealthier, well-educated middle class citizens on ideological grounds (Aidt & Jensen 2012; Inglehart & Welzel 2005; Stokes et al. 2013; Weitz-Shapiro 2013).

A good deal of research suggests that the opportunity costs of a leader contemplating leaving office are also affected by economic development. In a poor country, jobs with the state are often one of the few sources of substantial income. Evidence for this proposition may be found by comparing the salaries of parliamentarians. In rich (OECD) countries, members of

parliament earn about three times the annual per capita income in their country, while in poor countries MPs earn about fourteen times the per capita income (Gerring, Oncel & Morrison 2015). We can expect that the salary differential between rich and poor countries is at least equally big with respect to the salaries of executives, party leaders, and senior staff. A leader exiting office in a poor country may therefore have few options available by which to maintain the lifestyle to which he or she – and his/her coterie – has become accustomed. By contrast, in a rich society leaders who (voluntarily) leave office are likely to find ample sources of remuneration. They may serve on boards of directors, sell their services to consulting and lobbying firms, collect fees for writing and speaking, and so forth (Diermeier et al. 2005; Eggers & Hainmuller 2009). Many leaders find their financial opportunities enhanced after vacating their seat of power (Palmer & Schneer 2015).

The anticipated payoffs from leaving office may influence a leader's decision about whether or not to manipulate an election in order to ensure his/her hold on power, e.g., by vote-buying, intimidation, or ballot-stuffing. Elections identified as manipulated clearly increase the risk of riots, demonstrations, revolutions, and coups (see, e.g., Beaulieu 2014; Tucker 2007; Wig & Rød 2015) – which, if successful, have dire personal consequences for leaders (see Goemans et al. 2011). These may be risks that leaders of *poor countries* are willing to take, given the high opportunity costs of exiting office. In *rich countries*, however, where former leaders can expect to assume well-paid private-sector jobs, a high-risk approach to maintaining office is probably less enticing.

Hence, all else equal, a more developed economy (a) increases the power of citizens vis-à-vis leaders and (b) changes the incentive structure for leaders, making less likely that they will cling to office by any means necessary. Even so, in order for citizens to affect the character of national institutions they must overcome collective action dilemmas (e.g., Medina 2007). Citizens cannot impose their will when operating alone but may do so when acting in concert. If citizens are able to coordinate, enhanced power resources at the individual level, attendant upon economic development, are likely to translate into sustained impact at a societal level. A critical feature distinguishing electoral institutions from other institutions is the role that elections play as a *focal point* for citizen action, mitigating collective action problems that would otherwise constrain popular mobilization.[2] This feature acts as a protection against democratic backsliding, helping to ensure that electoral institutions, once established, are respected.

[2] On problems of collective action pertaining to democracy, see Chong (1991), Fearon (2011), and Weingast (1997). On the role of elections, and electoral fraud, as focal points, see Thompson & Kuntz (2005) and Tucker (2007). On focal points more generally see Schelling (1960).

The focal role of elections stems from five key features of the electoral process. First, elections are high-stake endeavors, authorizing governments to enact policies influencing the distribution of resources and the sanctioning of values. Second, they are highly visible. One can hardly hold an election in secret. Indeed, elections are likely to be intensively canvassed by the media and by informal networks (which may provide alternative sources of information if the official sources are biased). Third, actions that impair the quality of an election – e.g., widespread vote-buying, voter intimidation, denial of access to the ballot to a major party or candidate – are fairly easy to discern. Although clever leaders have developed subtle ways of manipulating elections (see Birch 2011; Gandhi & Lust-Okar 2009; Lehoucq 2003; Schedler 2013; Simpser 2013), gross infringements are hard to obscure. The most severe infringement upon the principle of free and fair elections – outright cancellation – is also the most visible. Fourth, elections occur across a short period of time and culminate in a single event, the announcement of a winner. At this point, when emotions are running high, it is natural for large numbers of people to mobilize if their preferences are not respected (see, e.g., Beaulieu 2014; Thompson & Kuntz 2005; Tucker 2007). Mobilization is more likely if the will of the majority is denied, for then this majority enjoys the comfort and safety of numbers. Once a tipping point of engagement is reached – making it difficult for the police or army or para-military squads to control a crowd – peripheral actors may enter the fray with minimal risk (Bunce & Wolchik 2011; Beaulieu 2014; Kuran 1989; Lohmann 1994; Tucker 2007).

These characteristics set elections apart from other aspects of democracy, and the prospect of collective action ought to make leaders think twice before manipulating them. By way of contrast, let us consider a non-electoral feature of democracy such as *civil liberties*. Leaders may infringe upon the right of free speech selectively, arresting only a few individuals at a time and allowing others to bask in (false) security. They may choose an opportune moment, when public attention is focused on another event of great salience (e.g., a natural disaster, international conflict, sporting event). They may even create the conditions for that moment by instigating a distracting event. They may also abridge civil liberties in a clandestine manner, e.g., through disappearances managed by para-military groups or private contracts, thus avoiding direct responsibility. Using various tools of repression, great damage may be done to the democratic ideal of civil liberty without a high level of public awareness and without a single galvanizing event that might prompt the general public to take action. Infringements of civil liberty – in contrast to elections – may be achieved stealthily, for there are no natural focal points.

To reprise, we argue that economic development spurs democratization in the electoral realm, but not necessarily in other realms. This is so because the relative power resources of

citizens as well as the leaders' direct costs and opportunity costs of repression are higher in more developed societies and because of the focal quality of elections, which helps citizens overcome collective action problems. All of these features should incentivize elected leaders to respect the election process and its results and should also provide citizens with an opportunity to shoo incumbents out of office if they fail to do so.

Importantly, focal points operate only where elections are already in place. Otherwise, there is no event around which constituencies can mobilize. This suggests that economic development might have greater impact on the consolidation of electoral democracy (once elections are established) than on the initial transition to electoral rule, following a line of argument initiated by Przeworski and associates (Przeworski et al. 2000; Przeworski 2005).

II. A Benchmark Model

Our main hypothesis centers on a particular dimension of democracy which we have characterized as *electoral* and which we define narrowly as "clean multiparty elections." Electoral democracy refers here to the quality of the electoral process itself, not the extent of participation in that election (i.e., suffrage or turnout). We expect that measures focused mainly on the electoral features of democracy will be strongly related to economic development, while measures focused on other aspects of democracy, as well as more comprehensive indices that include both electoral and non-electoral elements, will be only weakly related, or not at all related, to economic development.

Following Lipset (1959), we shall assume that economic development involves a set of factors including income, industrialization (and attendant changes to class structure), changing sectoral composition, education, communications infrastructure, and urbanization. Since these factors are causally inter-related (in ways that would be difficult to model) and highly correlated (and hence difficult to disentangle), we adopt the usual expedient by which per capita GDP serves as a proxy for the composite concept of economic development. Our chosen indicator is drawn from the Maddison Project (Bolt & van Zanden 2014), transformed by the natural logarithm. Following standard practice (Boix 2011; Treisman 2015), missing data within a time-series is linearly interpolated. Robustness tests focused on urbanization are included in the appendix (Tables B20-B21). Other good proxies for economic development with long time series and extensive cross-country coverage are hard to identify. It should be noted that we are not concerned with short-term changes in per capita GDP, i.e., economic growth, or with

various factors sometimes associated with, but conceptually distinct from, economic development such as wealth distribution or violent conflict.

There is no well-established benchmark model for testing the association between income and democracy, or other determinants of democracy for that matter (Gassebner et al. 2012). Following Boix (2011) and AJRY (2009), we employ a high threshold test in our benchmark model because we want to minimize the possibility of spurious findings. The chosen model features an ordinary least squares estimator along with country and year fixed effects, a lagged dependent variable, and robust standard errors clustered at the country level. Right-side variables are lagged one period behind the outcome and data is analyzed annually. The benchmark specification is intentionally sparse, disregarding additional factors that might serve as potential confounders but might also introduce post-treatment confounding or greatly truncate the sample. Note that our models include a lengthy time-series, extending for more than 100 years and in some cases up to two centuries, which should provide sufficient within-country information in a fixed-effects framework to mitigate the so-called Nickell bias (Nickell 1982).

We begin by assembling indicators that focus on *non-electoral* components of democracy. This includes four meso-level indices from the V-Dem dataset that attempt to measure Liberal, Participatory, Deliberative, and Egalitarian components of democracy (Coppedge et al. 2011; 2015a,b). Additional indices capitalize on the richness of V-Dem data to measure more specific aspects of democracy including Individual Liberty and Rule of Law, Judicial Constraints, Legislative Constraints, Free Expression, Alternative Sources of Information, Free Association, Executive Selection, and (de jure) Adult Suffrage. Detailed definitions of all variables used in this paper are located in Table A1 and descriptive statistics in Table A2. Note that all democracy measures are re-scaled to a 0-1 scale so that coefficients can be directly compared.

Results of these initial tests are shown across the first row of Table 1. Among these twelve non-electoral indicators of democracy only Judicial Constraints is predicted (with the expected sign) by a country's per capita GDP. Somewhat surprisingly, higher income predicts *lower* suffrage – a result that we suspect is spurious.

Next, we examine a set of composite indices commonly used to measure democracy in its entirety (following different understandings of the concept). This includes Polity2 from the Polity IV dataset (Marshall, Gurr & Jaggers 2014), the Unified Democracy Scores ("UDS") from Pemstein et al. (2012), and the Political Rights and Civil Liberties indices from Freedom House (2014). While each of these indices has a somewhat different focus they are all highly aggregated, including a wide variety of underlying concepts and measures. Results of these tests, shown in

columns 13-16 in Table 1, suggest that democracy, considered in its entirety, is not clearly identified as a by-product of economic development.

Of course, there are many additional issues to consider pertaining to samples (e.g., Boix 2011), estimators (e.g., Heid et al. 2012), specifications (e.g., Boix & Stokes 2003), and other matters. These are taken up in the next section of the paper. However, the results shown here indicate that whatever relationship may exist between economic development and macro-indices of democracy is not especially strong. Thus far, the skeptical view of modernization theory, introduced at the outset, is upheld.

Table 1: Varieties of Democracy

	NON-ELECTORAL											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Outcome	Liberal Component *(V-Dem)*	Participatory Component *(V-Dem)*	Deliberative Component *(V-Dem)*	Egalitarian Component *(V-Dem)*	Ind. Liberty Rule of Law *(V-Dem)*	Judicial Constraints *(V-Dem)*	Legislative Constraints *(V-Dem)*	Free Expression *(V-Dem)*	Alternative Information *(V-Dem)*	Free Association *(V-Dem)*	Executive Selection *(V-Dem)*	Adult Suffrage *(V-Dem)*
GDPpc(ln)	0.003	-0.000	0.001	-0.001	-0.001	0.004*	0.004	0.001	-0.001	0.001	0.006	-0.007**
	(0.002)	(0.001)	(0.003)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.007)	(0.003)
Years	111	111	111	111	111	111	111	111	111	111	111	111

	COMPOSITE				MOSTLY ELECTORAL			PURELY ELECTORAL	
	13	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Outcome	Polity2 *(Polity IV)*	UDS *(Pemstein)*	Political Rights *(FH)*	Civil Liberties *(FH)*	BMR *(Boix)*	Lexical *(Skaaning)*	Electoral Contestation *(V-Dem)*	Competitive Elections *(Skaaning)*	Clean Elections *(V-Dem)*
GDPpc(ln)	0.002	0.001	-0.004	0.002	0.007	0.010**	0.007**	0.013**	0.010***
	(0.003)	(0.002)	(0.006)	(0.005)	(0.005)	(0.005)	(0.003)	(0.005)	(0.004)
Years	211	62	37	37	207	211	111	211	111

Ordinary least squares regression with lagged dependent variable, country and year fixed effects, and standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). Units of analysis: country-years. Right-side variables measured at T-1. Scales normalized to 0-1 (1=most democratic)

In the third section of Table 1 ("mostly electoral") we examine indices that are focused primarily – but not exclusively – on the electoral component of democracy. We begin with the binary democracy indicator from Boix, Miller & Rosato (2013).[1] Their measure ("BMR") captures whether the legislature and executive are chosen (directly or indirectly) in free and fair elections in which at least a majority of adult men are enfranchised. Note that the inclusion of suffrage is the only departure from a purely electoral indicator (following our definition). Next, we examine the Lexical index (Skaaning et al. 2015), which is based on a cumulative aggregation of indicators capturing whether national elections are held, opposition parties are allowed to run, elections are competitive, and suffrage is inclusive. Again, the inclusion of a suffrage criterion is the only departure from a purely electoral measure. Finally, we employ an index of Electoral Contestation based on different V-Dem indicators including measures of Freedom of Association (including repression of political parties), Clean Elections, and Executive Selection. These are combined through multiplication based on the idea that they are necessary and mutually dependent conditions for contestation. Results from these tests are shown in columns 17-19 of Table 1. All electoral indices bear a positive relationship to economic development, though one (BMR) does not surpass the usual threshold of statistical significance.

