

## ECONOMIC DEVELOPMENT AND DEMOCRACY: A DISAGGREGATED PERSPECTIVE\*

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In recent decades, modernization theory has been challenged. Studies have found that richer countries are more likely to maintain democratic rule, but that the initial transition to democracy is unrelated to economic development, or that even the former relationship is spurious, disappearing once country fixed-effects are accounted for.<sup>1</sup> Others counter that the relationship between development and democracy is restored if historical data stretching back to the nineteenth century is incorporated, if different estimators are used, or when conditioning the relationship on institutional or leadership changes taking place.<sup>2</sup> Thus, the modernization

debate, at present, rests upon a complex set of modeling choices.

Left out of this long-running debate is an explicit consideration of the outcome – democracy. *A priori*, there is no reason to expect economic development to have uniform effects across different dimensions of democracy. Calling for a more nuanced approach than studying the overall link between development and democracy, before subsequently rejecting or confirming it, we propose that economic development is differentially related to various aspects of democracy. This insight helps account for the fragility of this relationship in extant studies and provides guidance to the ongoing debate about possible mechanisms at work in the development-democracy nexus. Specifically, we hypothesize that development primarily affects electoral contestation, while its impact on other aspects of democracy is less clear.

### I. Economic Development and Democracy

Democracy is a many-splendored concept embracing diverse elements such as electoral contestation, constitutionalism, participation, and deliberation. We argue that economic development favors the *electoral* aspect of democracy while expectations are ambiguous on other aspects. To convey this idea we distinguish two players: *citizens* and *leaders* (incumbents). We assume that citizens of a polity

are more likely to prefer a democratic regime than its leaders and 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.<sup>3</sup> Although development may also enhance the power resources of leaders, leaders in poor countries are *already* in control of considerable resources, especially in autocratic states. 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.

However, acquiring more power resources is insufficient for ensuring a democratic outcome. No citizen can effectively challenge an incumbent leader alone. For citizens to affect the character of national institutions, they must overcome their collective action dilemma. A critical feature distinguishing electoral institutions from others is the role that elections play as a *focal point* for mitigating collective action problems that would otherwise constrain popular mobilization. This protects against democratic backsliding, helping to ensure that electoral institutions, once established, are respected.

The focal role of elections stems from several key features: Elections are high-stakes endeavors; elections are highly visible, and often intensively

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1) Przeworski, A., Alvarez, M.E., Cheibub, J.A. & Limongi, F. (2000). *Democracy and Development*. New York: Cambridge University Press. Acemoglu, D., Johnson, S., Robinson, J.A. & Yared, P. (2008). "Income and Democracy." *American Economic Review* 98(3): 808–842; Acemoglu, D., Johnson, S., Robinson, J.A. & Yared, P. (2009). "Reevaluating the Modernization Hypothesis." *Journal of Monetary Economics* 56(8): 1043–1058.

2) Boix, C. & Stokes, S.C. (2003). Endogenous Democratization. *World Politics* 55(4): 517-49; Che, Y., Lub, Y., Tao, Z. & Wang, P. (2013). "The Impact of Income on Democracy Revisited." *Journal of Comparative Economics* 41(1): 159–169; Treisman, D. (2015). "Income, Democracy, and Leader

Turnover." *American Journal of Political Science* 59(4): 927-42..

3) Inglehart, R. & Welzel, C. (2005). *Modernization, Cultural Change, and Democracy*. Cambridge: Cambridge University Press; Rueschemeyer, D., Stephens, E.H. & Stephens, J.D.. (1992). *Capitalist Development and Democracy*. Chicago: University of Chicago Press.

canvassed by the media and informal networks; actions that impair election quality – e.g., voter intimidation or denial of access to the ballot to a major party – are often fairly easy to discern; and elections occur during a short and well-delimited period of time and culminate in a single event, the announcement of a winner. At this point, it is natural for large numbers of people to mobilize if their preferences are not respected.

