Economic Development, Democratization and Democracy

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1. Introduction

The correlation between economic development and democratization is probably one of the strongest we find in the social sciences; no matter what measure of democracy or of development that is employed, a positive correlation between them is always present in the data.

There are four propositions about this correlation in the vast literature that has attempted to interpret it: (a) the relationship between economic development and democratization is real, causal and positive; (b) the relationship between economic development and democratization is, real, causal and negative; (c) the relationship between economic development and democratization is real but not causal; (d) the relationship between economic development and democratization is spurious.

Proposition (a) is, of course, the core of “modernization” theory and is best represented by Lipset. Modernization theory was challenged from the very beginning in the form of proposition (b), which was put forward by authors such as Barrington Moore Jr., Samuel Huntington, and Guillermo O’Donnell. Propositions (3) and (4) were formulated more recently. Proposition (c) was first formulated by Przeworski and Limongi and expanded in further work by Przeworski, Alvarez, Cheibub and Limongi. It represented a break with existing work since it did not account for the relationship between economic development and democracy in terms of modernization theory. This interpretation, however, did not go unchallenged, as work by Boix and Stokes, and Epstein et al. demonstrates. Finally, proposition (d), is represented by the more recent work of Acemoglu and his associates; it is probably the most radical of all since it challenges what has so far been accepted by all.

The objective of this paper is to examine the theoretical and empirical foundations of each of these propositions. This is useful, in our view, because for the first time in many years there are new things being said about the impact of economic development on democratization.

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development on democracy and democratization and a real debate is in fact taking place. Moreover, with the collection of new data and the development of new statistical techniques, the literature has become quite sophisticated. The payoff for mapping out the field, indicating the areas of consensus and disagreement, and, therefore, suggesting questions for future research, may be high.

Before we proceed, we need to clarify the terminology that will be used here. Mainly, we need to distinguish between the establishment of democracy and its sustainability. This distinction has become standard in the literature. Although present but not clear in Lipset, it was made explicit by Przeworski and his co-authors, and accepted by most authors ever since. The process of democratization encompasses both, but they are not the same. We say that a country democratized, or became a democracy, or that a democracy emerged in a given country, when political actors decide that the choice of rulers will proceed through competitive elections. The question about the emergence of democracy is: what accounts for the relevant actors’ decision to allow such process to occur? Democracy is sustained when the actors who were involved in allowing a competitive election to take place choose to abide by the results and, after the agreed upon term of rule expires, choose to allow another competitive election to take place, and, following the election, choose to abide by the results, and so on.\(^6\)

The distinction between the establishment and the sustainability of democracy implies the identification of a discrete moment that marks the regime transition.\(^7\) If we want to analyze the factors that lead to the emergence of democracy as distinct from the factors that lead to its maintenance, it does not make sense to think of democracy as an inherently continuous attribute of just any regime. To be sure, there are different types of democracies and different types of dictatorships.\(^8\) But we do not consider different types of dictatorships to be more or less democratic than others. Either a regime fills the executive and legislature through contested elections or it does not. If it does not, it is simply not a democracy. Similarly, we do not examine the quality of democracy amongst regimes that do fill the executive and legislative through contested elections, though there are certainly differences amongst them. Why some democracies have more political and economic freedom than others is certainly an interesting and important question, but our focus is on questions of regime transition – the miraculous moments when ballots, paper or

\(^6\) Note that the decision about whether to abide by the results has to be made by all actors, losers and winners. Winning is relative to one’s expectation and there may be situations in which the winner of an electoral contest (say, the party who got the most vote) is not satisfied with the results. Recall Park Chung Hee in South Korea, who “lost” elections in 1971 in the sense that he did not obtain a majority as large as the one he thought necessary and, consequently, closed congress and wrote a new constitution.


\(^8\) For work on different types of dictatorships and their survival, see Jennifer Gandhi, *Political Institutions under Dictatorship* (New York: Cambridge University Press, 2008). For work on different types of democracy and their survival, see José Antonio Cheibub, *Presidentialism, Parliamentarism, and Democracy* (New York: Cambridge University Press).
electronic, truly determine the fate of political leaders – and the tragic moments when they stop.

This view of political regime is not uncontroversial. In other work (with Jennifer Gandhi of Emory University), we discuss our conception of political regime at length and contrast it to other measures. For the purposes of this paper, it suffices to emphasize that when studying transitions to and from democracy, a categorical conception of political regime is required so that the moment of transition can be clearly identified.

With this in mind, we begin by considering propositions 1 and 2 – development causes democracy or it does not. We then turn to the argument that development causes democracy to survive, as well as the recent challenges bringing back revised versions of modernization theory. Finally we consider the evidence that the relationship is entirely spurious, driven instead by country fixed effects.

2. Economic Development Causes Democracy: Modernization Theory

Proposition 1--economic development causes democracy to emerge--is famously known as "modernization theory," which is rooted in a broad social theory. The narrower question of how economic development affects democracy was first examined by Lipset. The original argument took several forms, but the basic idea was that as countries develop economically, social structures become too complex for authoritarian regimes to manage--individuals' outlooks change, technological change endows owners of capital with some autonomy and private information, complex labor processes require active cooperation rather than coercion, and civil society emerges. At some specific point in this process, dictatorship collapses, and democracy emerges as the alternative.

One important challenge for modernization theory is to identify precisely this point at which one can expect dictatorships to collapse and democracies to emerge. Przeworski et al. noted that "if modernization theory is to have any predictive power, there must be some level of income at which one can be relatively sure that the country will throw off its dictatorship." This issue was recognized by Neubauer early in the empirical study of democratization. For him, "certain levels of 'basic' socio-economic development appear to be necessary to elevate countries to a level at which they can begin to

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11 Seymour Martin Lipset, "Some Social Requisites of Democracy."
12 Przeworski et al., Democracy and Development, p. 97.
support complex, nation-wide patterns of political interaction, one of which may be democracy. Once above this threshold, however, the degree to which a country will 'maximize' certain forms of democratic performance is no longer a function of continued socio-economic development."^{14} Jackman, in turn, finds that there is a point of inflection in the democracy curve after which the effect of economic development at least levels off.^{15} Finally, Lipset, Seong, and Torres find an N-shaped pattern, allowing for a negative effect of economic development on democratization at moderate levels, after which the impact becomes, again, positive.^{16} None of these authors, however, attempted to identify the point in the process of economic development where the inflection in the democracy curve takes place; and, as we will see, those who looked were not able to find anything.

For either data or theoretical limitations, the first generation of empirical studies seeking to test the modernization hypothesis did not consider regime dynamics but rather used cross-sectional data. In other words, they took a snapshot of the world at a given moment in history and compared the level of per capita income across democracies and dictatorships. From the observation that the democracies were significantly richer than the dictatorships, inferences about the effect of the process of economic development were made.

In all fairness, it should be said that, from a theoretical point of view, this was not entirely incorrect. According to modernization theorists, the process of transformation that makes a traditional society into a modern one is universal and unilinear. Cross-sectional development variation arises only because countries are located at different points in this universal and unilinear process; an underdeveloped country today is nothing but the developed country yesterday. In this sense, the use of cross-sectional data to test the modernization hypothesis would be legitimate because it would capture countries at different stages of development.

Only if the view of a unilinear modernization process is abandoned do the limitations of cross-sectional data for testing the modernization hypothesis become apparent. Arat, for example, has shown that the positive relationship between economic development and democracy found in a cross section of countries is compatible with within-country relationships that can take any form.^{17} In her study of 124 countries for the period 1948-77, she found that, in spite of a strong positive aggregate correlation between development and democracy, only 30 experienced a growth in the level of democracy over time as economic development increased. In 52 countries the two variables displayed no relationship, and in 42 countries the level of democracy actually decreased with the level of economic development.