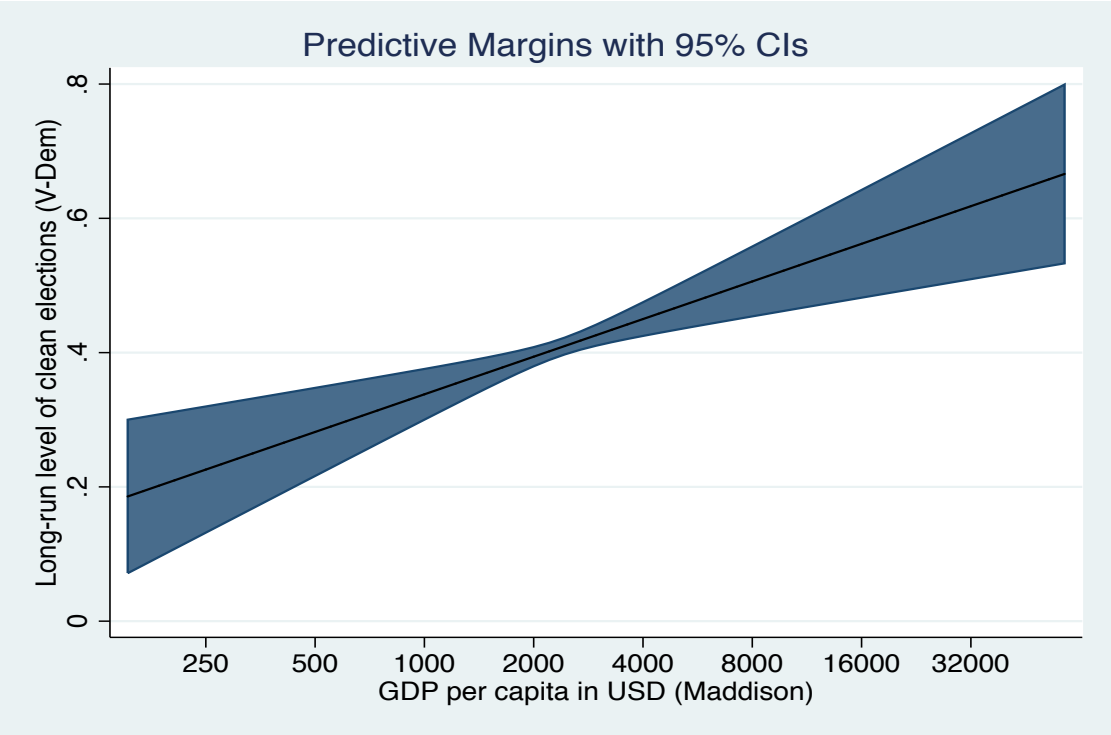
In the final section of Table 1 ("purely electoral") we examine indicators that are tightly focused on electoral democracy. Competitive Elections focuses on the existence of competitive multi-party elections without any consideration of the extent of suffrage. Specifically, the index is coded 1 in any situation where the chief executive offices and seats in the effective legislative body are filled by multi-party elections characterized by uncertain outcomes – meaning that the elections are, in principle, sufficiently free to enable the opposition to gain government power. Next, we measure Clean Elections, understood as the absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote buying, and election violence. The index is formed from a Bayesian factor analysis of these component indicators, drawn from the V-Dem dataset. Note that Competitive Elections is a component of the ordinal Lexical index and Clean Elections is a component of Electoral Contestation. These narrower indices are thus nested within the broader indices that we classified as "mostly electoral." Results of these final tests,

[1] It rather closely follows (except for including the participation criterion and some adjustments on how to capture the contestedness of elections) an earlier formulation provided by Przeworski and colleagues (Przeworski et al. 2000), subsequently known as the Democracy-Dictatorship (DD) measure (Cheibub et al. 2010). We do not include DD here, due to its shorter time series (post-WWII). However, when running tests on similar samples, we do find that BMR is somewhat more strongly related to income than DD. One plausible explanation of this is the stronger weight put on observed government alternation. Knutsen and Wig (2015) show that young democracies with strong economic performances are more likely to be misclassified as dictatorships by DD, which could lead to attenuation bias also when using DD to test the modernization thesis.

shown in columns 20-21 of Table 1, support our argument, as they are all strongly correlated with prior levels of per capita GDP.

To get a sense of the estimated size of the (long-term) causal effect, Figure 1 plots the marginal effect of logged GDP per capita on the long-run predicted equilibrium level of the Clean Elections index based on our benchmark model – Model 1, Table 3. Since our benchmark includes a lagged dependent variable, the coefficient for income only reveal the short-term (yearly) effect – 0.010 for each unit increase in logged income. The long-run effect, however, is 0.010/(1-0.881), where 0.881 is the coefficient on the lagged dependent variable, which amounts to roughly 0.080 on the 0-1 Clean Elections index (with a standard error of 0.032). This effect is plotted in Figure 1, surrounded by 95% confidence intervals.[2]

Figure 1: Long-run Effects



Long-run effects of economic development (proxied by per capita GDP) on electoral democracy (proxied by Clean Elections).

[2] The standard errors of the long-run coefficient are calculated using the nlcom command in Stata 13. They are very similar but slightly larger than those from a Bewley-transformation (De Boef and Keele 2008), where the lag of the dependent variable is used to instrument for its change. The same goes for the long-run equilibrium levels, where the root mean squared error (RMSE) based on the standard errors from Table 1, Model 21, scaled by (1-0.881), yields a slightly larger estimate than the RMSE from the Bewley tansformation. Figure 1 is based on this slightly more conservative estimate of the RMSE, arrived at through the *margins* and *marginsplot* commands in Stata 13.

To put this in perspective, an extremely poor country, at $250 USD per capita GDP, is expected to hover around 0.23 on the Clean Elections index – approximately the level observed in Mexico under the PRI in the 1980s. Quadrupling that income level, to $1000 USD, the expected long-run level of Clean Elections rises to 0.34 – equivalent to the status of Kenya after Arap Moi (but prior to 2007). A median income country by 2010's standards, at roughly $7300 USD per capita, is expected to score around the 0.5 midpoint of the Clean Elections scale – corresponding (roughly) to Ghana in the late 1990's. Given the secular-historical rise of the world economy, these results suggest that economic development brings with it a substantial shift in the quality of elections.

III. Additional Tests

We have demonstrated that measures narrowly focused on the electoral component of democracy are more closely associated with changes in per capita GDP than non-electoral measures or composite indices that include electoral and non-electoral elements. But, we have tested only one format: ordinary least squares with a lagged dependent variable, country and year fixed effects, and clustered standard errors. In this section, we explore alternate estimators, samples, and specifications. Our attention is focused on Competitive Elections and Clean Elections since they are narrowly targeted on the concept of theoretical interest. (A similar battery of robustness tests is also conducted on other indices, with results shown in Appendix B.)

Table 2 focuses on Competitive Elections. Model 1 replicates our initial test – Model 20 from Table 1. Subsequent models introduce variations in this benchmark. Model 2 excludes the lagged dependent variable. Model 3 substitutes a trend variable for annual dummies. Model 4 includes a number of control variables that, following the literature, may affect a country's regime-type: Corruption (Birch 2011), Land Inequality (Ansell & Samuels 2014), neighbor Diffusion (Brinks & Coppedge 2006), Internal Conflict and External Conflict (Reuveny & Li 2003), Natural Resources (Ross 2001). Descriptions of these variables and their sources can be found in Table A1.

Table 2: Competitive Elections

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	IV
Sample	Full	Full	Full	Full	Full	Full	5-year	MI	Full
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.013**	0.148***	0.104***	0.022*	0.167***		0.064***	0.040***	0.187**
	(0.005)	(0.036)	(0.035)	(0.011)	(0.048)		(0.020)	(0.008)	(0.090)
GDPpc (ln) L20						0.165***			
						(.047)			
Lagged Y	0.890***			0.840***			0.578***	0.544***	
	(0.009)			(0.012)			(0.031)	(0.031)	
Trend			0.002***						
			(0.001)						
Corruption				-0.090***	-0.775***				
				(0.031)	(0.172)				
Land Inequality				-0.000	-0.000**				
				(0.000)	(0.000)				
Diffusion				2.108**	10.488**				
				(0.926)	(4.644)				
Internal Conflict				0.008	-0.020				
				(0.010)	(0.034)				
External Conflict				-0.007	-0.039				
				(0.008)	(0.034)				
Natural Resources				0.000	0.000				
				(0.000)	(0.002)				
Country FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	157	157	157	132	132	158	156	216	136
Years	211	211	211	99	99	193	42	213	191
Obs	12947	13081	13081	6683	6695	12053	2509	23445	9610
R2 (within)	0.849	0.287	0.239	0.765	0.237	0.289	0.521	0.628	0.252
Cragg-Donald									156.1

Outcome: Competitive Elections. *Estimators:* OLS (ordinary least squares, with standard errors clustered by country), IV (instrumental variable, results from second stage). *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Model 5 repeats this specification without the lagged dependent variable. Model 6 returns to the benchmark model but lags per capita GDP two decades behind the outcome. Model 7 reconstructs the annual panel as a five-year panel (after converting variables to 5-year moving averages). Given the sluggish nature of right- and left-side variables, this might be regarded as a more plausible formulation. Model 8 imputes missing data with the Amelia II algorithm (Honaker & King 2010), extending our benchmark sample with an additional 10,000+ observations. Model 9 presents the second stage of an instrumental variables analysis, where (following Acemoglu et al. 2008), instruments are constructed by using the weighted income of trading partners to capture exogenous international shocks to domestic income.

All tests shown in Table 2 reveal a positive relationship between per capita GDP and Competitive Elections. Remarkably, all robustness tests suggest a stronger relationship between

these two variables – judging solely by coefficient estimates – than in our benchmark model (reproduced as Model 1 in Table 2), although coefficients are not directly comparable across dynamic and non-dynamic models.

The tests in Table 2 apply an ordinary least squares estimator, a choice that might seem odd given the binary outcome of interest. OLS provides ease of interpretation, computational simplicity (allowing for unit and time fixed effects along with annual data), and consistency with estimators used for other outcomes (e.g., in Table 1 and Appendix B). Moreover, a linear-probability model provides a sensible estimate of the conditional expectation function without relying heavily on assumptions about the distribution of the error term to produce estimates, as do logit, probit, and other maximum-likelihood models. Granted, the assumptions required for its use are more plausible in settings where the treatment is randomly assigned (Angrist & Pischke 2009: 94-107). To relieve concerns, tests in Table 2 (except the multiple-imputation and instrumental-variable models) are replicated with a logit estimator. Results, shown in Table B22, corroborate OLS estimates.