These characteristics set elections apart from other aspects of democracy, and the prospect of collective action ought to make leaders think twice before blatantly manipulating them. By contrast, infringements on *non*-electoral features of democracy such as civil liberties, should not provide as clear a focal point as major electoral fraud or the cancellation of elections. Using various tools of repression, great damage may be done to civil liberties, for example, without a high level of public awareness and without a single galvanizing event necessarily prompting the general public to take action.

When citizens are empowered by education and wealth they are more able to resist the blandishments and coercions of the leader and more likely to behave in a peaceful and orderly manner. This is most obvious for 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, raising the cost of vote-buying.

Importantly, focal points operate *only* where elections already exist. This suggests that development might only have an impact on maintaining electoral democracy but not on the initial transition to electoral rule. Hence, our argument suggests that once established, elections will

combine with economic development to form a safeguard against deterioration in electoral democracy. But before electoral institutions are in place, our argument has no clear implications for how economic development might affect the fate of electoral democracy.

## II. Main Results

We assume that economic development involves a set of factors, including income, industrialization, changing sectoral composition, education, communications infrastructure, and urbanization. As such, economic development typically entails both increased specialization in production, labor and capital markets, and social reorganization for example with a growing urban middle class. Since the aforementioned indicators of economic development are causally inter-related and highly correlated, we adopt the common strategy to use log GDP per capita as a proxy for the composite concept.

To test the association between income and democracy we employ an ordinary least squares (OLS) estimator with country and year fixed effects, a lagged dependent variable (LDV), and robust errors clustered by country. Right-side variables are lagged one period behind the outcome and country-year is the unit of analysis. The time-series extends for more than 100 years and sometimes up to two centuries.

We begin with measures focusing on *non-electoral* components of democracy. This includes four meso-level indices from V-Dem that measure Liberal, Participatory, Deliberative, and Egalitarian components of democracy.<sup>4</sup> Additional V-Dem

4) Coppedge, M., Gerring, J., Lindberg, S.I., Skaaning, S.E., Teorell, J., Altman, D., Bernhard, M., Fish, S., Glynn, A., Hicken, A., Knutsen, C.H., Krusell, J., Lüthmann, A., Marquardt, K.L., McMann, K., Mechkova, V., Olin, M., Paxton, P., Pemstein, D., Pernes, J., Petrarca, C.S., von Römer, J., Saxer, L.,

indices that we test measure more specific aspects of democracy. All measures are re-scaled to a 0-1 scale.