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^{14} Ibid., p. 1007.
Beyond the work correlating economic development to democracy, there is little research that seeks to explicitly test the (direct or indirect) mechanisms whereby economic development is supposed to affect democratization. Lipset’s original article was replete with stories that connect the two. Economic development leads to democratization via education, which affects people’s outlook by making them more rational, moderate, and tolerant, all alleged requisites for a democracy to emerge and exist. Economic development also leads to democratization via its effects on the class structure: it not only expands the middle classes—something that seems to be axiomatically beneficial for democracy—but also reduces the lower classes’ discount rate (thus making them less radical) and increases the upper classes’ tolerance for redistributive demands. Finally, economic development leads to a more complex civil society and the consequent creation of a network of voluntary organizations that serve as democracy’s training ground and protection against the state.¹⁸ We do not mean to say that no one has explored these topics of research. There is a vast literature, too large to be cited here, focusing on the impact of development on education, on social stratification, and on civil society. Perhaps not as large, but still significant, is the literature that connects these aspects to democracy. Yet, to our knowledge, there is little that explicitly seeks to test whether the relationship between economic development and democratization happens via the effect of the former on education, the class structure, or civil society, which then affects the latter.

There are two notable exceptions. One is the work of Inglehart, who, in a number of publications, has argued that economic development affects people’s belief systems, placing them closer to the more "democratic" poles of a two-dimensional attitudinal space.¹⁹ For him, even though there are some "cultural zones" that exert an independent impact on the democratic attitudes of citizens across the globe, economic development is probably the single most important factor accounting for democratic attitudes and, by implication, the emergence of democracy.²⁰ The second exception is provided by Rueschemeyer, Stephens, and Stephens, who argue that the reason economic development leads to the emergence and maintenance of democracy is that it expands and politically strengthens the working class, which happens to be the only class with an unambiguous preference for democracy.²¹ These exceptions notwithstanding, the most famous studies supporting modernization theory have focused exclusively on the correlation between level of economic development and democracy.

These days, there is a healthy recognition that one needs to show more than simply the existence of a correlation between economic development and democracy to claim support for modernization theory. The basic claim of modernization theory has always been one about regime dynamics, and it is now understood that an empirical test of its main claim requires that this be taken into consideration. After all, the modernization claim is a strong one. Its main proposition is not simply that economic development will be positively correlated with democratization. Rather, the proposition is that economic development will lead to democratization and that the effect will be a strong one, if not the strongest among all the other factors that may also cause the emergence of democracy. We return to this issue later in this chapter, but here it is sufficient to note that, in the context of modernization theory, democracy is the culmination of a global process of transformation that we call development. Even if we are able to correctly capture economic development empirically–a topic that we bracket by asserting that per capita income level, the variable that is most often used in empirical analyses, is a sufficiently acceptable indicator of economic development–the expectation that emerges out of modernization theory is that the impact of economic development on democratization will overshadow all other effects.

3. Development Does Not Always Lead to Democracy

To refute modernization theory, some scholars sought to establish not that economic development would inevitably lead to authoritarianism but simply that there were some conditions under which development would actually lead to dictatorship and not democracy. Lipset himself mentioned that rapid economic development can be destabilizing. This brings us to proposition 2: economic development causes democracy to collapse. Barrington Moore Jr., Samuel Huntington, and Guillermo O'Donnell have developed the three best-known arguments along these lines.22

Moore argued that there was more than one path to modernity and that these paths did not always end in democracy. The circumstances that in England led to the marketization of labor relations and the dilution of the landed aristocracy's power in response to the stimulus of capitalist development were unique and were the only ones that would "naturally" lead to the emergence of democracy. Absent an exogenous shock--such as the 1789 revolution in France that destroyed the repressive system of labor relations--capitalist development would lead either to what was called "modernization from above," a process of development characterized by the repression of labor by the state in alliance with the landed aristocracy, or to a "communist revolution," where labor would take over the state

22 Barrington Moore Jr., Social Origins of Dictatorship and Democracy; Samuel P. Huntington, Political Order in Changing Societies; and Guillermo O'Donnell, Modernization and Bureaucratic-Authoritarianism.
to repress the landed aristocracy. Neither of these two last alternatives was democratic, even though they resulted from the onset of the very process of modernization. A simplistic summary of Moore's argument is his famous statement, "no bourgeoisie, no democracy," though this does not do justice to the nuances of his argument. The existence of a strong independent bourgeoisie is a necessary, but not sufficient, condition for economic development to lead to democratization; and for many societies, with or without a bourgeois class, economic development may lead to authoritarianism under fascism or communism.

Huntington called attention to the importance of institutions in the process of modernization. For him, the process of modernization is inherently unsettling of existing social relations. In the absence of strong political institutions able to absorb, control, and guide those it displaces, modernization leads to praetorian politics. Improving economic circumstances lead to mass economic and political demands that an underdeveloped state cannot meet. Inequality makes socialism attractive, leading to the establishment of a one-party socialist state. Huntington's advice to the West during the Cold War was thus to support non-Communist one-party states, encouraging the development of robust political institutions able to withstand the destabilizing force of rapid economic development. He did not promise that economic development would lead to democracy; for Huntington, whereas modernity may be associated with democracy, modernization may not.

Finally, O'Donnell, not unlike de Schwenitz, has argued that dependent development, such as experienced by Latin American countries in the 1950s and 1960s, eventually faces constraints that can be overcome only by the force of an authoritarian regime. After an "easy" phase of economic development driven by the local production of previously imported consumer goods (called import-substitution-industrialization, or ISI), countries face a bottleneck that cannot be addressed in the context of a democratic system that is based on a nationalist ideology and the political mobilization of urban workers. A "coup coalition" thus emerges that is ready to implement the bitter policies necessary for further economic development. Democracy becomes a casualty of modernization. Thus, dictatorships emerged in the 1960s and 1970s in countries such as Argentina, Brazil, Chile, and Uruguay not because of their lack of development but, rather, precisely because they were successful in generating a domestic industrial sector. These dictatorships emerged as the vehicles for the implementation of the next development phase.

There are several difficulties with these arguments. With respect to Moore, it is hard not to read it (particularly as interpreted by Skocpol) as a story in which

nondemocratic outcomes are a function of relatively weak modernizing impulses. In this light, England, France, Germany, and China simply represent different levels of economic development on a scale going from high to low. Thus, in a manner not unlike what modernization theory would suggest, differences in political regimes are due to modernizing impulses that are varied in their strength—in other words, to differences in levels of economic development.

As for Huntington, the level of political development required to sustain economic development and thereby steer a country to democracy is not at all apparent. He has little to say about the process of institution building itself, about the moment when a country's institutions can be considered to be ready to face the test of mass politics, and when nondemocratic institutions can safely be replaced by new, democratic frameworks. He often defines "institutionalization" tautologically in terms of the expected outcome, "order." Still, Huntington's claim about the dangers of early democratization resonates with recent work that points to the perils of introducing contested elections in some countries when conditions are not ready. Yet, like Huntington, those who make this kind of argument fail to realize the apparent paradox involved in a situation in which institutions that will enable democracy must be created under nondemocratic systems; they also fail to provide a clear way for identifying ex ante when a society would be ready to "be allowed" to democratize.