Table 3 focuses on Clean Elections. Model 1 again replicates our initial test from Table 1. Subsequent models introduce variations in this benchmark, following the template of Table 2 but with a few variations, as discussed below.

Clean Elections is a continuous variable, so there is no need to introduce non-linear estimators. However, the variable presents an uneven distribution, with multiple values at the left bound of 0, representing a non-electoral regime. To assure that reported results are not solely the product of an electoral transition (from no elections to elections), Model 7 in Table 3 replicates the benchmark model with a sub-sample of observations in which an electoral regime was in place (elections were on course).

Table 3: Clean Elections

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS	IV
Sample	Full	Full	Full	Full	Full	Full	Y>0	5-year	5-year	MI	Full
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
GDPpc (ln)	0.010***	0.100***	0.074***	0.015**	0.119***		0.011***	0.034**	0.083***	0.009***	0.116**
	(0.004)	(0.026)	(0.026)	(0.006)	(0.030)		(0.003)	(0.014)	(0.015)	(0.003)	(0.058)
GDPpc (ln) L20						0.083**					
						(0.037)					
Lagged *Y*	0.879***			0.837***			0.953***	0.579***	0.643***	0.741***	
	(0.010)			(0.015)			(0.006)	(0.034)	(0.060)	(0.022)	
Trend			0.002***								
			(0.000)								
Corruption				-0.103***	-0.688***						
Index				(0.021)	(0.108)						
Land				-0.000**	-0.000**						
Inequality				(0.000)	(0.000)						
Diffusion				0.676	4.189						
				(0.500)	(2.787)						
Internal				-0.001	-0.008						
Conflict				(0.005)	(0.015)						
External				-0.001	-0.027						
Conflict				(0.005)	(0.018)						
Natural				-0.000	-0.000						
Resources				(0.000)	(0.001)						
Country FE	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	149	152	152	205	130
Years	111	112	112	99	99	115	111	22	22	114	92
Obs	11271	11375	11375	6630	6649	10439	8560	2211	2211	21143	7789
R2 (within)	0.847	0.320	0.262	0.818	0.417	0.351	0.863	0.549		0.853	0.189
Cragg-Donald											127.6

Outcome: Clean Elections index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), IV (instrumental variables, second stage), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), Y>0 (scores for Clean Elections that surpass 0), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

The continuous nature of Clean Elections allows for the use of a system generalized method of moments estimator (Blundell & Bond 1998), reported in Model 9 of Table 3. This version of GMM is regarded as appropriate for studying sluggish variables. We follow a standard approach for GMM models with long time series in re-coding annual data at five-year intervals (as in Model 8). This reduces the number of time series units and thus the number of instruments, and allows for valid identification (following the assumptions of the model). We enter income and the lagged dependent variable as endogenous and allow two lags for instrumentation. This yields 145 instruments, below the number of cross-sectional units (153), which is the rule-of-thumb threshold (Roodman 2009). The Ar(2) test p-value is .56 and the Hansen J-test p-value is .39, suggesting that Model 9 provides consistent estimates (this holds also for other GMM specifications that we tested).

Overall, the results for Clean Elections are highly robust. Across eleven models shown in Table 3, per capita GDP is related to higher-quality elections in every test, surpassing standard thresholds of significance. As with Competitive Elections, we find that robustness tests generally show an *enhanced* relationship between these two factors relative to the benchmark model (Model 1).

Since economic development is a protean concept, amenable to many operationalizations, it is possible that these results may reflect some peculiarity of this particular indicator, drawn from the Maddison project. To alleviate this concern, we replicate the battery of tests in Tables 2 and 3 using Urbanization rather than national income as the key predictor. (Urbanization, the share of population living in cities, is the main alternative to per capita GDP if one requires a measure of economic development with good historical coverage.) Results, shown in Tables B20-21, are generally robust.

At this point, we have subjected two indicators of central theoretical concern – Competitive Elections and Clean Elections – to a litany of empirical tests. But alternatives to these two measures have been tested in only one format, our benchmark model. This incongruity is remedied in a series of tables in Appendix B, where tests contained in Tables 2-3 are replicated for alternate measures of democracy. The general picture that emerges from this interrogation confirms the initial findings presented in Table 1. Non-electoral indicators of democracy, with the notable exception of Judicial Constraints, are not well-predicted (in the expected direction) by per capita GDP (Tables B1-B12). Nor are composite indices (Tables B13-B16). By contrast, indices that focus mostly on the electoral component of democracy are consistently predicted by a lagged measure of per capita GDP (Tables B17-B19). Indeed, Lexical and Electoral Contestation prove to be almost as robust as our "purely electoral" indicators (Competitive Elections and Clean Elections).

The general picture emerging from all these tests is that the relationship between economic development and democracy is dependent on an electoral connection. The more closely an indicator homes in on the purely electoral component of democracy the more sensitive it is to changes in economic development.

IV. Head-to-Head Contests

Measures of democracy are highly correlated, as many studies have pointed out. As such, one must be wary of over-interpreting fine differences in performance across indicators of very similar latent concepts – each of which, we must presume, is affected by potential measurement error. One approach to this problem is to include both measures in the same model so that partial effects (the impact of *X* controlling for *Z*) can be calculated. In our setting, this common strategy is more complicated since we are comparing rival measures of the outcome (*Y*) rather rival measures of a causal factor. Even so, the strategy of testing rival hypotheses head-to-head in the same model is viable.

Table 4: Head-to-Head Contests

Outcome	**Competitive Elections**	**Clean Elections**	**Polity2**	
	1	**2**	**3**	**4**
GDPpc (ln)	0.065***	0.085***	0.006	-0.046**
	(0.024)	(0.019)	(0.021)	(0.022)
Polity2	0.940***	0.485***		
	(0.042)	(0.028)		
Competitive Elections			0.461***	
			(0.024)	
Clean Elections				0.802***
				(0.045)
Country FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Countries	155	149	155	149
Years	211	112	211	112
Obs	12543	9739	12543	9739
R2 (within)	0.599	0.581	0.632	0.537

Ordinary least squares regression with country and year fixed effects, standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). Right-side variables measured at T-1. Units of analysis: country-years.

In Table 4, we build on the benchmark model to test electoral measures of democracy – Competitive Elections and Clean Elections – against the most common composite measure of democracy, Polity2. In Model 1, Competitive Elections is regressed on per capita GDP along with Polity2 plus country and year fixed effects. In Model 2, the analysis is replicated with Clean Elections as the outcome indicator. In both analyses, the relationship between per capita GDP and electoral democracy is robust, even when "controlling" for a composite measure of democracy on the right side of the model. Models 3 and 4 repeat this exercise in reverse. Here, Polity2 forms the outcome while Competitive elections and Clean elections serve as the controls. Here, the result does not survive. Indeed, the relationship turns negative in Model 4.

The set of results presented in Table 4 offers further evidence of our claim that the relationship between economic development and democracy is not evenly distributed across all aspects of democracy. Composite indices such as Polity2 are not robust to the inclusion of electoral democracy, while measures of electoral democracy are robust to the inclusion of a composite measure.

V. Inside the Box

The Clean Elections index offers a unique opportunity to peak inside the box of an intriguing relationship. Note that this index is composed of eight variables, each of which is measured separately in the V-Dem dataset. By testing our benchmark model with each of these outcome variables (separately) we may gain additional insight into the causal mechanisms at work in this relationship.

Four indicators tap into problems of electoral integrity that may be characterized as violence or fraud. *Government intimidation* inquires whether opposition candidates, parties, or campaign workers were subjected to repression, intimidation, violence, or harassment by the government, the ruling party, or their agents. *Other violence* asks whether the campaign period, election day, and post-election process were free from other types of violence related to the conduct of the election and the campaign. *Vote buying* inquires into evidence of vote and/or turnout buying in an election. This refers to the distribution of money or gifts to individuals, families, or small groups in order to influence their decision to vote/not vote, or whom to vote for. *Other irregularities* refers to other irregularities on the part of incumbent and/or opposition parties. Specific examples include use of double IDs, intentional lack of voting materials, ballot-stuffing, misreporting of votes, and false collation of votes. We have strong theoretical reasons to believe that these factors are affected by the incentives of leaders and the relative power of leaders and citizens, which in turn are responsive to economic development, as articulated in Section I.

Three of the indicators that compose the Clean Elections index measure the capability of a state to manage the election process. *Voter registry* asks whether there was a reasonably accurate voter registry in place at the time of an election and whether it was in fact utilized. *EMB capacity* measures whether the Electoral Management Body in charge of administering national elections has sufficient staff and resources to administer a well-run national election. *EMB autonomy* measures the ability of the Election Management Body to apply election laws and administrative rules impartially in national elections, separate from pressures exerted by the government or

governing party. While it is plausible to suppose that economic development might enhance state capacity, this lies outside the ambit of our theory. Thus, we have no strong priors on the relationship of these variables to per capita GDP.

The final indicator comprising the Clean Elections index is *Free and fair elections*. This provides a summary judgment of whether – taking all aspects of the pre-election period, election day, and post-election process into account – the national election was free and fair. It does not consider the extent of suffrage but only the fairness of an election for those who are entitled to vote. We regard this as an overall measure of electoral democracy, and hence falling within the ambit of our theoretical framework.

In Table 5, we regress each of these outcomes on per capita GDP in our benchmark model (lagged dependent variable, country and year fixed effects, and clustered standard errors). Not all of these variables pass standard tests of statistical significance, suggesting that the meso-level concept – Clean Elections – is more responsive to economic development than several of its components. This could be a product of measurement error, which is generally minimized when a variety of measures are combined in a single index. Note also that these components may perform a substitutive function. When leaders clamp down on (or open up to) electoral democracy they may prioritize one or the other of these factors, leading to variability across time and across countries that serves as noise in the crossnational estimator. For incumbents wanting to manipulate election results, picking one option from the "menu of manipulation" may be sufficient for ensuring election victory (Schedler 2002). For instance, leaders could opt either to stuff ballot boxes or to use party thugs to deter opposition members from voting in the first place; these strategies act as substitutes.

Table 5: Clean Elections, Disaggregated

	Fraud & Violence				**Capacity**			**General**
Outcome	Government Intimidation	Other Violence	Vote Buying	Other Irregularities	Voter Registry	EMB Capacity	EMB Autonomy	Free & Fair
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
GDPpc (ln)	0.027***	0.029***	0.034***	0.032***	0.012	-0.003	0.007	0.029***
	(0.009)	(0.009)	(0.007)	(0.009)	(0.008)	(0.007)	(0.008)	(0.010)
Lagged *Y*	0.924***	0.901***	0.917***	0.918***	0.910***	0.960***	0.950***	0.914***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.009)	(0.005)	(0.005)	(0.008)
Countries	152	152	152	152	152	151	151	152
Years	111	111	111	111	111	111	111	111
Obs	11271	11271	11271	11271	11271	11227	11230	11271
R2 (within)	0.869	0.839	0.858	0.856	0.879	0.952	0.937	0.855

Outcomes: components of the Clean Elections index. Ordinary least squares regression with country and year fixed effects, standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). Right-side variables measured at T-1. *Units of analysis:* country-years.

Even so, it is worth comparing those indicators that pass our threshold test to those that do not. In line with our expectations, Table 5 shows that all indicators associated with electoral violence and fraud bear a strong relationship to economic development (Models 1-4) while indicators of state capacity do not (Models 5-7). The overall measure of election quality – Free and Fair – is also strongly correlated with per capita GDP, though this result does not help in disentangling causal mechanisms as it rests at roughly the same level of aggregation as our summary index (Clean Elections).