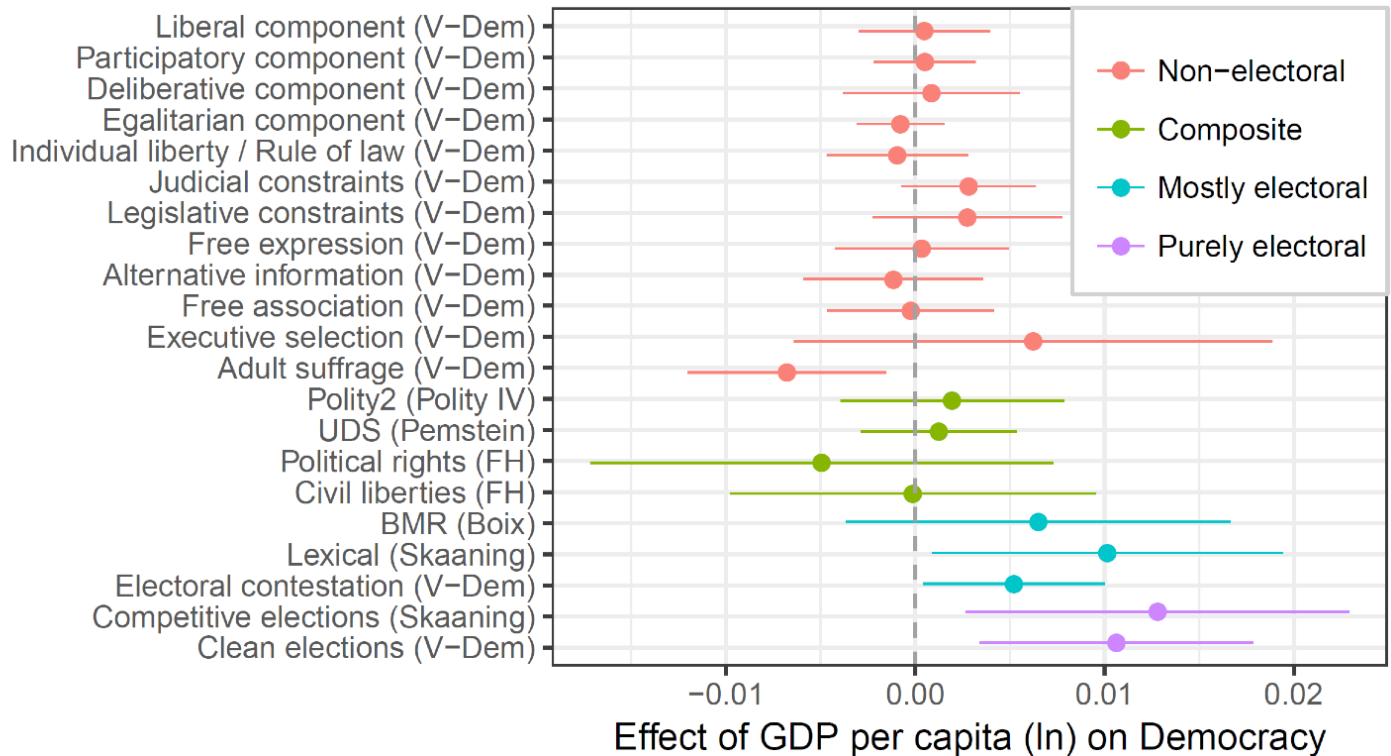
Coefficient plots for GDP per capita, estimated from these tests, are shown in Figure 1. Income predicts none of the twelve non-electoral measures of democracy (with the expected sign). Robustness tests (not shown) suggest that some of these measures are related to income in some model specifications; but none are very robust.

Next, we examine composite indices commonly used to measure democracy in its entirety (following different understandings of the concept). This includes Polity2, Unified Democracy Scores, and the Political Rights and Civil Liberties indices from Freedom House.<sup>5</sup> Results shown in Figure 1 suggest that these composite indices are not clearly linked to income.

Further, we examine three indices that focus primarily on the electoral component of democracy: the binary measure (“BMR”) from Boix et al., which captures whether the legislature

Seim, B., Sigman, R., Staton, J., Stepanova, N. & Wilson, S. (2017). V-Dem [Country-Year/Country-Date] Dataset v7.1. Varieties of Democracy (V-Dem) Project; Coppedge, M., Gerring, J., Lindberg, S.I., Skaaning, S.E., Teorell, J., Krusell, J., Marquardt, K.L., Mechkova, V., Pemstein, D., Pernes, J., Saxer, L., Stepanova, N., Tzelgov, E., Wang, Y. & Wilson, S. (2017). V-Dem Methodology v7.1. Varieties of Democracy (V-Dem) Project; Pemstein, D., Marquardt, K.L., Tzelgov, E., Wang, Y., Krusell, J. & Miri, F. (2017). The V-Dem Measurement Model: Latent Variable Analysis for Cross-National and Cross-Temporal Expert-Coded Data. University of Gothenburg, Varieties of Democracy Institute: Working Paper No. 21, 2nd edition.

5) Marshall, M., Gurr, T. & Jagers, K. (2014). Polity IV, <http://www.systemicpeace.org/inscrdata.html>; Pemstein, D., Meserve, S.A. & Melton, K. (2010). Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type. *Political Analysis* 18(4): 426-449; Freedom House. (2014). Freedom in the World Survey, <http://www.freedomhouse.org> (last visited 4/11 2016).