Finally, O'Donnell's account of the emergence of South American authoritarian regimes in the 1960s and 1970s has been challenged in terms of its historical accuracy and implicit inevitability. Although O'Donnell's argument is compelling given its premises, the premises themselves are questionable. For example, the notion that the "deepening" of import substitution industrialization could not be achieved under democratic conditions because it required sharp reduction of wages

25 See, for example, Jack Snyder, From Voting to Violence: Democratization and Nationalist Conflict (New York: W. W. Norton, 2000).


and consumption expenditures has been shown to be untrue, both then and now (see the vast literature on economic reforms under democracy). 28

One difficulty that pertains to all of these arguments is that the aggregate evidence linking economic development to democracy—the evidence that a correlation between the two exists—is simply overwhelming and is not really altered by the existence of cases that deviate from the general pattern. At most, what these critics of modernization theory establish is that (1) economic development may happen in a way that will not bring about all the associated transformations that modernization theory postulated would happen together; and (2) there are factors other than economic development that need to be present for development to lead to democracy. For Moore, the key additional factor is the class structure. For Huntington, the key additional factor is institutionalization. And for O’Donnell, the key additional factor is the international relationship of the country to global capitalism. Yet the core proposition of modernization theory—that given a certain type of development, democracy will emerge—is not fundamentally challenged.


Adam Przeworski has argued that democracy is a contingent outcome of conflict. 29 It emerges as the result of the interaction between regime and nonregime actors who come to accept that their best strategy is to delegate the decision about who will rule to a device that requires periodic competition for popular votes. The conditions that will make these actors choose this strategy cannot be reduced to any one factor. Actors will make the choice to institute periodic competitive elections for choosing rulers under conditions of high and low economic development, ethnic diversity, resource wealth, income inequality, asset specificity, revolutionary threat, geopolitical intimidation, or any other factor one may want to name.

This represents a radical departure from modernization theory. The claim is that the emergence of democracy is idiosyncratic or random with respect to economic development. How can such a claim be made in the face of an overwhelming correlation between democracy and development? The answer lies in regime dynamics. The correlation is driven by a connection between economic development and the survival of democracy. Democracy may emerge under all sorts of circumstances, but when it exists in poor countries, it is fragile and may well collapse. When democracy exists above a certain level of economic development, however, it never collapses. By thinking explicitly in a dynamic way, it is easy to see that the sustainability of democracy is what may drive the democracy and

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development connection, as distinct from the emergence story offered by modernization theorists. This is our proposition 3: economic development does not cause democracy to emerge but rather contributes to its survivability.

In empirical work with Fernando Limongi, José Antonio Cheibub, and Mike Alvarez, Przeworski has argued that the following is true regarding the relationship between economic development and political regimes:

- There is a strong relationship between level of economic development (as measured by per capita income) and the incidence of democracy: level of development alone correctly predicts 77.5 percent of current regimes in a sample of 138 countries between 1950 and 1990. When the impact of economic development on the incidence of democracy is compared with that of other factors (whether the country was founded after 1950, whether the country had been a British colony, whether the country had experienced a democratic breakdown in the past, the proportion of Catholics, Protestants, and Muslims in the population, the degree of ethnolinguistic fractionalization, the degree of religious fractionalization, and the proportion of democracies in the world), it turns out that development is what best predicts the incidence of democracy.

- The bivariate relationship between economic development and the probability of a transition to democracy is curvilinear: transitions to democracy are less likely at very low and very high levels of economic development. This means that economic development destabilizes dictatorships at intermediate levels.

- Many dictatorships survived at relatively high levels of economic development. To put it differently, whatever the supposed threshold for dictatorships to become democracy, many dictatorships passed it in good health.

- Many dictatorships fell, that is, many democracies were established, at low levels of economic development.

- Of the countries that experienced development under dictatorships, some never democratized, whereas others eventually became democratic, but much later and at very different income levels. Only a few, actually five out of twenty, did experience what modernization theory would have expected.

- Per capita income has a strong impact on the survival of democracy: the probability that a democracy will die falls monotonically as per capita income increases, reaching (approximately) zero when income is higher than $7,000 (1985 PPP$).

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30 Przeworski et al., *Democracy and Development.*  
31 PPP stands for "purchasing power parity." This measure of per capita income accounts for the fact that nontraded goods and services (e.g., haircuts) may have similar values in different countries, even though the price, according to nominal exchange rates, may be quite different. Countries with large
• The effect of per capita income on the survival of democracy is strong, even in the presence of other economic, political, social, cultural, and historical factors considered simultaneously. The effect of per capita income on transitions to democracy is positive and statistically significant, although it is orders of magnitude smaller than the effect of income on democratic survival.

• Thus, for the 1950-90 period, there is, at most, a curvilinear relationship between economic development and the emergence of democracy; at the same time, there is a monotonically declining relationship between economic development and the endurance of democracies.

• This pattern is also observed for the pre-1950 period. Given the limited availability of data, one finds for the period before 1950 that democracy was established at very different levels of development, that is, that there was no clear development threshold after which democracy became inevitable; that democratic reversals (transitions to dictatorship) did occur and that they were more likely in countries where democracy was established when they were very poor; and that democracy tended to survive past 1950 (and survive until today) in countries where they were established at higher levels of income. Thus, the pre-1950 pattern seems to be the same as the post-1950 one: no development threshold for the establishment of democracy, unstable democracies in poor countries, and endurance in rich countries.

Understandably, these findings have been theoretically and empirically challenged by subsequent scholarship. The gist of these critiques is that Przeworski et al. misinterpret the evidence, fail to consider the limitations of their data, and/or are blinded by their zeal to refute the modernization hypothesis. Two of the most direct and detailed critiques are represented in work by Boix and Stokes and Epstein et al., to which we now turn.

4.1. Modern Work on Modernization Theory

The best-known critiques of the empirical work of Przeworski and colleagues are the studies by Carles Boix and Susan Stokes, as well as the study by David Epstein, Robert Bates, Jack Goldstone, Ida Kristensen and Sharyn O'Halloran.

vibrant domestic economies and low labor costs, such as China and Brazil, have higher levels of economic development than the nominal exchange rate would indicate.  
32 The theoretical critique is that Przeworski et al. do not offer an explanation of why economic development sustains democracy, that is, why political actors choose not to revert the result of contested elections at high levels of income of income. We do not address this issue here as our goal is to evaluate the empirical claims about the relationship between economic development and democratization. One such explanation is provided in Adam Przeworski, "Democracy as an Equilibrium," *Public Choice* 123 (2005): 253-73.  
33 Carles Boix and Susan C. Stokes, "Endogenous Democratization;" David L. Epstein et al., "Democratic Transitions."
Boix lays the theoretical groundwork for the empirical research of Boix and Stokes. Boix provides a game theoretic mechanism for modernization theory. He argues that level of economic development, income distribution, and--importantly--asset specificity together impact the probability of the emergence of democracy.

Asset specificity refers to the extent to which investments in the production of a good are locked in to the production of that specific good, or whether the investment may contribute to the production of various different goods. For example, investments in oil pipelines are highly specific, whereas investments in education are not.

Where asset specificity is high and the income distribution is highly skewed, such as in many countries rich in oil or other natural resources, the wealthy members of a society face severe distributional consequences for allowing popular sovereignty, and they have no credible threat to flee the country. Thus, it is in the self-interest of the rich to pay high costs of repressing democracy, maintaining dictatorial rule. To put it bluntly, if the rich of a country derive their incomes from what is in the ground, they must defend it against the redistributive demands of democracy because they cannot flee the country with this source of income.

Suppose, however, that asset specificity is low, and the rich derive their income from high levels of skill (as do many in South Africa, for example). Then the rich have a credible exit threat. If the rich flee the country, taking their productive capacity along with them, they can severely harm the national economy. This credible threat restrains the distributional demands of the poor and may make democracy possible even in countries with relatively low levels of economic development, such as India. Asset specificity aside, if distributional demands diminish at higher levels of economic development, Boix argues that economic development should make democracy more likely both to emerge and to survive.