This set of tests provides additional fodder for our argument that a richer economy empowers citizens to deter leaders from engaging in blatant manipulation of elections and weakens the incentives of leaders to do so. By contrast, other aspects of election quality that derive more from state capacity bear little relationship to per capita income. Even when we disaggregate the index of theoretical interest we find that the "electoral connections" theory makes accurate predictions.

VI. Upturns and Downturns

Finally, we investigate whether the relationship between income and electoral democracy is symmetric or asymmetric. Does economic development affect the probability of *upturns* (transitions to greater democracy, aka "democratization") as well as of *downturns* (to greater autocracy, aka "democratic survival"), as argued by Boix (2011), Boix & Stokes (2003), and Epstein et al. (2006)? Or does it only affect the probability of downturns, as argued by Przeworski and colleagues (Przeworski et al. 2000; Przeworski 2005)?

According to our theory, elections cannot serve as focal points in a non-elective regime. Where the established method for selecting leaders is by appointment or inheritance, there is no recognized event that might galvanize opposition at a single point in time. Thus, we expect that the impact of economic development is asymmetric – assisting in the consolidation of an electoral regime but not (or only minimally) in the initial transition to an electoral regime.

To analyze this question we return to our preferred measures of electoral democracy – Competitive Elections and Clean Elections – along with a third measure that registers the existence of an Electoral Regime (a regime in which regular elections are on course). Units of analysis are comprised of election-years, as previously. But we also conduct tests with elections as the units of analysis. (Recall that annual data is generated from election data by filling in non-election years with scores from the previous election – unless there is an interruption in the electoral regime, in which case the period of interruption is coded as 0).

Following Boix (2011: 822), we run two regressions for each dependent variable to differentiate movements in either direction (toward, or away from, democracy). The "Up" model re-codes the outcome to register instances of positive change since the previous year, setting all cases of no change or negative change to zero. The "Down" model re-codes the outcome to register instances of negative change since the previous year, setting all cases of no change or positive change to zero. By comparing the coefficients on GDP across these two regressions we can differentiate the influence of economic development on democratization and on backsliding (away from the democratic ideal).

Table 6: Upturns and Downturns

Outcome	**Competitive Elections**		**Electoral Regime**		**Clean Elections**		**Clean Elections**	
Sample	1801-2011		1901-2011		1901-2011		1901-2011	
Units	Country-year		Country-year		Country-year		Election-year	
Direction	**Up**	**Down**	**Up**	**Down**	**Up**	**Down**	**Up**	**Down**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
GDPpc (ln)	0.004	0.009***	-0.008	0.012***	0.002	0.008***	-0.002	0.011***
	(0.004)	(0.003)	(0.006)	(0.004)	(0.004)	(0.002)	(0.009)	(0.003)
Lagged *Y*	-0.057***	-0.052***	-0.139***	-0.054***	-0.084***	-0.037***	-0.110***	-0.052***
	(0.004)	(0.006)	(0.009)	(0.005)	(0.007)	(0.005)	(0.016)	(0.010)
Countries	157	157	156	156	152	152	149	149
Years/elections	211	211	111	111	111	111	56	56
Obs	12947	12970	11792	11797	11271	11283	2720	2723
R2 (within)	0.047	0.051	0.110	0.031	0.076	0.029	0.090	0.089

Ordinary least squares regression with country and year fixed effects, standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). Right-side variables measured at T-1.

- "Up" (toward greater democracy): $D_{i,t}^{+} = \gamma_1 * D_{t-1} + \beta_1 * GDP_{t-1} + c_i + u_t + e_{i,t}$, where D is the democracy measure (dependent variable), and $D_{i,t}^{+} = \max(D_t, D_{t-1})$.
- "Down" (avoiding backsliding): $D_{i,t}^{-} = \gamma_1 * D_{t-1} + \beta_1 * GDP_{t-1} + c_i + u_t + e_{i,t}$, where $D_{i,t}^{-} = \min(D_t, D_{t-1})$.
- c_i and u_t are country-and year-fixed effects.

Results from these analyses, shown in Table 6, clearly support the asymmetric hypothesis.[3] Higher income discourages downturns but does not encourage upturns. This is so regardless of whether we focus on dichotomous measures – Competitive Elections (Models 1-2) and Electoral Regime (Models 3-4) – or the more fine-grained Clean Elections index (Models 5-8). It is so regardless of whether the sample includes the twentieth century only (Models 3-8) or the entire modern period (Models 1-2). And, it is so regardless of whether years (Models 5-6) or elections (Models 7-8) provide the units of analysis. (The latter tests suggest that the asymmetric relationship is not solely the product of electoral interruptions, which are not included in the

[3] Coefficients on the lagged dependent variable in Table 6 are negative because these models look at change in the dependent variable as the outcome, as opposed to the other tests in this paper where current level is the dependent variable.

election-year panel analysis.) In other words, as per capita GDP rises it becomes less likely that election quality will deteriorate.[4]

VII. Conclusion

Since democracy is a diffuse, multi-dimensional concept it stands to reason that if economic development affects democracy, the causal connections are likely to be stronger for some aspects of democracy than for others. Only by disaggregating the concept can this crucial issue be addressed.

In this study, we find that the relationship between economic development and democracy is robust only with respect to the electoral component of democracy, narrowly construed as the existence of competitive national elections and the procedural integrity of the electoral process. Other aspects of democracy such as those associated with the participatory, deliberative, liberal, and egalitarian ideals or with state capacity are not related, or are only weakly related, to national income and its correlates (e.g., urbanization). This may help to explain why empirical tests employing composite indices such as Polity2 or Freedom House show inconsistent results, leading to a long and seemingly irresolvable debate over modernization theory, referenced at the outset. We also find that while economic development prevents democratic backsliding it does not show a significant relationship to democratization, corroborating the thesis of asymmetric effects (Przeworski et al. 2000).

As part of the contribution of this study, we propose a theoretical framework to explain the differential effects of economic development on democracy. This framework, presented in Section I, suggests that economic development reduces the relative power and alters the utility calculus of leaders, who are in a position to respect or subvert multi-party elections. In a developed society, the direct costs of subversion (e.g., through vote-buying) are raised while the opportunity costs of leaving office are lowered (by virtue of offering remunerative nongovernmental career options). Likewise, the focal role of elections provides a coordination mechanism for citizens who wish to see the will of the people respected. All of these mechanisms are election-centered, having little applicability to other elements of democracy or to state capacity (often viewed as a facilitating condition of democracy).

This explanation is put forth in a stipulative fashion, based on extant studies, and is consistent with the evidence presented here. However, the mechanisms are not directly measured

[4] However, Models 3-4 indicates that there is also an 'interruptions/coup effect'; income does not incur the introduction of elections, but it decreases the chances of electoral interruptions (coups, autogolpes, etc.).

and tested. Future research should aim to get further inside the box so as to show the micro-level connections between economic development and improved prospects for democracy.

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APPENDIX A: Data
Table A1: Variable Definitions

Democracy Indices

Polity2 (Polity IV). Measures the extent to which democratic or autocratic "authority patterns" are institutionalized in a given country. It takes into account how the executive is selected, the degree of checks on executive power, and the form of political competition (Marshall et al. 2014). *polity2*

UDS (Pemstein). A democracy index comprised of multiple indicators and aggregated through a Bayesian IRT measurement model (Pemstein et al. 2010). *uds_mean*

Political Rights (FH). An annual comparative assessment of political rights based on a 1 to 7 scale (Freedom House 2014). *fh_pr*

Civil Liberties (FH). An annual comparative assessment of civil liberties based on a 1 to 7 scale (Freedom House 2014). *fh_cl*

Liberal Component (V-Dem). The liberal principle of democracy emphasizes the importance of protecting individual and minority rights against the tyranny of the state and the tyranny of the majority. The liberal model takes a "negative" view of political power insofar as it judges the quality of democracy by the limits placed on government. This is achieved by constitutionally protected civil liberties, strong rule of law, an independent judiciary, and effective checks and balances that, together, limit the exercise of executive power. This index is formed by averaging the following indices: equality before the law and individual liberties (v2xcl_rol), judicial constraints on the executive (v2x_jucon), and legislative constraints on the executive (v2xlg_legcon). *v2x_liberal*

Participatory Component (V-Dem). The participatory principle of democracy emphasizes active participation by citizens in all political processes, electoral and non-electoral. It is motivated by uneasiness about a bedrock practice of electoral democracy: delegating authority to representatives. Thus, direct rule by citizens is preferred, wherever practicable. This model of democracy thus takes suffrage for granted, emphasizing engagement in civil society organizations, direct democracy, and subnational elected bodies. This index is formed by averaging the following indices: civil society participation (v2x_cspart), direct popular vote (v2xdd_dd), elected local government power (v2xel_locelec), and elected regional government power(v2xel_regelec). *v2x_partip*

Deliberative Component (V-Dem). The deliberative principle of democracy focuses on the process by which decisions are reached in a polity. A deliberative process is one in which public reasoning focused on the common good motivates political decisions—as contrasted with emotional appeals, solidary attachments, parochial interests, or coercion. According to this principle, democracy requires more than an aggregation of existing preferences. There should also be respectful dialogue at all levels—from preference formation to final decision—among informed and competent participants who are open to persuasion. To measure these features of a polity we try to determine the extent to which political elites give public justifications for their positions on matters of public policy, justify their positions in terms of the public good, acknowledge and respect counter-arguments; and how wide the range of consultation is at elite levels. The index is formed by point estimates drawn from a Bayesian factor analysis model including the following indicators: reasoned justification (v2dlreason), common good justification (v2dlcommon), respect for counterarguments (v2dlcountr), range of consultation (v2dlconslt), and engaged society (v2dlengage). *v2xdl_delib*

Egalitarian Component (V-Dem). The egalitarian principle of democracy addresses the distribution of political power across social groups, i.e., groups defined by class, sex, religion, and ethnicity. This perspective on democracy emphasizes that a formal guarantee of political rights and civil liberties are not always sufficient for political equality. Ideally, all social groups should have approximately equal participation, representation, agenda-setting power, protection under the law, and influence over policymaking and policy implementation. If such equality does not exist, the state ought to seek to redistribute socio-economic resources, education, and health so as to enhance political equality. The index is formed by point estimates drawn from a Bayesian factor analysis model including indicators of power distribution according to socioeconomic position (v2pepwrses), power distribution according to social group (v2pepwrsoc), social group equality in respect for civil liberties (v2clsocgrp), equal access to education (v2peedueq), equal access to health (v2pehealth), power distribution according to gender (v2pepwrgen), share of budget allocated to public/common goods (v2dlencmps), and the share of welfare programs that provide universal rather than means-tested benefits (v2dlunivl). *v2x_egal*

Individual Liberty/Rule of Law (V-Dem). To what extent are laws transparent and rigorously enforced and public administration impartial, and to what extent do citizens enjoy access to justice, secure property rights,

freedom from forced labor, freedom of movement, physical integrity rights, and freedom of religion? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for rigorous and impartial public administration (v2clrspct), transparent laws with predictable enforcement (v2cltrnslw), access to justice for men/women (v2clacjstm, v2clacjstw), property rights for men/women (v2clprptym, v2clprptyw), freedom from torture (v2cltort), freedom from political killings (v2clkill), from forced labor for men/women (v2clslavem v2clslavef), freedom of religion (v2clrelig), freedom of foreign movement (v2clfmove), and freedom of domestic movement for men/women (v2cldmovem, v2cldmovew). *v2xcl_rol*

Judicial Constraints (V-Dem). To what extent does the executive respect the constitution and comply with court rulings, and to what extent is the judiciary able to act in an independent fashion? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for executive respects constitution (v2exrescon), compliance with judiciary (v2jucomp), compliance with high court (v2juhccomp), high court independence (v2juhcind), and lower court independence (v2juncind). *v2x_jucon*

