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Keywords: Democracy, Latin America, level of development

ABSTRACT

In this paper, we analyze the relationship between modernization and democracy for one region of the world, Latin America from 1945 to 1996, on the basis of quantitative data. We make three arguments: First, we show that the level of development had a modest impact on the likelihood of democracy in Latin America for the 1945–96 period. Democracy in Latin America has survived in the face of a low level of development and it has faltered despite moderately high per capita income. Second, we show that per capita income is a markedly worse predictor of democracy in Latin America than in the entire world or in other countries in the same income range. We identify a distinctive, nonlinear functional shape for this relationship in Latin America. Third, we address some potential explanations for this Latin American exceptionalism. No existing structural explanation suffices; this issue merits further exploration in future research.

RESUMEN

En este artículo analizamos, con base en datos cuantitativos, la relación entre la modernización y la democracia en una región del mundo: América Latina entre 1945 y 1996. Formulamos tres argumentos. Primero, demostramos que el nivel de desarrollo tuvo un impacto modesto sobre la probabilidad de democracia en América Latina entre 1945 y 1996. La democracia ha sobrevivido en América Latina con bajos niveles de desarrollo y ha flaqueado aún con ingresos per cápita moderadamente altos. Segundo, mostramos que el ingreso per cápita es un predictor de la democracia marcadamente peor en América Latina que en el mundo entero o en otros países en el mismo rango de ingresos. Identificamos una distintiva forma funcional no linear para esta relación en América Latina. En tercer lugar consideramos algunas explicaciones potenciales para este expecionalismo Latinoamericano. Ninguna explicación estructural basta; este asunto amerita mayor exploración en investigaciones futuras.

What is the relationship between the level of development and democracy? Is this relationship universal or is it shaped by regional and historical contexts? These are some of the great old questions in comparative politics and political sociology. In this paper, we analyze this question for one region of the world, Latin America from 1945 to 1996, on the basis of quantitative data. We test whether a) the level of development[1] is a significant factor in explaining democracy in Latin America; b) the level of development operates through higher per capita income levels, education, or changes in the class structure; c) per capita income has a linear relationship to democracy (an assumption challenged by the bureaucratic-authoritarian literature); and d) whether the relationship between per capita income and democracy in Latin America is similar to what is found in the rest of the world.

Given the abundant literature on the relationship between level of development and democracy, why examine this problem for one region of the world? There are three reasons. First, different regions of the world might have different political dynamics and hence the levels of development could have a variable impacts on democracy. Whether there are region-specific effects has important implications in comparative politics. The subfield of comparative politics is often organized along regional lines. Presumably, one reason for this organization is that different regions have specific political dynamics, yet rarely have scholars tested for region-specific effects in the relationship between level of development and democracy. If the level of development has a uniform impact on democracy across the globe, some claims for the virtues of focusing on regions would suffer.

Second, the literature contains an unresolved debate about whether to expect distinctive regional effects. Most large-N studies assume that there is no region-specific effect, and Coppedge (1997) explicitly argues that there is not. Yet other influential studies (Collier 1975; O'Donnell 1973) argue that the Latin American cases appear to deviate from global findings. If confirmed statistically, this would pose a series of interesting questions about why this is so and what Latin American exceptionalism implies for broader theories.

Third, several scholars have noted that the wealthiest countries are almost always democratic while the poorest ones almost never are. The Latin American subset eliminates the extreme high and low per capita income values, allowing us to test the possibility that the strong global relationship is to a significant degree a product of the wealthiest and poorest countries, with a considerably weaker relationship in middle-income countries. This finding has implications for understanding the impact of the level of development on regime types.

Notwithstanding the sizable literature on the relationship between level of development and democracy at the global level, this relationship has not been studied in much depth for Latin America. These important questions have therefore received little attention in the

literature specifically devoted to Latin America. O'Donnell (1973) and Rueschemeyer, Stephens, and Stephens (1992) are exceptions, but neither of them approaches these questions from the basis of quantitative work using controls for more than one independent variable.

We make three arguments. First, three variables that serve as indicators of the level of development (per capita income, the share of the labor force in agriculture, and education) had a modest impact on democracy in Latin America for the 1945–96 period. Democracy in Latin America has survived in the face of a low level of development, and it has faltered despite moderately high per capita income. In Latin America, the level of development is a weak predictor of regime type.