**Figure 1: Income and various measures of democracy**

Notes: The plot displays coefficient estimates surrounded by 95% confidence intervals. Regressions are OLS with LDV, country- and year fixed effects, and errors clustered by country. Right-side variables measured at T-1. Scales normalized to 0-1 (1=most democratic)

and executive are chosen (directly or indirectly) in free and fair elections where at least a majority of adult men are enfranchised (the inclusion of suffrage is the only departure from a purely electoral indicator, following our definition); the Lexical Index of Electoral Democracy (“Lexical”), a cumulative aggregation of indicators capturing whether national elections are held, opposition parties can run, elections are competitive, and suffrage is inclusive; and an index of Electoral Contestation based on different V-Dem indicators including measures of Freedom of Association, Clean Elections, and Executive Selection combined through multiplication.<sup>6</sup> All indices bear a

positive relationship to income, though BMR does not surpass conventional thresholds of statistical significance.

Finally, we examine indicators that are tightly focused on electoral democracy, constituting our core dependent variables. Competitive Elections from Lexical measures the existence of contested multi-party elections without any consideration of suffrage. Next, we use the V-Dem index Clean Elections based on eight indicators (presented below). For years where national elections are not on track, because they have not been introduced or discontinued due to coups, etc., the score is 0. For indicators observed only in election years, scores are repeated within election regime periods as defined by V-Dem. These electoral

measures are strongly correlated with prior levels of income.

To put the latter results in perspective, an extremely poor country, at \$250 USD per capita GDP, is predicted to hover around 0.25 on the Clean Elections index – approximately the level of PRI-Mexico in the 1980s. Quadrupling that income, to \$1000 USD, the expected long-run level of Clean Elections rises by about 0.1. A median-income country by 2010 standards, roughly \$7300, is expected to score right above the 0.5 midpoint of Clean Elections – corresponding (roughly) to late-1990’s Ghana. These results suggest that economic development brings a substantial shift in the quality of elections.

We conducted a large number of additional tests, accounting for

6) Boix, C., Miller, M.K. & Rosato, S. (2013). A Complete Data Set of Political Regimes, 1800-2007. *Comparative Political Studies* 46(12): 1523-1554; Skaaning, S.E., Gerring, J. & Bartusevičius, H. (2015). A Lexical Index of Electoral Democracy.

*Comparative Political Studies* 48(12): 1491-1525.

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additional confounders and modeling the possible endogeneity of income to democracy. The relationships between income and our electoral measures of democracy are very robust. The general picture emerging from all these tests is thus that the relationship between economic development and democracy depends on an electoral connection. The more closely an indicator homes in on the purely electoral component of democracy, the more sensitive it is to economic development.

### III. Inside the Box

The Clean Elections index offers a unique opportunity to peek inside the box of an intriguing relationship. This index is composed of eight indicators, all originally coded on five-point ordinal scales by several country experts and then transformed to interval-scale measures by the V-Dem measurement model.

Four indicators tap into problems of electoral integrity pertaining to 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 campaign/election-related violence. *Vote buying* inquires into vote and/or turnout buying in an election. *Other irregularities* refers to other irregularities on the part of the incumbent and/or opposition parties, such as double IDs, intentional lack of voting materials, ballot-stuffing, misreporting of votes, and false collation of votes.

Three other indicators in Clean Elections measure the capabilities of states to manage election processes. *Voter registry* asks whether there was a reasonably accurate voter registry in place at the time of an

election and whether it was 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.

The final indicator is *Free and fair elections*. This provides a summary judgment of whether the national election was free and fair.

In Table 1, we regress each outcome on income in our benchmark.

Notably, all indicators associated with electoral violence and fraud bear a strong relationship to income (Models 1-4) while indicators reflective of state capacity do not (Models 5-7).