Yet, how can Boix and Stokes claim that development causes democracies to emerge in the face of the evidence presented by Przeworski, Alvarez, Cheibub, and Limongi (henceforth PACL)? They argue that PACL’s empirical inferences are questionable because they are based on a small number of wealthy dictatorships and that, if data from a longer period of time are considered, the effect of development becomes more apparent. They furthermore argue that the effect of development is contingent on accounting for other factors, some of which are identified by the theory proposed

by Boix. Once these important variables are included in the analysis, they argue, economic development clearly causes democracy.

Epstein and colleagues take a different approach. Rather than propose a new variant of modernization theory, they take issue with the conception of democracy employed by PACL. They argue that one should acknowledge the existence of a middle category of political regimes and that, if one does so, the data show a connection between economic development and the emergence of democracy. Thus, theirs is purely an empirical issue and rests on a defensible middle category of political regime.

As the work by Przeworski and colleagues delivered a severe blow to modernization theory, these new studies represent an exciting new challenge and a vigorous defense of the old school of thought. The new studies themselves, thus, deserve scrutiny as we enter into the next round of the debate. We thus consider their contributions one by one.

4.1.1. Dwindling Numbers, Sample Bias, and Omitted Variables

This subsection's title lists the three empirical objections raised by Boix and Stokes to the analysis of Przeworski and Limongi and PACL:36

1. The inferences are shaky because they are based on a small number of wealthy dictatorships.

2. While the findings may be true for the post-1950 period, they do not hold for a larger time span (e.g., since the middle of the nineteenth century).

3. Finally, PACL fail to consider important variables that, when included in their analysis, clearly demonstrate that economic development causes democracy.

We examine each of these claims in turn.

Dwindling Numbers. Boix and Stokes object to two statements PACL make on the basis of their data. They react, first, to the assertion that dictatorships at the highest levels of per capita income have lower probabilities of democratizing than those at moderate levels of per capita income, a statement that obviously contradicts modernization theory. Second, they react to the observation that few dictatorships experienced development for a relatively long period of time and then democratized.

Regarding the first statement, Boix and Stokes correctly argue that inferences made on the basis of small numbers--as with transitions to democracy at high levels of

economic development should be treated with caution. Such inferences can change drastically with the addition or subtraction of only a few instances of the event of interest. Given the small number of wealthy dictatorships in PACL’s dataset, one or two additional cases of authoritarian collapse could change the overall picture substantially, making the relationship between economic development and transitions to democracy resemble the one described by modernization theory.

Although a possibility, this is, however, all that it is. Short of wishing for an alternative world, there is little one can do about the fact that only a few dictatorships exist at high levels of economic development. One of the things one can do is to explain why the world is as it is.

Boix and Stokes object to the second statement—that few dictatorships experienced development for a relatively long period of time and then democratized—on the grounds that this, in fact, constitutes evidence in support of modernization theory. Here is their argument:

Assume . . . that both endogenous and exogenous mechanisms are at work [in the process of democratization]. Then there may be few dictatorships left at a high level of income precisely because development at lower levels of income already helped turn them into democracies and then helped keep them democratic. . . . Przeworski and Limongi count as countries "that developed under authoritarianism and became 'modern'" only ones that achieved a per capita income of $4,115. But it is not obvious to us why countries that move from a per capita income of $1,000 to $2,000, or from $2,000 to $3,000, and so on are failing to undergo development. If they are developing, and if dictatorships collapse and are replaced by democracies as they achieve development at these lower levels, then their absence from the pool of dictatorships at higher levels of income does not refute endogenous modernization but instead supports it. Indeed, from this perspective the anomaly is not that the number of dictatorships that became rich and then democratized is small, but that some dictatorships survived at all, despite earlier development.37

The reason the dataset contains few wealthy dictatorships, Boix and Stokes argue, is that most dictatorships that experienced some amount of development, even if paltry, had already democratized and remained democratic. Boix and Stokes thus change the main theoretical claim of modernization theory from being one about the

effects of levels of development on democratization to one about the effects of changes (or perhaps long-term trends) in the level of development. From this perspective, what matters is that per capita income increases, even if from a very low level. Development, in this sense, is a process and not a condition; thresholds become irrelevant because the "democratizing" effects of development—that is, of a change of per capita income—will be felt even by very poor countries.

If this is the case, then the relevant variable for explaining democratization should be changes in per capita income and not levels of per capita income. Yet, the evidence supporting a positive relationship between changes in per capita income and democratization is at best weak. PACL find that changes in per capita income affect both democracies and dictatorships: economic growth is always good as it makes both regimes less likely to change (although the effect is stronger for the latter than for the former). Acemoglu et al., in turn, find that changes in per capita income have no effect on democracy, whether the time span one adopts is 10, 50, or 100 years. Alternatively, Quinn and Gassebner, Lamla, and Vreeland find that short-run changes in per capita income, that is, economic growth, makes democratization less likely because it helps dictatorships survive in office. This turns modernization theory on its head.

Our skepticism notwithstanding, the challenges of Boix and Stokes are worthy of empirical investigation. We consider a variant of the Boix and Stokes statistical model (model 1 in table 1) and find that for a poor dictatorship—with per capita income of just $100—the chances it will democratize are small: about 1 out of 100. With per capita income of $5,000, the chances of democratization increase to 1 out of 75. With per capita income of $12,000, the chances of democratization increase to about 1 out of 40. So, the best estimate is that by increasing income the chances of democratization nearly triple. But in order for this to happen, per capita income must increase by 120 times, going from $100 to $12,000 (see table 2).

38 Daron Acemoglu et al., "Income and Democracy." They do find, however, that if one adopts a 500-year time span, the relationship between change in per capita income and democratization is positive, although they make an argument that this relationship is very likely to be spurious. We take this finding with some skepticism as we find it hard to meaningfully talk about democracy 500 years ago.

Table 1: Determinants of Regime Transition

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<td>-0.00033</td>
<td>0.004</td>
<td>0.00001</td>
<td>0.0001</td>
<td>0.0025</td>
<td>0.0005</td>
<td>0.00450</td>
</tr>
<tr>
<td></td>
<td>0.0004</td>
<td>0.437</td>
<td>0.000</td>
<td></td>
<td>0.155</td>
<td>0.010</td>
<td>0.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagged per capita income growth</td>
<td>-0.01998 -0.02385</td>
<td>0.0103</td>
<td>0.0169</td>
<td>0.052</td>
<td>0.159</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagged leadership turnover</td>
<td>0.54148 0.97221</td>
<td>0.1933</td>
<td>0.2810</td>
<td>0.005</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index of religious fractionalization</td>
<td>0.10964 2.55558</td>
<td></td>
<td></td>
<td>0.4592 0.9904</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.811 0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Catholics in the population</td>
<td>0.00154 -0.01129</td>
<td>0.0026</td>
<td>0.0054</td>
<td>0.558 0.037</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Protestants in the population</td>
<td>-0.00262 -0.02444</td>
<td>0.0060</td>
<td>0.0162</td>
<td>0.661 0.132</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Muslims in the population</td>
<td>-0.00072 0.00022</td>
<td>0.0031</td>
<td>0.0031</td>
<td>0.817 0.817</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New country</td>
<td>-0.43483 -0.01593</td>
<td>0.2097</td>
<td>0.4513</td>
<td>0.038 0.972</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior British colony</td>
<td>0.16485 -0.83915</td>
<td>0.2044</td>
<td>0.4251</td>
<td>0.421 0.048</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number past democratic breakdowns</td>
<td>0.36116 0.89459</td>
<td>0.0700</td>
<td>0.1210</td>
<td>0.000 0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Democracies in the world</td>
<td>3.03252 -3.74161</td>
<td>1.2017</td>
<td>1.8800</td>
<td>0.012 0.047</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-3.40653 0.12385</td>
<td>-2.45053</td>
<td>-1.28993</td>
<td>-13.6899</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.5407 0.9027</td>
<td>0.2821</td>
<td>0.3366</td>
<td>6.7440</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>0.000 0.891</td>
<td>0.000</td>
<td>0.000</td>
<td>0.002</td>
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<tr>
<td>N</td>
<td>2397 1545</td>
<td>583 736</td>
<td>259</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR chi2</td>
<td>85.25 167.45</td>
<td>1.92</td>
<td>8.29</td>
<td>14.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi2</td>
<td>0.000 0.000</td>
<td>0.166</td>
<td>0.004</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.1783 0.4695</td>
<td>0.0189</td>
<td>0.0784</td>
<td>0.4294</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\beta_{PA}^{*}$ = transition from Authoritarianism to Democracy; $\beta_{PA}$ = transition from Democracy to Authoritarianism.