Legislative Constraints (V-Dem). To what extent is the legislature and government agencies (e.g., comptroller general, general prosecutor, or ombudsman) capable of questioning, investigating, and exercising oversight over the executive? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for legislature questions officials in practice (v2lgqstexp), executive oversight (v2lgotovst), legislature investigates in practice (v2lginvstp), and legislature opposition parties (v2lgoppart). *v2xlg_legcon*

Free Expression (V-Dem). To what extent does government respect press & media freedom, the freedom of ordinary people to discuss political matters at home and in the public sphere, as well as the freedom of academic and cultural expression? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for print/broadcast censorship effort (v2mecenefm), internet censorship effort (v2mecenefi), harassment of journalists (v2meharjrn), media self-censorship (v2meslfcen), freedom of discussion for men/women (v2cldiscm, v2cldiscw) and freedom of academic and cultural expression (v2clacfree). *v2x_freexp*

Alternative Sources of Information (V-Dem). To what extent is the media (a) un-biased in their coverage (or lack of coverage) of the opposition, (b) allowed to be critical of the regime, and (c) representative of a wide array of political perspectives? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for media bias (v2mebias), print/broadcast media critical (v2mecrit), and print/broadcast media perspectives (v2merange). *v2xme_altinf*

Free Association (V-Dem). To what extent are parties, including opposition parties, allowed to form and to participate in elections, and to what extent are civil society organizations able to form and to operate freely? The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for party ban (v2psparban), barriers to parties (v2psbars), opposition parties autonomy (v2psoppaut), elections multiparty (v2elmulpar), CSO entry and exit (v2cseeorgs) and CSO repression (v2csreprss). Since the multiparty elections indicator is only observed in election years, its values have first been repeated within election regime periods (as defined by v2x_elecreg). *v2x_frassoc_thick*

Executive Selection (V-Dem). Is the chief executive appointed through popular elections (either directly or indirectly)? There are six different chains of appointment/selection to take into account in constructing this index, all of which are scaled to vary from 0 to 1. First, whether the head of state is directly elected (*a=1*) or not (*a*=0). Second, the extent to which the legislature is popularly elected (*b*), measured as the proportion of legislators elected (if legislature is unicameral), or the weighted average of the proportion elected for each house, with the weight defined by which house is dominant (if legislature is bicameral). Third, whether the head of state is appointed by the legislature, or the approval of the legislature is necessary for the appointment of the head of state (*c1*=1, otherwise 0). Fourth, whether the head of government is appointed by the legislature, or the approval of the legislature is necessary for the appointment of the head of government (*c2*=1, otherwise 0). Fifth, whether the head of government is appointed by the head of state (*d*=1) or not (*d*=0). Sixth, whether the head of government is directly elected (*e=1*) or not (*e*=0). Define *hosw* as the weight for the head of state. If the head of state is also head of government (v2exhoshog==1), *hosw*=1. If the head of state has more power than the head of government over the appointment and dismissal of cabinet ministers, then *hosw=1*; if the reverse is true, *hosw=0*. If they share equal power, *hosw*=.5. Define the weight for the head of government as *hogw*=1-*hosw*. *v2x_accex*

Adult Suffrage (V-Dem). What share of adult citizens (as defined by statute) has the legal right to vote in national elections? This question does not take into consideration restrictions based on age, residence, having been convicted for crime, or being legally incompetent. It covers legal (de jure) restrictions, not restrictions that may be operative in practice (de facto). The scores reflect de jure provisions of suffrage extension in percentage of the adult population as of January 1 in a particular year. The adult population (as defined by statute) is defined by citizens in the case of independent countries or the people living in the territorial entity in the case of colonies. Universal suffrage is coded as 100%. Universal male suffrage only is coded as 50%. Years before electoral provisions are introduced are scored 0%. The scores do not reflect whether an electoral regime was interrupted or not. Only if new constitutions,

electoral laws, or the like explicitly introduce new regulations of suffrage, the scores were adjusted accordingly if the changes suggested doing so. If qualifying criteria other than gender apply (such as property, tax payments, income, literacy, region, race, ethnicity, religion, and/or 'economic independence'), estimates have been calculated by combining information on the restrictions with different kinds of statistical information (on population size, age distribution, wealth distribution, literacy rates, size of ethnic groups, etc.), secondary country-specific sources, and – in the case of very poor information – the conditions in similar countries or colonies. *v2x_suffr*

BMR (Boix et al.). Dichotomous democracy measure based on contestation and participation. Countries coded democratic have (1) political leaders that are chosen through free and fair elections and (2) a minimal level of suffrage (Boix, Miller & Rosato, 2013). *e_mibmr*

Lexical (Skaaning et al.). A lexical index of electoral democracy based on six conditions and seven levels: (L0) no elections; (L1) no-party or one-party elections; (L2) multiparty elections for legislature; (L3) multiparty elections for legislature and executive; (L4) minimally competitive, multiparty elections for legislature and executive; (L5) minimally competitive, multiparty elections with full male or female suffrage for legislature and executive; and (L6) minimally competitive, multiparty elections with universal suffrage for legislature and executive (Skaaning et al. 2015). *lexical_scale*

Competitive Elections (Skaaning et al.). An index of electoral competition coded 1 in any situation where the chief executive offices and seats in the effective legislative body are filled by multi-party elections characterized by uncertain outcomes – meaning that the elections are, in principle, sufficiently free to enable the opposition to gain government power (Skaaning et al. 2015). *competitive_elections*

Electoral Contestation (V-Dem). An index of electoral contestation, which combines, through multiplication, measures of Freedom of Assocation (v2x_frassoc_thick), Clean Elections (v2xel_frefair), and Executive Selection (v2x_accex). *v2x_contest*

Clean Elections (V-Dem). To what extent are elections free and fair? Free and fair connotes an absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote buying, and election violence. The index is formed by taking the point estimates from a Bayesian factor analysis model of the indicators for EMB Autonomy (v2elembaut), EMB Capacity (v2elembcap), Election Voter Registry (v2elrgstry), Election Vote Buying (v2elvotbuy), Election Other Voting Irregularities (v2elirreg), Election Government Intimidation (v2elintim), Election Other Electoral Violence (v2elpeace), and Election Free and Fair (v2elfrfair). Since the bulk of these indicators are only observed in election years, the index scores have then been repeated within election regime periods (as defined by v2x_elecreg). *v2xel_frefair*

Components of Clean Elections index

Government Intimidation (V-Dem). In this national election, were opposition candidates/parties/campaign workers subjected to repression, intimidation, violence, or harassment by the government, the ruling party, or their agents? Responses: (0) Yes: the repression and intimidation by the government or its agents was so strong that the entire period was quiet; (1) Yes, frequent: there was systematic, frequent and violent harassment and intimidation of the opposition by the government or its agents during the election period; (2) Yes, some: there was periodic, not systematic, but possibly centrally coordinated – harassment and intimidation of the opposition by the government or its agents; (3) Restrained: there were sporadic instances of violent harassment and intimidation by the government or its agents, in at least one part of the country, and directed at only one or two local branches of opposition groups; (4) None: there was no harassment or intimidation of opposition by the government or its agents, during the election campaign period and polling day. *v2x_elintim*

Other Violence (V-Dem). In this national election, was the campaign period, election day, and post-election process free from other types (not by the government, the ruling party, or their agents) of violence related to the conduct of the election and the campaigns (but not conducted by the government and its agents)? Responses: (0) No: there was widespread violence between civilians occurring throughout the election period, or in an intense period of more than a week and in large swaths of the country; it resulted in a large number of deaths or displaced refugees; (1) Not really: there were significant levels of violence but not throughout the election period or beyond limited parts of the country; a few people may have died as a result, and some people may have been forced to move temporarily; (2) Somewhat: there were some outbursts of limited violence for a day or two, and only in a small part of the country; the number of injured and otherwise affected was relatively small; (3) Almost: there were only a few instances of isolated violent acts, involving only a few people; no one died and very few were injured; (4) Peaceful: no election-related violence between civilians occurred. *v2x_elpeace*

Vote Buying (V-Dem). In this national election, was there evidence of vote and/or turnout buying? Responses: (0) Yes: there was systematic, widespread, and almost nationwide vote/turnout buying by almost all parties and candidates; (1) Yes, some: there were non-systematic but rather common vote-buying efforts, even if only in some

parts of the country or by one or a few parties; (2) Restricted: money and/or personal gifts were distributed by parties or candidates but these offerings were more about meeting an 'entry-ticket' expectation and less about actual vote choice or turnout, even if a smaller number of individuals may also be persuaded; (3) Almost none: there was limited use of money and personal gifts, or these attempts were limited to a few small areas of the country; in all, they probably affected less than a few percent of voters; (4) None: there was no evidence of vote/turnout buying. *v2x_elvotbuy*

Other Irregularities (V-Dem). In this national election, was there evidence of other *intentional* irregularities by incumbent and/or opposition parties, and/or vote fraud? Responses: (0) Yes: there were systematic and almost nationwide other irregularities; (1) Yes, some: there were non-systematic, but rather common other irregularities, even if only in some parts of the country; (2) Sporadic: there were a limited number of sporadic other irregularities, and it is not clear whether they were intentional or disfavored particular groups; (3) Almost none: there were only a limited number of irregularities, and many were probably unintentional or did not disfavor particular groups' access to participation; (4) None: there was no evidence of intentional other irregularities; unintentional irregularities resulting from human error and/or natural conditions may still have occurred. *v2x_elirreg*

Voter Registry (V-Dem). In this national election, was there a reasonably accurate voter registry in place and was it used? Responses: (0) No: there was no registry, or the registry was not used; (1) No: there was a registry but it was fundamentally flawed (meaning 20% or more of eligible voters could have been disenfranchised or the outcome could have been affected significantly by double-voting and impersonation); (2) Uncertain: there was a registry but it is unclear whether potential flaws in the registry had much impact on electoral outcomes; (3) Yes, somewhat: the registry was imperfect but less than 10% of eligible voters may have been disenfranchised, and double-voting and impersonation could not have affected the results significantly; (4) Yes: the voter registry was reasonably accurate (less than 1% of voters were affected by any flaws) and it was applied in a reasonable fashion. *v2x_elrgstry*

EMB Capacity (V-Dem). Does the Election Management Body (EMB) have sufficient staff and resources to administer a well-run national election? Responses: (0) No: there are glaring deficits in staff, financial, or other resources affecting the organization across the territory; (1) Not really: deficits are not glaring but they nonetheless seriously compromised the organization of administratively well-run elections in many parts of the country; (2) Ambiguous: there might be serious deficiencies compromising the organization of the election but it could also be a product of human errors and co-incidence or other factors outside the control of the EMB; (3) Mostly: there are partial deficits in resources but these are neither serious nor widespread; (4) Yes: the EMB has adequate staff and other resources to administer a well-run election. *v2elembcap*

EMB Autonomy (V-Dem). Does the Election Management Body (EMB) have autonomy from government to apply election laws and administrative rules impartially in national elections? Responses: (0) No: the EMB is controlled by the incumbent government, the military, or other *de facto* ruling body; (1) Somewhat: the EMB has some autonomy on some issues but on critical issues that influence the outcome of elections, the EMB is partial to the *de facto* ruling body; (2) Ambiguous: the EMB has some autonomy but is also partial, and it is unclear to what extent this influences the outcome of the election; (3) Almost: the EMB has autonomy and acts impartially almost all the time. It may be influenced by the *de facto* ruling body in some minor ways that do not influence the outcome of elections; (4) Yes: the EMB is autonomous and impartially applies elections laws and administrative rules. *v2elembaut*