Table 1: Clean Elections, Disaggregated

Outcome	Fraud & Violence				Voter Registry	Capacity		General
	Government Intimidation	Other Violence	Vote Buying	Other Irregularities		EMB Capacity	EMB Autonomy	
	1	2	3	4	5	6	7	8
GDPpc (ln)	0.032*** (0.012)	0.052*** (0.016)	0.036*** (0.011)	0.031*** (0.011)	0.004 (0.011)	-0.000 (0.009)	0.008 (0.010)	0.026** (0.012)
Lagged Y	0.910*** (0.006)	0.869*** (0.010)	0.909*** (0.008)	0.910*** (0.007)	0.903*** (0.009)	0.955*** (0.004)	0.949*** (0.005)	0.906*** (0.007)
Countries	156	156	156	156	156	156	156	156
Years	111	111	111	111	111	111	111	111
Obs	11538	11538	11538	11538	11535	11680	11675	11538
R2 (within)	0.841	0.778	0.842	0.841	0.859	0.949	0.934	0.839

Note: OLS regression with country and year fixed effects, errors clustered by country. \*, \*\*, \*\*\*.01. Right-side variables measured at T-1.



Deficiencies in the fraud and violence indicators are more straightforward for citizens to connect to the intentional actions of the government and other elites than deficiencies in the capacity variables. Hence, these analyses provide 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.

#### IV. Upturns and Downturns

Finally, we investigate whether the relationship between income and electoral democracy is symmetric or asymmetric. Does economic development enhance the probability of upturns (transitions to greater democracy) *and* reduce the probability of downturns (to greater autocracy)? Or does it only affect downturns?

Using Competitive Elections and Clean Elections along with a third measure that registers the existence of an Electoral Regime (where regular elections are on course), we ran regressions differentiating movements toward and away from electoral democracy. Results support the asymmetric hypothesis. Higher income discourages downturns, but does not clearly encourage upturns.<sup>7</sup> These results conform with our theoretical expectation that a combination of economic development and pre-existing elections should prevent leaders from discontinuing elections, or blatantly manipulating them.

#### V. Conclusion

7) One exception is when we test dynamic probit models for Competitive Elections. Here, we find a positive coefficient both on onset and survival of competitive elections. Since this measure extends back to 1800, the result corresponds well with those in Boix & Stokes (2003), suggesting that economic development might have had a stronger influence on democratic transitions in the 19th century.

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 are not, or only weakly, related to income. This may help to explain why tests employing composite indices such as Polity2 or Freedom House show inconsistent results, depending on choice of model specifications. We also find that while economic development prevents backsliding in electoral democracy it does not show a significant relationship to democratization, corroborating the thesis of asymmetric effects.

We proposed a theoretical framework that may explain the differential effects of economic development on different aspects of democracy. Development reduces the relative power and alters the utility calculus of leaders, who are in a position to respect or subvert multiparty elections. Development raises the direct costs of subversion (e.g., through vote-buying) while lowering the opportunity costs of leaving office. Yet, citizens of rich countries cannot simply push through institutional changes of any kind. Elections play a focal role, providing a coordination mechanism for citizens who wish to see the “will of the people” respected.

Regarding our contribution to the wider “modernization debate”, we note that different explanations – not only (versions of) modernization theory -- are consistent with the prediction that development affects democracy, but not with the more nuanced patterns that we find in the data. Our theoretical argument, which is consistent with the observed patterns, incorporates elements familiar to some classic formulations of modernization theory

(power resources of citizens increasing with development) but also elements that modernization theorists have typically overlooked (the role of focal points for citizen action against the regime). Further, our empirical findings point towards a potential reconciliation of the long-running debate between proponents and skeptics of the notion that development leads to democracy. Just as Przeworski and colleagues called attention to possible asymmetries between democratization and democratic consolidation we have called attention to another nuance; economic development affects some aspects of democracy more than others. While we don't expect this nuance to definitively settle the debate, it will hopefully contribute to a more fine-grained discussion. Rather than trying to prove that the “modernization hypothesis” is entirely true or entirely false, scholars might think about the varying strength of this relationship in different contexts.