Table entries are coefficient, standard error and p-value.

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In the history of the modern world, a change in per capita income of this magnitude has never happened. The closest is Japan, which entered the sample with a per capita income of $1,768 in 1952 and reached a per capita income of $14,317 in 1990, an eightfold increase in per capita income. Five other countries—Canada, Finland, West Germany, Luxembourg, and Norway—experienced an increase in per capita income slightly higher than $10,000 between 1950 and 1990. Of course, these cases do not represent good examples for modernization theory because they were all democracies to begin with. At the same time, twenty-four countries ended the period with per capita incomes below those with which they had started, and forty-four saw their incomes increase by less than $1,000 between the times that they were first and last observed. The average country between 1950 and 1990 had its per capita income increase by 2.1 times, far below the 120-fold increase that our estimates suggest are necessary to raise the probability of a transition to democracy from about one out of 100 to about one in 40.

<table>
<thead>
<tr>
<th>Per Capita Income (1985 PPP$)</th>
<th>$P_{AD}$</th>
<th>$P_{DA}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0.0086</td>
<td>0.0965</td>
</tr>
<tr>
<td>1,000</td>
<td>0.0093</td>
<td>0.0365</td>
</tr>
<tr>
<td>2,000</td>
<td>0.0102</td>
<td>0.0097</td>
</tr>
<tr>
<td>3,000</td>
<td>0.0112</td>
<td>0.0020</td>
</tr>
<tr>
<td>4,000</td>
<td>0.0122</td>
<td>0.0003</td>
</tr>
<tr>
<td>5,000</td>
<td>0.0133</td>
<td>0.0000</td>
</tr>
<tr>
<td>6,000</td>
<td>0.0145</td>
<td>0.0000</td>
</tr>
<tr>
<td>7,000</td>
<td>0.0158</td>
<td>0.0000</td>
</tr>
<tr>
<td>8,000</td>
<td>0.0171</td>
<td>0.0000</td>
</tr>
<tr>
<td>9,000</td>
<td>0.0186</td>
<td>0.0000</td>
</tr>
<tr>
<td>10,000</td>
<td>0.0202</td>
<td>0.0000</td>
</tr>
<tr>
<td>11,000</td>
<td>0.0219</td>
<td>0.0000</td>
</tr>
<tr>
<td>12,000</td>
<td>0.0237</td>
<td>0.0000</td>
</tr>
<tr>
<td>Difference</td>
<td>0.0151</td>
<td>0.0965</td>
</tr>
</tbody>
</table>

Given these estimates and realistic expectations about economic growth, should we embrace the claim that development sets in motion a number of processes that will, soon enough, lead to the emergence of democracy? When we also consider that the relationship is highly uncertain from a statistical point of view, our answer is no.
Sample Bias. The second empirical objection that Boix and Stokes raise to PACL’s analysis is that it was limited to the 1950-90 period. Extending the analysis back to the mid-nineteenth century, they argue, reveals that the impact of economic development on democratization is positive and very strong. Yet, further data analysis of the 1850 to 1949 period (which can be seen in models 2 and 3 of table 1) shows that the result is driven by a small number of western European cases in the late nineteenth century.

First consider the period 1901-49.\textsuperscript{40} It turns out that this period is much like the 1950-90 period analyzed by PACL. Economic development has no effect on transitions to democracy, democracy emerged at high and low levels of economic development, and economic development did have an effect on the survival of democracy, substantially reducing the probability of a democratic breakdown.

Given that per capita income does not cause democratization in the 1900-49 sample, the effect that Boix and Stokes found for the 1850-1949 period must be due to what happens between 1850 and 1900. Here, the effect of economic development on the emergence of democracy is indeed positive.\textsuperscript{41} Substantively, the effect is strong: the probability of a democratic transition increases from virtually zero to 0.42 when per capita income goes from $100 to $3,000. The statistical significance of this finding, however, is marginal, which means that we cannot have much confidence in the result.\textsuperscript{42}

Why is our confidence low? To begin with, there are not many observations. For the eighteen countries in the sample, data on per capita income are available for only 259 yearly observations of non-democracies out of a possible 2,345 observations--so nearly 90 percent of the data are missing. Eleven of the countries have data for 1850, but no country has data for the period between 1851 and 1870--so we are really analyzing the period 1871-1900. Most of these data (222 of the observations) come from eight western European countries: the United Kingdom, Belgium, the Netherlands, Germany, Austria, Italy, Sweden, and Denmark. Moreover, there is not much variation in the dependent variable. There are only three transitions to democracy in this period for which per capita income information is available: the United Kingdom (1885), Belgium (1894), and the Netherlands (1897).\textsuperscript{43} As these

\textsuperscript{40} Przeworski et al., Democracy and Development, pp. 103-6, also analyzed the period 1901-49, relying on descriptive statistics. Unlike Boix and Stokes, they do not estimate inferential statistics given the limitations of the data.

\textsuperscript{41} We do not analyze the effect of per capita income on democratic breakdown for the 1850-1900 period because all democracies--for which data are available--survive. As a matter of fact, there is one democratic breakdown in the period--France in 1852--but per capita income is not available.

\textsuperscript{42} The finding holds only at the 0.10 level of statistical confidence and is rejected at the conventional 0.05 level.

\textsuperscript{43} Boix and Stokes’ date of democratic transition are significantly different from the ones identified by Przeworski and his co-authors (1990:105). According to the latter, democratic transition in the United Kingdom, Belgium and the Netherlands occurred in 1911, 1919 and 1868, respectively.
transitions occurred at relatively high levels of per capita income, we see a positive relationship; but it is not a relationship with high statistical significance. Note that Boix and Stokes do not control for other variables because data are not available. It may well be that if we could control for other factors, the correlation would be even weaker.

Thus, to review, the effect of per capita income on transitions to democracy is not statistically significant for the period 1950-90, is not statistically significant for the period 1901-49, and is only marginally statistically significant for the period 1850-1900.

Omitted Variables. Boix and Stokes's last empirical objection to PACL's is that it suffers from omitted-variable bias. Specifically, they argue that there are two variables that PACL did not include in their analysis and which hindered democracy from emerging as a result of economic development: whether the country was rich in oil, and whether the country was in eastern Europe under the influence of the Soviet Union.\footnote{This first variable is derived from Boix's version of modernization theory outlined previously; Boix, \textit{Democracy and Redistribution}. Note that PACL already exclude from their dataset (the same used by Boix and Stokes to produce their table 6), six countries in which the ratio of fuels exports to total exports exceeded 50\% in 1984-86. They do so "because the patterns of economic development for countries that rely for most of their income on oil are sui generis"; Przeworski et al., \textit{Democracy and Development}, p. 77. These countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.}

As we saw earlier, Boix proposes that the effect of per capita income on democratization may be contingent on the degree of asset specificity in a country.\footnote{Boix, \textit{Democracy and Redistribution}.} If the economic elites (or "the rich") within a country derive their income from highly specific assets, such as oil (as they do in many Middle Eastern countries), then they will stop at nothing to repress democracy. They fear that democracy will lead to massive expropriation by governments supported by the poor. But if the rich derive their income from their skills and education, as is true for countries such as India and South Africa, redistributive demands are tempered even under democracy. Alienation of the rich may lead to emigration, damaging prospects for economic growth. Recognizing this, even democratic governments supported by the poor will resist the temptation of massive expropriation. So, anticipating moderate redistributive demands, the rich may acquiesce to demands for democracy.