Free & Fair (V-Dem). Taking all aspects of the pre-election period, election day, and the post-election process into account, would you consider this national election to be free and fair? Responses: (0) No, not at all: the elections were fundamentally flawed and the official results had little if anything to do with the 'will of the people' (i.e., who became president; or who won the legislative majority); (1) Not really: while the elections allowed for some competition, the irregularities in the end affected the outcome of the election (i.e., who became president; or who won the legislative majority); (2) Ambiguous: there was substantial competition and freedom of participation but there were also significant irregularities; it is hard to determine whether the irregularities affected the outcome or not; (3) Yes, somewhat: there were deficiencies and some degree of fraud and irregularities but these did not in the end affect the outcome; (4) Yes: there was some amount or human error and logistical restrictions but these were largely unintentional and without significant consequences. *v2x_elfrfair*

Causal Factors

GDPpc(ln). Gross domestic product per capita, transformed by the natural logarithm, missing data interpolated within a time-series. *Source:* Maddison Project (Bolt & van Zanden 2014). *e_migdppcln_ipo*

Corruption (V-Dem). Includes indicators of corruption in the executive, the legislature, the judiciary, and the public sector at-large, aggregated with Bayesian factor analysis and then constructed as a historical stock with a 10% annual depreciation rate. *v2x_icorr*

Land Inequality. A measure of land inequality, which combines the urbanization rate (Vanhanen 2003) with the

percentage of cultivated land area comprised by family farms (also Vanhanen 2003), according to the formula: (100-[urbanization rate])*(100-[family farms]). *land_inequality*

Diffusion variables. Diffusion of a variable for country *X* measured as a sum of that variable for all countries except country *X*, weighted by the distance (in kilometers) between the capital of each country and that of country *X*. *[variable name]_geo*

Internal Conflict. Coded 1 if the country suffered in an internal armed conflict in a given year, 0 otherwise. The original source codebook (Brecke 2001) states that no war is coded as 0 and war is coded as 1. However, the data contains only 1's along with missing data (no 0's). Following the authors' instructions (personal communication), we re-code missing observations as non-conflict (0) for countries where at least one year in the original times series (which runs from 1500 until present) was coded as 1. *Sources:* Clio Infra (clio-infra.eu), drawing on Brecke (2001), compiled by V-Dem. *conflict_int*

External Conflict. Coded 1 if the country participated in an international armed conflict in a given year, 0 otherwise. The original source codebook (Brecke 2001) states that no war is coded as 0 and war is coded as 1. However, the data contains only 1's along with missing data (no 0's). Following the authors' instructions (personal communication), we re-code missing observations as non-conflict (0) for countries where at least one year in the original times series (which runs from 1500 until present) was coded as 1. *Sources:* Clio Infra (clio-infra.eu), drawing on Brecke (2001), compiled by V-Dem. *conflict_ext*

Natural Resources. Dependence on natural resources, measured by revenues from oil, gas, coal, and metals as a percentage of GDP (Miller 2015). *e_resdep2*

Urbanization. Urban population divided by total population. Data on urban population and total population from Clio Infra (clio-infra.eu); missing data within a time-series interpolated using a linear model. *urban_clio_ipo*

Table A2: Descriptive Statistics

	Obs.	Mean	SD	Min	Max
DEMOCRACY INDICATORS					
Polity2 (Polity IV)	15,903	0.477	0.352	0	1
UDS (Pemstein)	8,802	0.502	0.232	0	1
Political Rights (FH)	6,986	0.537	0.374	0	1
Civil Liberties (FH)	6,986	0.543	0.326	0	1
Liberal Component (V-Dem)	16,992	0.438	0.280	0.000	0.984
Participatory Component (V-Dem)	20,009	0.240	0.197	0.000	0.828
Deliberative Component (V-Dem)	16,437	0.491	0.298	0.019	0.994
Egalitarian Component (V-Dem)	16,509	0.490	0.295	0.021	0.993
Individual Liberty/Rule of Law (V-Dem)	16,515	0.491	0.290	0.003	0.993
Judicial Constraints (V-Dem)	16,333	0.493	0.290	0.010	0.986
Legislative Constraints (V-Dem)	12,114	0.499	0.300	0.023	0.990
Free Expression (V-Dem)	15,969	0.492	0.296	0.018	0.993
Alternative Sources of Information (V-Dem)	15,986	0.493	0.305	0.033	0.989
Free Association (V-Dem)	16,172	0.495	0.310	0.043	0.976
Executive Selection (V-Dem)	16,358	0.518	0.483	0	1
Adult Suffrage (V-Dem)	16,474	0.639	0.436	0	1
BMR (Boix et al.)	15,739	0.317	0.465	0	1
Lexical (Skaaning et al.)	18,142	0.457	0.391	0	1
Competitive Elections (Skaaning)	18,142	0.347	0.476	0	1
Electoral Contestation (V-Dem)	16,018	0.209	0.299	0	0.957
Clean Elections (V-Dem)	16,317	0.309	0.333	0	0.989
Government Intimidation (V-Dem)	16,325	0.202	0.900	-2.293	3.276
Other Violence (V-Dem)	16,325	0.392	0.756	-2.163	2.615
Vote Buying (V-Dem)	16,325	0.298	0.854	-1.900	2.776
Other Irregularities (V-Dem)	16,325	0.189	0.864	-2.079	2.518
Voter Registry (V-Dem)	16,325	0.257	0.831	-2.233	2.724
EMB Capacity (V-Dem)	16,204	0.136	1.078	-1.742	3.210
EMB Autonomy (V-Dem)	16,210	-0.090	1.138	-1.997	2.864
Free & Fair (V-Dem)	16,317	0.167	0.978	-2.058	2.589
CAUSAL FACTORS					
GDPpc (ln)	17,932	7.510	1.011	5.315	10.667
Corruption index	16,403	0.518	0.284	0.014	0.986
Land Inequality	9,764	5,040.182	2,474.755	0	9,603
Internal Conflict	30,753	0.064	0.245	0	1
External Conflict	30,753	0.098	0.297	0	1
Natural Resources	13,541	3.560	9.714	0	100
Urbanization rate	39,879	0.234	0.233	0.002	1
Diffusion variables:					
Polity2 (Polity IV)	40,660	0.009	0.011	0.000	0.100
UDS (Pemstein)	11,970	0.020	0.024	0.002	0.260
Political Rights (FH)	7,600	0.029	0.037	0.005	0.312
Civil Liberties (FH)	7,600	0.030	0.036	0.006	0.313
Liberal Component (V-Dem)	21,850	0.017	0.011	0.003	0.078
Participatory Component (V-Dem)	21,850	0.011	0.008	0.001	0.067
Deliberative Component (V-Dem)	21,850	0.018	0.013	0.003	0.107
Egalitarian Component (V-Dem)	21,850	0.018	0.013	0.002	0.081
Individual Liberty/Rule of Law (V-Dem)	21,850	0.018	0.012	0.003	0.084
Judicial Constraints (V-Dem)	21,850	0.018	0.011	0.004	0.075
Legislative Constraints (V-Dem)	21,850	0.014	0.011	0.002	0.096
Free Expression (V-Dem)	21,850	0.018	0.012	0.003	0.089
Alternative Sources of Information (V-Dem)	21,850	0.017	0.012	0.003	0.109
Free Association (V-Dem)	21,850	0.018	0.013	0.002	0.105
Executive Selection (V-Dem)	21,850	0.019	0.016	0.002	0.132
Adult Suffrage (V-Dem)	21,850	0.023	0.020	0.001	0.137
BMR (Boix et al.)	39,472	0.007	0.017	0.000	0.311
Lexical (Skaaning et al.)	40,660	0.011	0.022	0.000	0.315
Competitive Elections (Skaaning)	40,630	0.009	0.020	0.000	0.313

Electoral Contestation (V-Dem)	21,850	0.008	0.008	0.000	0.053
Clean Elections (V-Dem)	21,850	0.012	0.010	0.000	0.065

Democracy indices are normalized to 0-1, where 1=most democratic.

APPENDIX B: Robustness Tests

Table B1: Liberal Component (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.003	0.074***	0.048**	0.004	0.098***		0.018*	0.037***	0.005**
	(0.002)	(0.023)	(0.024)	(0.004)	(0.027)		(0.011)	(0.010)	(0.002)
GDPpc (ln) L20						0.082**			
						(0.036)			
Lagged *Y*	0.942***			0.935***			0.676***	0.780***	0.804***
	(0.005)			(0.009)			(0.025)	(0.046)	(0.021)
Trend			0.002***						
			(0.000)						
Corruption				-0.014*	-0.576***				
				(0.008)	(0.111)				
Land Inequality				-0.000	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.217	4.742				
				(0.387)	(2.989)				
Internal Conflict				-0.000	-0.019				
				(0.003)	(0.015)				
External Conflict				-0.001	-0.033**				
				(0.003)	(0.016)				
Natural Resources				0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	154	154	154	132	132	154	154	154	205
Years	111	112	112	99	99	115	22	22	114
Obs	11571	11664	11664	6752	6752	10617	2288	2288	21143
R2 (within)	0.920	0.288	0.187	0.900	0.384	0.301	0.616		0.905

Outcome: Liberal Component index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B2: Participatory Component (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	Y>0	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
GDPpc	-0.000	0.011	-0.001	0.001	0.058***		0.000	0.001	0.018**	0.000
(ln)	(0.001)	(0.014)	(0.014)	(0.002)	(0.019)		(0.001)	(0.006)	(0.008)	(0.001)
GDPpc						0.024				
(ln) L20						(0.021)				
Lagged *Y*	0.957***			0.947***			0.956***	0.739***	0.812***	0.890***
	(0.004)			(0.007)			(0.004)	(0.024)	(0.048)	(0.013)
Trend			0.003***							
			(0.000)							
Corruption				-0.008	-0.246***					
				(0.005)	(0.069)					
Land				-0.000*	-0.000***					
Inequality				(0.000)	(0.000)					
Diffusion				0.047	3.371					
				(0.234)	(2.760)					
Internal				0.002	0.000					
Conflict				(0.002)	(0.008)					
External				-0.000	-0.023*					
Conflict				(0.002)	(0.013)					
Natural				-0.000	-0.001					
Resources				(0.000)	(0.000)					
Country FE	✓	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓	✓
Countries	159	159	159	132	132	160	155	159	159	205
Years	111	112	112	99	99	115	111	22	22	114
Obs	11998	12095	12095	6751	6751	10997	11545	2370	2370	21143
R2 (within)	0.952	0.483	0.402	0.931	0.476	0.479	0.953	0.758		0.959

Outcome: Participatory Component index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), Y>0 (scores for Participatory Component that surpass 0), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B3: Deliberative Component (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.001	0.056**	0.020	0.006	0.115***		0.011	0.034***	0.003
	(0.003)	(0.027)	(0.029)	(0.005)	(0.038)		(0.012)	(0.010)	(0.003)
GDPpc (ln) L20						0.058			
						(0.045)			
Lagged *Y*	0.943***			0.928***			0.668***	0.767***	0.798***
	(0.004)			(0.007)			(0.023)	(0.039)	(0.020)
Trend			0.004***						
			(0.001)						
Corruption				-0.018*	-0.688***				
				(0.010)	(0.142)				
Land Inequality				-0.000*	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.170	4.893**				
				(0.280)	(2.263)				
Internal Conflict				0.004	-0.009				
				(0.004)	(0.021)				
External Conflict				-0.000	-0.033				
				(0.004)	(0.022)				
Natural Resources				-0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11449	11543	11543	6751	6751	10524	2262	2262	21143
R2 (within)	0.930	0.361	0.274	0.901	0.396	0.363	0.654		0.864