Boix and Stokes also propose that international relations may matter. Specifically, they suggest that countries under the influence of the Soviet Union may have been less likely to democratize despite their levels of economic development because the Soviet Union exerted "powerful pressures" against democratization in eastern Europe "and did so consistently through almost the entire period covered by the
Przeworski data set.” They suggest, therefore, the importance of accounting for whether a country was under Soviet influence.

Had PACL accounted for oil-rich and Soviet dictatorships, Boix and Stokes argue, they would have found a positive and substantial effect of per capita income on democratization in the period between 1950 and 1990. Boix and Stokes conclude that "once we control for the exogenous factors of international politics and factor endowments, economic development makes democratization more likely.” To account for these factors, they drop observations of Soviet and oil-producing countries from the analysis.

It is true that if one drops most of the observations of Soviet dictatorships and all of the oil-rich dictatorships, the effect of per capita income on the emergence of democracy is statistically significant. Yet, Boix and Stokes fail to drop all of the observations of countries that were Soviet dictatorships—they keep the precise observations for the years in which these countries transitioned to democracy: Bulgaria in 1990, Czechoslovakia in 1990, and Hungary in 1990. This is an understandable and unintended technical mistake: because their model is dynamic, they should drop observations of countries that were Soviet dictatorships the previous year, but they actually dropped observations that are Soviet countries in a given year, so the Bulgaria, Czechoslovakia, and Hungary transitions are included even though they transitioned from Soviet dictatorships.

More specifically, Boix and Stokes drop observations if their Soviet indicator is equal to one, but they should drop observations if their lagged Soviet indicator is equal to one. Otherwise, transitions from Soviet dictatorships to democracy—Bulgaria, Czechoslovakia, and Hungary—all count as transitions at relatively high incomes. But all of the years that the Soviet dictatorships survived and for which we have data on income—Bulgaria 1981-89, Czechoslovakia 1961-89, and Hungary 1971-89, again at relatively high incomes—get dropped. To bring this into more detail, Boix and Stokes argue that they exclude Soviet-dominated countries (rather than using an indicator variable to identify these countries) because such a variable would be perfectly collinear with the regime variable: all Soviet-dominated countries are also authoritarian. This, however, is true only if "Soviet-domination" is taken to be a time-invariant factor, which it is not. Now, given that it varies over time, the proper way for this variable to be entered into the Markov model—the model that both PACL and Boix and Stokes estimate—is lagged by at least one year: what matters for regime dynamics is not that the country was dominated by the Soviet Union this

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48 Other countries under the influence of the Soviet Union also democratized in the period (e.g., Poland in 1989 and Romania in 1990). These countries, however, do not appear in the Boix and Stokes dataset because income data for these years are not available.
year but that it was dominated by it last year. Once this is done, the results reported by Boix and Stokes completely disappear.

More generally, we caution against excluding cases according to important variables (rather than controlling directly for the potential effects of these variables in the statistical analysis). If we exclude sufficient cases, we can get any results we want. This could become absurd, with the researcher choosing to analyze only the authoritarian regimes in which small merchants accumulated sufficient capital to increase productivity and provide a general increase in material well-being; in which the capital accumulated was mobile rather than fixed; in which the population was ethnically homogeneous and shared a religion that emphasized individual values and the pursuit of happiness through hard work; in which institutions that allowed an elite to compete for power and get habituated with competition were in place before the emergence of mass politics; in which the middle class expanded and started to forcefully demand that the shackles of dictatorship be removed; in which . . . the process of economic development took place in just the right way as to lead to democratization as posited by modernization theory. At the limit, one is left with the cases of which Lipset spoke, located in "northwest Europe and their English-speaking offspring in America and Australasia," where "the conditions related to stable democracy . . . are most readily found."51

Still, Boix and Stokes make an important contribution in drawing attention to the effect of asset specificity—particularly oil—on democratization. More generally, there is a growing literature on the effect of the "resource curse" on political regime and economic development. The question is addressed by Lindberg and Meerow in this volume. It has long been known that the presence of natural resources can lead an economy to divert investment away from potentially productive sectors, ultimately undermining economic development. Ross, as well as Jensen and Wantchekon, have shown that the presence of oil hinders the emergence of democracy.52 Gassebner et al. show that oil is one of a very few variables that robustly predict democratization, with a negative effect.53 The resource curse may also hurt democracies. Collier and

51 Lipset, Political Man, p. 57.
Collier and Hoeffler argue that the resource curse can hurt democracy more than autocracy because it is more likely to breed violent conflict and instability under democracy.⁵⁴ We find some of the evidence that oil has a direct impact on the dynamics of political regimes convincing. The evidence that the effect of economic development is contingent on the presence of oil is plausible in theory, but robust empirical evidence supporting this claim is lacking.

The broad evidence in support of a strong effect of economic development on democratization is weak at best, even after the extension of the sample to the nineteenth century and the inclusion of variables that had been left out of the analysis before. This effect is often not statistically significant. When it is significant, it is either substantively small—particularly in view of the expectations derived from modernization theory—or based on a dataset that is problematic.

### 4.1.2. Partial Democracies

Epstein et al.’s major innovation is to employ a measure of political regime that classifies cases into three categories: democracy, partial democracy, or autocracy. For this, they need an alternative measure to PACL’s binary one. They use polity, a commonly used measure of regime, particularly in the quantitative literature in international relations.

Though polity runs from −10 to +10, often researchers choose to “dichotomize” the measure between cases that are greater than +6 or +7 and cases that are less than +6 or +7. While such an approach produces a measure that is broadly correlated with the PACL measure, it is problematic when it comes to studying regime transitions, because there is no obvious threshold for a switch in regime types. The extremes are easy to agree on—there are obvious democracies, such as the United Kingdom, and obvious dictatorships, such as North Korea. But the precise timing of the transition from dictatorship to democracy and back again is not obvious without crisp, explicit, and replicable rules for coding transitions, such as provided by the PACL measure.⁵⁵

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⁵⁵ See Cheibub, Gandhi, and Vreeland, ”Democracy and Dictatorship Revisited,” for a comparison of the PACL and Polity measures.
What constitutes a "transition" in the polity scale is further complicated by the fact that it actually combines five different component variables that measure different facets of a polity. The measure combines variables that code, for example, the relationship between the executive and the legislature, how the executive is recruited, whether there are elections, and whether there is political violence. The combination of all of these different facets of a polity results in several objectionable claims. For example, if a country moves from totalitarianism into civil war, it is coded as more "democratic" because political violence is considered to be a form of political participation that is absent under totalitarianism. As another example, countries that fill the chief executive through coups are considered more "democratic" than countries that have monarchies because the selection process is theoretically more open. In our view, we would not consider any of these situations more or less democratic. Rather, we would simply suggest that they are different situations within the same category of nondemocracy.

These critiques notwithstanding, Epstein et al.'s uniqueness in the transitions literature is to propose a "trichotomization" of the polity scale over the intervals [-10, 0], [+1, +7], and [+8, +10]. They estimate the probability of a transition from dictatorship to democracy and the probability of a transition from partial democracy to democracy. They also consider breakdowns of democracy, estimating the probability of a transition from democracy to either partial democracy or dictatorship.

Epstein et al. emphasize two main aspects of their findings: (1) that they have "demonstrated that higher incomes per capita significantly increases the likelihood of democratic regimes, both by enhancing the consolidation of existing democracies and by promoting transitions from authoritarian to democratic systems"; and (2) that the category of "partial democracies" emerges from their analysis "as critical to understanding democratic transitions." According to them, "These are 'fragile'
democracies, or perhaps 'unconsolidated democracies.' Whatever one wishes to call them, they emerge from our analysis as critical to the understanding of democratic transitions. More volatile than either straight autocracies or democracies, their movements seem at the moment to be largely unpredictable. One of our major conclusions, then, is that it is this category—the partial democracies—upon which future research should focus.\textsuperscript{59}

What are partial democracies? For Epstein et al., as we have seen, partial democracies are political regimes that score between +1 and +7 in the polity measure. They justify the decision to partition the polity measure in this way by arguing the following: there are no cases of a country with a total score of 7 or below and a maximum value in any of the five component measures; the classification "correspond[s] well with those employed by others"; and the analysis "is robust to changes in the cut points."\textsuperscript{60} This last point is precisely the problem. Their findings with respect to "partial democracies" are robust to all different cut points of the polity measure, making their findings too robust to provide any real analytical traction over their question.

To explain, following the Epstein et al. suggestion to focus research on "the partial democracies," we expand the cut points in step-by-step increments from the [+1, +7] interval all the way out to the [-9, +9] interval. Thus, partial democracies are variously defined to encompass as few as 811 observations (when the polity interval is [+1, +7]) and as many as 4,503 (when the polity interval is [-9, +9]). It turns out that no matter what interval we use, the qualitative findings reported by Epstein et al. do not change. Most importantly, the estimate of the impact of economic development on the probability of a transition toward democracy always remains positive and significant (and actually larger) as the definition of partial democracies expands. The effect of economic development on the survival of democracy is also positive and significant as long as the upper bound of partial democracy is +8 or lower.

When full democracies are coded as the cases scoring +10, and autocracies as the cases scoring −10, the effect of economic development on the survival of democracy is positive but not significant, whereas the effect of economic development on the emergence of democracy is both positive and significant. Recall that the latter really indicates the effect of per capita GDP on transitions from autocracy or partial democracy to full democracy. An examination of the data demonstrates that many of the cases included as partial democracies in the more expansive definitions violate whatever conceptual understanding one may have of these political regimes. There is certainly no consensus in the literature. Hegre et al. consider the full scale of polity in their analysis of middle regimes, estimating their significance parametrically, while Fearon and Laitin define the middle interval as running [-5,
Yet, in the Epstein et al. analysis, the key result holds no matter what cut points are used. Ironically, we thus lose analytical traction over the question of midlevel regimes. There are, it seems, situations in which coefficients can be just too robust for them to be of any use.

We suggest that careful, conceptually driven, dissection of the polity index is required to understand what is going on in the data. Of the many aspects of democratization conflated in the measure--political violence, constraints on the chief executive, the selection of rulers--we need to understand which ones are correlated with economic development and whether the correlation is driven by the emergence and/or the survival of democracy. Until such a better understanding of the findings of Epstein et al. appears, we remain unconvinced.

We conclude that economic development does not exert a strong effect on democratization, though we find convincing its strong impact on democratic survival. This proposition has been recently further corroborated by an analysis of the emergence and survival of democracy in which the impact of fifty-eight other factors were analyzed for robustness. After evaluating 1.7 million regressions of the emergence of democracy and 1.4 million for the survival of democracy, Gassebner et al. concluded that per capita income is not among the most robust determinants of the transition to democracy, but that it is one of three robust factors accounting for the survival of democracy.62

In our view, the best statistical techniques and the best data collection efforts have not been sufficient to generate convincing evidence that the effect of economic development on democratization is substantively significant. True, there is an effect, in the sense that estimated coefficients are positive and, at times, statistically significant. Under some specifications, the effect is curvilinear--development destabilizes middle-income dictatorships but not very poor or very rich ones. But in no case is the effect of economic development--as measured by per capita income--consistent with what would be expected if modernization theory, in any of its incarnations, were true.

When it comes to the emergence of democracy, there are some cases that conform to proposition 1 (economic development goes along with democratization), some that conform to proposition 2 (economic development goes along with the

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62 Gassebner, Lamla and Vreeland, "Extreme Bounds of Democracy." Interestingly, Gassebner et al. do find evidence that a positive change in per capita income is associated with the survival of dictatorships. So, economic growth actually prevents the emergence of democracy, which goes directly against proposition 1 and may be somewhat consistent with proposition 2. For a thorough empirical and theoretical investigation of this phenomenon, see Quinn, "Democracy and International Financial Reform."
entrenchment of autocracy), and many other cases where we observe little change at all. The lack of a clear relationship may be due to a lack of a causal connection between economic development and democratization, but it also may be because the causal connection is more complex than scholars have thus far analyzed. Economic development may unleash both pro-democracy forces and also undemocratic forces. Democratizing forces may include increasing levels of education and labor processes that become too complex to be controlled by an autocracy; it may also include a diverse civil society that is simply too strong to be dominated through autocratic forms of control. Undemocratic forces may include a growing insecurity among the winners from economic development who fear the expropriation of their gains, increasing inequality resulting in a growing sentiment of relative deprivation among labor and the poor, and an increase in factionalism across society too deep for peaceful elections. If economic development can simultaneously lead to both pro-democratic and undemocratic forces, we may not observe a consistent, prevailing movement in favor of democracy. Nevertheless, this does not mean that development is necessarily neutral with respect to democratization—we may need to further break down its effects, sorting out the democratic and undemocratic forces. Theoretical models such as those of Rosendorff, Boix, and Acemoglu and Robinson are helpful in identifying how these forces may interact.63 Yet, as for testing these theories, unfortunately history has not given us sufficient data to work with, as the work by Boix and Stokes demonstrates. Still, we look forward to future research along these lines.

In the meantime, PACL’s statement, in our view, still stands: “The conclusion reached thus far is that whereas economic development under dictatorship has at most a non-linear relationship to the emergence of democracies, once they are established, democracies are much more likely to endure in more highly developed countries.”64

5. Country-Specific Effects and Spurious Correlation

Given all that has been written about the relationship between development and democracy, proposition 4, put forward by Acemoglu, Johnson, Robinson, and Yared is a radical one: the relationship between democracy and development is spurious.65 In other words, there is no causal connection between democracy and development at all. Development causes neither the emergence nor the survival of democracy. The apparent connection between democracy and development is really driven by other factors, which independently cause both.


64 Przeworski et al., Democracy and Development, p. 103.

Focusing on former European colonies, Acemoglu and his colleagues argue that the institutional structure built at the moment of colonization (which they see as a "critical juncture" in the history of these countries) created divergent development paths, which persisted through time: one path was characterized by economic failure and repressive forms of governments, whereas the other was characterized by economic success and democratic forms of government (in particular, forms of government that impose constraints on the executive power). Once these divergent paths are taken into consideration, they claim, the relationship between development and democracy disappears: development is related neither to the probability of transition to democracy nor to the sustainability of democracy.

This is an exciting proposition—it challenges everything that has been said about the relationship between economic development and democracy by social scientists in the past fifty years. It is also a proposition that is based on an empirical claim that is not necessarily valid.66

Acemoglu and his colleagues argue that the reason previous studies have found a significant effect of economic development on transitions to and away from democracy is that they failed to take into consideration the impact of country-specific factors on both income and democracy. These factors, they argue, are historical in the sense that they are the result of events (critical junctures) that took place in a country’s distant past and whose implications are still felt today because "institutions have a tendency to persist."67 They address this issue by estimating models of regime transition including country fixed effects and find that, once this is done, the impact of per capita income disappears entirely: it matters neither for the emergence of democracy nor for the survival of democracy.