Outcome: Deliberative Component index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B4: Egalitarian Component (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	-0.001	0.012	0.022	0.000	0.006		-0.001	0.007	0.001
	(0.001)	(0.022)	(0.020)	(0.002)	(0.028)		(0.007)	(0.005)	(0.003)
GDPpc (ln) L20						0.006			
						(0.031)			
Lagged *Y*	0.962***			0.963***			0.776***	0.947***	0.722***
	(0.003)			(0.005)			(0.016)	(0.022)	(0.027)
Trend			0.005***						
			(0.000)						
Corruption				-0.008*	-0.388***				
				(0.004)	(0.070)				
Land Inequality				-0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				-0.246*	0.261				
				(0.143)	(2.234)				
Internal Conflict				0.005**	0.002				
				(0.002)	(0.011)				
External Conflict				0.002	-0.019				
				(0.002)	(0.014)				
Natural Resources				0.000	0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11447	11541	11541	6749	6750	10522	2261	2261	21143
R2 (within)	0.972	0.611	0.595	0.970	0.686	0.631	0.849		0.878

Outcome: Egalitarian Component index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B5: Individual Liberty/Rule of Law (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	-0.001	0.059**	0.036	0.000	0.099***		0.005	0.021**	0.003
	(0.002)	(0.025)	(0.026)	(0.003)	(0.029)		(0.010)	(0.009)	(0.002)
GDPpc (ln) L20						0.068*			
						(0.040)			
Lagged *Y*	0.961***			0.952***			0.738***	0.873***	0.799***
	(0.003)			(0.007)			(0.021)	(0.044)	(0.022)
Trend			0.003***						
			(0.001)						
Corruption				-0.004	-0.540***				
				(0.008)	(0.129)				
Land Inequality				0.000	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.145	5.522*				
				(0.278)	(3.196)				
Internal Conflict				0.002	-0.050***				
				(0.003)	(0.015)				
External Conflict				-0.001	-0.035**				
				(0.003)	(0.016)				
Natural Resources				0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11449	11543	11543	6751	6751	10524	2262	2262	21143
R2 (within)	0.944	0.324	0.230	0.915	0.380	0.327	0.690		0.893

Outcome: Individual Liberty/Rule of Law index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B6: Judicial Constraints (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.004*	0.091***	0.071***	0.005	0.089***		0.020**	0.031***	0.007***
	(0.002)	(0.022)	(0.021)	(0.003)	(0.025)		(0.009)	(0.011)	(0.002)
GDPpc (ln) L20						0.099***			
						(0.033)			
Lagged *Y*	0.956***			0.934***			0.753***	0.918***	0.737***
	(0.006)			(0.011)			(0.023)	(0.041)	(0.031)
Trend			-0.000						
			(0.000)						
Corruption				-0.016**	-0.521***				
				(0.008)	(0.095)				
Land Inequality				-0.000**	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.184	3.192				
				(0.238)	(2.179)				
Internal Conflict				0.001	-0.006				
				(0.003)	(0.012)				
External Conflict				-0.002	-0.028*				
				(0.003)	(0.016)				
Natural Resources				-0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11429	11524	11524	6751	6751	10524	2258	2258	21143
R2 (within)	0.916	0.139	0.0801	0.887	0.304	0.154	0.606		0.894

Outcome: Judicial Constraints index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B7: Legislative Constraints (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.004	0.065*	0.027	0.006	0.082**		0.013	0.021*	0.012***
	(0.003)	(0.033)	(0.032)	(0.005)	(0.040)		(0.013)	(0.013)	(0.003)
GDPpc (ln) L20						0.112**			
						(0.045)			
Lagged *Y*	0.960***			0.956***			0.772***	0.915***	0.701***
	(0.004)			(0.006)			(0.022)	(0.031)	(0.025)
Trend			0.002***						
			(0.001)						
Corruption				-0.015	-0.626***				
				(0.011)	(0.148)				
Land Inequality				0.000	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.118	5.846*				
				(0.381)	(3.448)				
Internal Conflict				-0.001	0.014				
				(0.004)	(0.023)				
External Conflict				-0.001	-0.039*				
				(0.003)	(0.021)				
Natural Resources				-0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	9551	9839	9839	5834	5969	9133	1801	1801	21143
R2 (within)	0.940	0.253	0.154	0.927	0.359	0.284	0.694		0.814

Outcome: Legislative Constraints index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B8: Free Expression (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.001	0.077***	0.031	0.003	0.145***		0.013	0.036***	0.007***
	(0.002)	(0.029)	(0.033)	(0.005)	(0.042)		(0.012)	(0.010)	(0.002)
GDPpc (ln) L20						0.090*			
						(0.049)			
Lagged *Y*	0.958***			0.948***			0.717***	0.821***	0.802***
	(0.004)			(0.006)			(0.024)	(0.043)	(0.021)
Trend			0.002***						
			(0.001)						
Corruption				0.000	-0.577***				
				(0.007)	(0.159)				
Land Inequality				-0.000	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.076	5.998*				
				(0.290)	(3.275)				
Internal Conflict				0.002	-0.035*				
				(0.004)	(0.020)				
External Conflict				-0.001	-0.054**				
				(0.004)	(0.021)				
Natural Resources				-0.000	-0.003**				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11244	11339	11339	6601	6605	10340	2221	2221	21143
R2 (within)	0.939	0.292	0.127	0.915	0.348	0.305	0.657		0.864

Outcome: Free Expression index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B9: Alternative Sources of Information (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	-0.001	0.020	-0.023	0.003	0.120***		-0.000	0.028***	0.005*
	(0.002)	(0.029)	(0.032)	(0.004)	(0.040)		(0.012)	(0.010)	(0.003)
GDPpc (ln) L20						0.039			
						(0.049)			
Lagged *Y*	0.955***			0.945***			0.724***	0.812***	0.789***
	(0.004)			(0.006)			(0.026)	(0.050)	(0.022)
Trend			0.003***						
			(0.001)						
Corruption				0.004	-0.449***				
				(0.007)	(0.154)				
Land Inequality				-0.000	-0.000***				
				(0.000)	(0.000)				
Diffusion				0.309	6.712**				
				(0.321)	(2.781)				
Internal Conflict				0.005	0.012				
				(0.004)	(0.018)				
External Conflict				-0.001	-0.043**				
				(0.004)	(0.020)				
Natural Resources				-0.000	-0.003**				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11244	11339	11339	6601	6605	10340	2221	2221	21143
R2 (within)	0.938	0.325	0.154	0.915	0.341	0.331	0.678		0.869

Outcome: Alternative Sources of Information index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B10: Free Association (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.001	0.044	-0.008	0.003	0.102**		0.010	0.031***	0.007**
	(0.003)	(0.030)	(0.033)	(0.005)	(0.043)		(0.014)	(0.009)	(0.003)
GDPpc (ln) L20						0.063			
						(0.050)			
Lagged *Y*	0.951***			0.938***			0.673***	0.730***	0.800***
	(0.005)			(0.007)			(0.028)	(0.059)	(0.020)
Trend			0.003***						
			(0.001)						
Corruption				0.004	-0.533***				
				(0.009)	(0.138)				
Land Inequality				-0.000**	-0.000***				
				(0.000)	(0.000)				
Diffusion				-0.093	4.624*				
				(0.296)	(2.699)				
Internal Conflict				0.005	0.009				
				(0.004)	(0.020)				
External Conflict				-0.003	-0.022				
				(0.005)	(0.022)				
Natural Resources				-0.000	-0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11226	11330	11330	6585	6605	10338	2202	2202	21143
R2 (within)	0.932	0.315	0.131	0.907	0.346	0.346	0.627		0.870

Outcome: Free Association index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B11: Executive Selection (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.006	0.033	0.019	0.043***	0.223***		-0.001	0.051**	0.007
	(0.007)	(0.042)	(0.039)	(0.015)	(0.061)		(0.026)	(0.022)	(0.005)
GDPpc (ln) L20						0.041			
						(0.065)			
Lagged *Y*	0.849***			0.800***			0.476***	0.466***	0.757***
	(0.009)			(0.015)			(0.029)	(0.039)	(0.017)
Trend			0.005***						
			(0.001)						
Corruption				-0.059	-0.455**				
				(0.041)	(0.175)				
Land Inequality				-0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				0.256	3.436*				
				(0.688)	(1.898)				
Internal Conflict				-0.027**	-0.042				
				(0.013)	(0.031)				
External Conflict				-0.012	-0.040				
				(0.010)	(0.034)				
Natural Resources				0.000	0.001				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11295	11402	11402	6716	6717	10394	2226	2226	21143
R2 (within)	0.778	0.189	0.169	0.690	0.134	0.195	0.376		0.785

Outcome: Executive Selection index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B12: Adult Suffrage (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	-0.007**	-0.111***	-0.067**	-0.009**	-0.074*		-0.025**	0.001	-0.010**
	(0.003)	(0.030)	(0.030)	(0.004)	(0.039)		(0.012)	(0.009)	(0.004)
GDPpc (ln) L20						-0.087**			
						(0.039)			
Lagged *Y*	0.922***			0.918***			0.664***	0.736***	0.776***
	(0.005)			(0.009)			(0.017)	(0.028)	(0.018)
Trend			0.009***						
			(0.001)						
Corruption				-0.015**	-0.220**				
				(0.007)	(0.093)				
Land Inequality				-0.000	-0.000*				
				(0.000)	(0.000)				
Diffusion				0.042	1.181				
				(0.203)	(2.252)				
Internal Conflict				0.006	0.024				
				(0.004)	(0.020)				
External Conflict				-0.000	-0.005				
				(0.004)	(0.020)				
Natural Resources				0.000**	0.001*				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	152	152	205
Years	111	112	112	99	99	115	22	22	114
Obs	11438	11532	11532	6750	6750	10513	2260	2260	21143
R2 (within)	0.944	0.579	0.520	0.948	0.623	0.623	0.780		0.842

Outcome: Mass Suffrage index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B13: Polity2 (Polity IV)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.002	0.071**	0.021	0.008	0.094**		0.016	0.064***	0.009***
	(0.003)	(0.032)	(0.028)	(0.006)	(0.037)		(0.014)	(0.013)	(0.003)
GDPpc (ln) L20						0.098**			
						(0.039)			
Lagged *Y*	0.928***			0.893***			0.666***	0.663***	0.732***
	(0.006)			(0.010)			(0.029)	(0.050)	(0.022)
Trend			0.003***						
			(0.001)						
Corruption									
Land				-0.019	-0.536***				
Inequality				(0.016)	(0.136)				
Diffusion				-0.000***	-0.000***				
				(0.000)	(0.000)				
Internal				0.083	5.139**				
Conflict				(0.442)	(2.347)				
External				0.011**	0.037*				
Conflict				(0.005)	(0.021)				
Natural				-0.009	-0.028				
Resources				(0.006)	(0.026)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	155	155	155	132	132	156	154	154	216
Years	211	211	211	99	99	193	42	42	213
Obs	12676	12823	12823	6647	6666	11854	2465	2465	23445
R2 (within)	0.912	0.354	0.275	0.845	0.282	0.355	0.655		0.798

Outcome: Polity2 index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B14: UDS (Pemstein)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.001	0.033*	0.003	0.003	0.026		0.012	0.054***	0.013***
	(0.002)	(0.017)	(0.016)	(0.004)	(0.023)		(0.011)	(0.010)	(0.003)
GDPpc (ln) L20						0.025			
						(0.026)			
Lagged *Y*	0.892***			0.869***			0.523***	0.638***	0.513***
	(0.009)			(0.012)			(0.044)	(0.075)	(0.022)
Trend			0.003***						
			(0.000)						
Corruption				-0.022*	-0.334***				
				(0.012)	(0.081)				
Land Inequality				0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				0.378	4.417**				
				(0.317)	(2.221)				
Internal Conflict				0.000	-0.009				
				(0.003)	(0.010)				
External Conflict				-0.004	0.001				
				(0.003)	(0.016)				
Natural Resources				-0.000	-0.000				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	156	156	156	131	131	155	155	155	205
Years	62	63	63	53	53	63	11	11	114
Obs	7390	7538	7538	4840	4846	6883	1296	1296	21143
R2 (within)	0.862	0.282	0.216	0.829	0.322	0.309	0.502		0.755

Outcome: UDS index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B15: Political Rights (FH)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	-0.004	0.008	-0.009	-0.022	-0.064		-0.002	0.092***	0.026***
	(0.006)	(0.033)	(0.031)	(0.014)	(0.050)		(0.021)	(0.020)	(0.005)
GDPpc (ln) L20						-0.021			
						(0.036)			
Lagged *Y*	0.849***			0.797***			0.436***	0.652***	0.481***
	(0.013)			(0.021)			(0.042)	(0.064)	(0.018)
Trend			0.006***						
			(0.001)						
Corruption				-0.067*	-0.383**				
				(0.035)	(0.173)				
Land Inequality				-0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				0.186	0.661				
				(0.583)	(2.660)				
Internal Conflict				-0.009	-0.057**				
				(0.008)	(0.028)				
External Conflict				-0.005	0.024				
				(0.012)	(0.033)				
Natural Resources				0.001***	0.003***				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	157	157	157	132	132	157	155	155	205
Years	37	39	39	25	25	40	7	7	114
Obs	5247	5540	5540	2746	2749	5733	994	994	21143
R2 (within)	0.774	0.137	0.125	0.695	0.170	0.139	0.297		0.666

Outcome: Political Rights index, inverted scale. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B16: Civil Liberties (FH)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.002	0.028	0.030	-0.018	-0.025		0.012	0.053***	0.022***
	(0.005)	(0.027)	(0.025)	(0.012)	(0.043)		(0.017)	(0.015)	(0.004)
GDPpc (ln) L20						0.012			
						(0.031)			
Lagged *Y*	0.845***			0.791***			0.468***	0.673***	0.415***
	(0.012)			(0.018)			(0.035)	(0.047)	(0.019)
Trend			0.005***						
			(0.001)						
Corruption				-0.014	-0.215				
				(0.023)	(0.138)				
Land Inequality				-0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				0.124	2.677				
				(0.631)	(2.410)				
Internal Conflict				-0.006	-0.060***				
				(0.007)	(0.021)				
External Conflict				-0.001	-0.020				
				(0.011)	(0.031)				
Natural Resources				0.001***	0.002				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	157	157	157	132	132	157	155	155	205
Years	37	39	39	25	25	40	7	7	114
Obs	5247	5540	5540	2746	2749	5733	994	994	21143
R2 (within)	0.788	0.179	0.154	0.685	0.126	0.182	0.416		0.663

Outcome: Civil Liberties index, inverted scale. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B17: BMR (Boix et al.)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	Logit	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
GDPpc (ln)	0.007	0.109***	0.084**	0.012	0.139**		1.400***	0.046***
	(0.005)	(0.041)	(0.041)	(0.010)	(0.054)		(0.439)	(0.008)
GDPpc (ln) L20						0.175***		
						(0.051)		
Lagged *Y*	0.904***			0.869***			2.268***	0.507***
	(0.007)			(0.010)			(0.219)	(0.029)
Trend			0.003***					
			(0.001)					
Corruption				-0.068***	-0.821***			
				(0.025)	(0.178)			
Land Inequality				-0.000*	-0.000***			
				(0.000)	(0.000)			
Diffusion				1.237	9.517**			
				(0.749)	(4.598)			
Internal Conflict				0.008	0.015			
				(0.008)	(0.029)			
External Conflict				-0.006	-0.034			
				(0.006)	(0.032)			
Natural Resources				0.000	0.000			
				(0.000)	(0.001)			
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓		✓	✓	✓	✓	✓
Countries	156	156	156	132	132	155	76	216
Years	207	207	207	99	99	187	41	213
Obs	12232	12351	12351	6735	6737	11010	1550	23445
R2 (within)	0.873	0.312	0.279	0.805	0.255	0.322		0.578

Outcome: BMR index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B18: Lexical (Skaaning)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
GDPpc (ln)	0.010**	0.104***	0.064**	0.016*	0.124***		0.040**	0.097***	0.009***
	(0.005)	(0.027)	(0.025)	(0.009)	(0.037)		(0.017)	(0.019)	(0.003)
GDPpc (ln) L20						0.079**			
						(0.037)			
Lagged *Y*	0.849***			0.814***			0.479***	0.442***	0.715***
	(0.010)			(0.014)			(0.037)	(0.064)	(0.017)
Trend			0.003***						
			(0.000)						
Corruption				-0.069**	-0.625***				
				(0.028)	(0.142)				
Land Inequality				-0.000***	-0.000***				
				(0.000)	(0.000)				
Diffusion				1.144*	6.447**				
				(0.665)	(2.915)				
Internal Conflict				0.006	-0.015				
				(0.009)	(0.028)				
External Conflict				-0.003	-0.015				
				(0.007)	(0.024)				
Natural Resources				-0.000	0.000				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	157	157	157	132	132	158	156	156	216
Years	211	211	211	99	99	193	42	42	213
Obs	12947	13081	13081	6683	6695	12053	2509	2509	23445
R2 (within)	0.825	0.378	0.305	0.740	0.266	0.374	0.523		0.799

Outcome: Lexical index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B19: Electoral Contestation (V-Dem)

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	Y>0	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
GDPpc (ln)	0.007**	0.095***	0.069***	0.014***	0.147***		0.007**	0.025*	0.061***	0.007***
	(0.003)	(0.022)	(0.022)	(0.005)	(0.026)		(0.003)	(0.013)	(0.014)	(0.003)
GDPpc (ln) L20						0.110***				
						(0.033)				
Lagged *Y*	0.912***			0.893***			0.956***	0.640***	0.689***	0.777***
	(0.008)			(0.010)			(0.006)	(0.030)	(0.056)	(0.021)
Trend			0.003***							
			(0.000)							
Corruption				-0.053***	-0.589***					
				(0.015)	(0.112)					
Land Inequality				-0.000**	-0.000***					
				(0.000)	(0.000)					
Diffusion				0.401	6.131*					
				(0.492)	(3.600)					
Internal Conflict				-0.001	-0.010					
				(0.004)	(0.013)					
External Conflict				-0.003	-0.037**					
				(0.004)	(0.018)					
Natural Resources				-0.000*	-0.002**					
				(0.000)	(0.001)					
Country FE	✓	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓	✓
Countries	152	152	152	132	132	153	144	152	152	205
Years	111	112	112	99	99	115	111	22	22	114
Obs	11076	11193	11193	6551	6572	10212	7146	2168	2168	21143
R2 (within)	0.900	0.395	0.338	0.884	0.465	0.411	0.915	0.643		0.875

Outcome: Electoral Contestation index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), Y>0 (scores for Electoral Contestation that surpass 0), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B20: Urbanization and Competitive Elections

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	Logit	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Urbaniz	0.077***	0.711***	0.712***	0.040	0.284		1.424	0.195***
	(0.026)	(0.202)	(0.164)	(0.067)	(0.326)		(1.767)	(0.050)
Urbaniz L20						0.648***		
						(0.218)		
Lagged *Y*	0.892***			0.843***			2.243***	0.577***
	(0.008)			(0.012)			(0.198)	(0.031)
Trend			0.001***					
			(0.000)					
Corruption				-0.090***	-0.797***			
				(0.031)	(0.184)			
Land Inequality				-0.000	-0.000			
				(0.000)	(0.000)			
Diffusion				1.959**	9.613**			
				(0.899)	(4.453)			
Internal Conflict				0.006	-0.023			
				(0.010)	(0.034)			
External Conflict				-0.007	-0.050			
				(0.007)	(0.035)			
Natural Resources				0.000	0.001			
				(0.000)	(0.002)			
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓		✓	✓	✓	✓	✓
Countries	188	188	188	135	135	188	95	213
Years	211	211	211	99	99	193	42	216
Obs	16165	16357	16357	7087	7101	16161	2063	23445
R2 (within)	0.850	0.288	0.253	0.765	0.222	0.282		0.669

Outcome: Competitive Elections index. *Estimators:* OLS (ordinary least squares), logit (conditional logit), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B21: Urbanization and Clean Elections

Estimator	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	OLS
Sample	Full	Full	Full	Full	Full	Full	5-year	5-year	MI
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Urbaniz	0.034**	0.285**	0.305**	0.082***	0.387**		0.155***	0.265***	0.062***
	(0.016)	(0.128)	(0.124)	(0.030)	(0.165)		(0.058)	(0.058)	(0.020)
Urbaniz L20						0.275**			
						(0.127)			
Lagged *Y*	0.897***			0.841***			0.636***	0.622***	0.742***
	(0.009)			(0.015)			(0.031)	(0.061)	(0.022)
Trend			0.003***						
			(0.000)						
Corruption				-0.106***	-0.730***				
				(0.022)	(0.122)				
Land Inequality				-0.000	-0.000				
				(0.000)	(0.000)				
Diffusion				0.632	4.357				
				(0.486)	(2.829)				
Internal Conflict				-0.001	-0.013				
				(0.005)	(0.015)				
External Conflict				-0.002	-0.035*				
				(0.004)	(0.018)				
Natural Resources				-0.000	-0.000				
				(0.000)	(0.001)				
Country FE	✓	✓	✓	✓	✓	✓	✓		✓
Year FE	✓	✓		✓	✓	✓	✓	✓	✓
Countries	160	160	160	135	135	160	160	160	205
Years	111	112	112	99	99	115	22	22	114
Obs	15011	15193	15193	7061	7081	15530	2926	2926	21143
R2 (within)	0.873	0.354	0.320	0.820	0.401	0.365	0.611		0.856

Outcome: Clean Elections index. *Estimators:* OLS (ordinary least squares), GMM (generalized method of moments), standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Sample:* Full (all available data), 5-year (data aggregated at 5-year intervals, after constructing 5-year moving averages), MI (missing data imputed with the Amelia multiple imputation algorithm). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.

Table B22: Competitive Elections (logit models)

Sample	Full	Full	Full	Full	Full	5-year	Full
	1	**2**	**3**	**4**	**5**	**6**	**7**
GDPpc (ln)	0.945***	1.749***	0.194	1.691***	2.649***	1.682***	
	(0.334)	(0.463)	(0.383)	(0.428)	(0.611)	(0.508)	
GDPpc (ln), L20							2.263***
							(0.705)
Lagged Y	6.338***			5.900***		2.345***	
	(0.252)			(0.358)		(0.269)	
Trend			0.054***				
			(0.010)				
Corruption				-5.131***	-11.125***		
				(1.272)	(2.264)		
Land Inequality				-0.000	-0.000		
				(0.000)	(0.000)		
Diffusion				106.088***	141.724**		
				(40.382)	(67.440)		
Internal Conflict				0.397	-0.034		
				(0.414)	(0.446)		
External Conflict				-0.571	-0.854*		
				(0.503)	(0.502)		
Natural Resources				0.028	0.004		
				(0.019)	(0.044)		
Country FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓		✓	✓	✓	✓
Countries	86	87	89	60	60	78	82
Years	152	152	211	99	99	31	154
Obs	7351	7434	8831	3842	3848	1370	6910
R2 (pseudo)	0.827	0.519	0.502	0.802	0.559	0.562	0.529
Log likelihood	-839.2	-2363	-2857	-517.4	-1154	-396.6	-2198

Outcome: Competitive Elections index. Logistic regression, standard errors clustered by country. *.1, **.05, ***.01 (two-sided tests). *Units of analysis:* country-years, unless otherwise noted. Right-side variables measured at T-1.