66 Furthermore, the proposition is based on data that have been questioned. The data Acemoglu and his associates use to support their claim about the importance of critical junctures, specifically the critical juncture represented by the onset of European colonization of the rest of the world, are not entirely free of problems. There is an ongoing debate regarding Acemoglu’s coding decisions, which we want to avoid here. Albouy, probably the most systematic of the critics of their data efforts, calls attention to the fact that there may be a bias in the coding decisions of the settler mortality rates toward assigning high values to countries that have "bad" institutions today; David Albouy, “The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data,” Center for International and Development Economics, Berkeley, 2006, Paper C04’138. For the beginning of the debate, see Daron Acemoglu, Simon Johnson, and James Robinson. “The Colonial Origins of Comparative Development: An Empirical Investigation,” American Economic Review 91, no. 5 (2001): 1369-1401. See Daron Acemoglu, Simon Johnson, and James Robinson, “Reply to the Revised (May 2006) Version of David Albouy’s 'The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data,’” unpublished manuscript, Cambridge, 2006, for their reply to Albouy’s charges. For a different critique, see John R. Freeman and Dennis P. Quinn, “The Economic Origins of Democracy Reconsidered,” paper presented at the annual meeting of the American Political Science Association, Boston, MA, 2008.

67 Acemoglu et al., "Reevaluating the Modernization Hypothesis," p. 5.
A country "fixed effect" may be due to any of a large number of a country's attributes that are fixed over time. While political regime and economic development are examples of attributes that may change over time for most countries, other attributes of the country are more fixed (with some notable exceptions), such as its date of independence, the characteristics of the founding population, the language, the borders, its geographic features, its latitude and longitude, and the list goes on. Because these features do not vary over time, it is hard to disentangle which one or ones may have causal power in a given setting. Typically, scholars use a "fixed effects model" as a diagnostic to test the robustness of their findings and remain agnostic as to which specific attribute of a country the fixed effects may really be capturing. Acemoglu et al. take their analysis a step further, however, speculating as to the precise causal mechanism that the fixed effects capture.

Acemoglu et al. support their claim that these fixed effects capture the historical events that took place around critical junctures by showing that they, the country fixed effects, are themselves correlated with variables that are correlated with the institutional structures created at the moment of European colonization and the development paths that countries subsequently embarked on. Specifically, the country fixed effects are correlated with settler mortality rates at the time of colonization, indigenous population density in 1500, the average constraint on the executive in the country's first ten years after independence, and the date of independence. The intuition behind their argument is that two major contributors to democratization are the strength of civil society and the structure of political institutions (meaning the constraint on the executive branch of government), and because of exogenous factors--these developed the furthest in western Europe. Where western Europeans settled in large proportions and survived, so did their civil society and institutions. These factors contributed to both economic prosperity and democratization.

The estimates of country fixed effects thus play a crucial role in the analysis of Acemoglu and colleagues; these estimates are used not only to eliminate the findings that per capita income causes democracy to emerge and survive but also to support their alternative claim that what really matters is the developmental path that countries embarked on at the moment of European colonization.

Yet a problem with the country fixed effects approach is that we really cannot distinguish the civil society and institutions that settlers bring with them from any

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68 To ground this discussion in more of a statistical jargon, a "fixed effects" model is equivalent to including a separate variable that uniquely identifies each country. So, if there are 135 countries in the sample, 134 additional variables are de facto included to "control" for the "Algeria" effect, the "Angola" effect, and all the way down to the "Zambia" effect, and the "Zimbabwe" effect.

69 It is probably important to emphasize explicitly that the list goes on. We want to be clear that this is far from an exhaustive list.

70 The data on this factor actually come from one of the components of the POLITY measure of political regime.
other factor associated with the country, such as its resource endowment, latitude and longitude, size, and strategic importance.

Even more problematic for the country fixed effects approach is that many countries in the period under study (1950-90) did not experience any political regime change. They spent the entire period either as democracies or as dictatorships. Because they do not vary over the periods in which they are observed, these cases effectively do not count when a country fixed effects approach is employed. One can think of the problem this way: what is the probability of observing a transition to democracy given that a country is always observed as a dictatorship? The answer is zero. What is the probability of observing a transition to dictatorship given that a country is always democracy? Again, the answer is obviously zero. We appear to "learn" nothing from these cases, so they drop out of the analysis. But do we really learn nothing from these cases?

Note, importantly, that the countries for which there is no variation in regime are not randomly distributed around the world: the countries that were first observed as democracies and remained democratic during the 1950-90 period tended to be relatively wealthy, whereas the countries that were first observed as dictatorships and remained dictatorships during the same period tended to be relatively poor. So, when we introduce country fixed effects, we drop key cases with respect to the question of economic development and democracy: a large number of poor dictatorships and rich democracies is dismissed, and the estimation of the impact of per capita income on transition to and from democracy is disproportionately based on observations of countries with middle levels of per capita income. Thus, given this country fixed effects setup, the lack of a statistically significant impact of per capita income should come as no surprise.

These issues are far from having been settled, and our goal here is simply to recognize the importance of the proposition put forward by Acemoglu and his colleagues and, at the same time, call attention to some of the issues that arise from their analysis. Their work represents an important contribution to the literature on democratization to which students and scholars should be attentive.

6. Conclusion

From our original five propositions, we reject all but the third one: that economic development causes democracy to survive. We accept proposition 3 in a broad sense because the evidence is clear and convincing. As for the other propositions, we acknowledge that there are several cases that fit each story and even some nonrobust systematic evidence in favor of them. Yet, the preponderance of the evidence is against them.

If development (per capita income) affects democratization, its status is not privileged with respect to other factors that may also affect democratization--past
democratic breakdowns, participation in international organizations, short-term economic performance, natural resources, the ethnic composition of the population, historical legacies, diffusion, and so on. Yet development does appear to sustain democracy: countries that democratize at higher levels of development are virtually certain to continue living under democracy, whereas countries that democratize at lower levels of development still face significant odds that democracy will be overthrown.

At a general level, democracy emerges either because one actor who happens to prefer democracy is politically successful or because there is a balance of forces among relevant actors so that no one can impose its preferences over the others. There are multiple reasons why the existence of such an actor or of such a balance of forces exists. Sometimes it is because economic development favored a democratic actor (the working class for Rueschemeyer, Stephens, and Stephens or the middle class for Lipset), which led to the emergence of conflicts over democracy. But other times these reasons have nothing to do with economic development: the military government decides that the political system is too centralized and sets in motion a process that, against its own preferences, ultimately leads to an alternation in power via competitive elections (as occurred in Brazil); or geopolitical considerations, among others, importantly shape the decisions of the dominant party to implement political reforms (as in Taiwan); or the military, which is unable to govern the country or win an international war of its own making, gives up power (as in Argentina); or a civil war ends militarily in a way that induces warring factions to accept power-sharing agreements, or neighbors and regional partners are becoming increasingly democratic. Whatever the reason, there is nothing predetermined about the outcomes of interactions revolving around the establishment of democracy. As many analyses of democratic transitions have demonstrated, transition games are characterized by a multiplicity of equilibria,

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72 Rueschemeyer, Stephens, and Stephens, Capitalist Development and Democracy; Lipset, Political Man.


including the establishment of a democratic regime and the perpetuation of an authoritarian one.

Thus, democratization is the product of many causes, and it is inherently uncertain. Should we then give up on theorizing about it? The answer, of course, depends on what we mean by theorizing. If the goal is to generate a theory that is able to unambiguously answer why democracies emerge and, on the basis of this answer, generate predictions about when it will emerge, we find that theorizing is doomed, and we should just as well go do something else. If, however, the goal is to identify different mechanisms for the emergence of democracy and characterize the conditions under which these mechanisms are more or less likely to operate, then we have a long and, we hope, fruitful agenda in front of us.