Second, we argue that the relationship between level of development and democracy in Latin America differs from that in the rest of the world and also that in other countries within the same income range. Not only is per capita income a worse predictor of democracy in Latin America than in other regions, but the functional shape of the relationship is also different. We document an N-shaped curve in the relationship between per capita income and the likelihood of democracy in Latin America, thus confirming earlier related observations by Muller (1988, 1995) and O'Donnell (1973). The nonlinear relationship is absent when we study a worldwide sample or other, non-Latin American countries in the same income range. In such cases, the likelihood of democracy is a monotonic function of per capita income.

Third, we provide basic tests for the (few) structural theories that might explain this Latin American exceptionalism. Existing explanations focus on the exhaustion of a stage of industrialization (O'Donnell 1973) and on the political impact of social inequalities (Muller 1988, 1995). Our results suggest that neither of these structural explanations solves the puzzle of Latin American specificity. Latin American exceptionalism, in the relationship between level of development and democracy, is a product of both democratic overachievers (cases with a high level of democracy relative to their level of development) and democratic underachievers. We argue that a unified grand explanation is unlikely to account for Latin American exceptionalism because this exceptionalism is based on two completely different components; it is unlikely that a single explanation can account for both kinds of anomalies.

The Effect of Level of Development on Democracy: The Literature

Much has been written about the relationship between the level of economic development and democracy. In this literature there is considerable consensus about two key points. Almost every large-N study on this issue has shown that the level of economic development, usually operationalized by per capita income, is a powerful predictor of democ-

racy (Bollen 1980; Bollen and Jackman 1985; Burkhart and Lewis-Beck 1994; Coppedge 1997**;** Cutright 1963**;** Dahl 1971: 61–80; Diamond 1992; Huntington 1984; Jackman 1973; Lipset 1959; Lipset et al. 1993; Londegran and Poole 1996; Przeworski and Limongi 1997; Przeworski et al. 2000; Rueschemeyer, Stephens, and Stephens 1992).

Most analysts have further agreed that this relationship between per capita income and democracy is not linear. Jackman (1973) established that the impact of modernization flattens at high levels of development since the level of democracy stabilizes at some point for developed countries. Dahl (1971: 66–68), Huntington (1984, 1991), Diamond (1992), and Przeworski and Limongi (1997) also argued that above a certain level, the likelihood of democracy is already so great that additional increases in per capita income do not have much impact. Domínguez (1993) and Hadenius (1992) also underscored the nonlinearity of the relationship between per capita income and democracy. Some scholars (Dahl 1971: 68) also argued that extremely poor countries were unlikely to have democracy until they reached a certain threshold; hence, increases in wealth were not likely to have a significant effect.

Most of this literature has assumed a uniform impact across regions of level of development upon regime type. A few scholars, however, have argued that the global finding may not apply uniformly across regions and that Latin America in particular might have region-specific effects. Some authors (Collier 1975; O'Donnell 1973) argued that the relationship between modernization and democracy is weaker in Latin America than modernization theorists maintained. O'Donnell (1973) argued that bottlenecks of development in the most industrialized Latin American countries triggered the emergence of military regimes in the 1960s and 1970s. His work challenged modernization theory by suggesting that at certain levels of development, modernization could favor authoritarian regressions. In an analysis with some convergences with O'Donnell, Huntington (1968) argued that modernization could unleash demands for participation and economic benefits, leading to strains on political systems that lacked strong institutions. Muller (1988, 1995) also argued that at some intermediate income levels, the likelihood of democracy diminishes when per capita income increases.

Thus until the 1990s, alongside many large-N studies that consistently showed a strong impact of modernization on democracy, several influential studies questioned that finding for Latin America. In the 1990s, several new studies arrived at conclusions that offered a way to reconcile the large-N findings and the doubts about whether they pertained to Latin America. Lipset, Seong, and Torres (1993: 161–64) found a decreasing likelihood of democracy at certain points in development. Burkhart and Lewis-Beck (1994) demonstrated that the relationship between per capita income and democracy is less robust in peripheral

and semiperipheral countries than in core countries. Although they found a powerful effect in all three groups of countries, their work suggests the likelihood of a less powerful effect of modernization on democracy in Latin America than in the core countries. Londegran and Poole (1996) drew a similar conclusion. These arguments pointed to distinctive effects of the level of development on democracy in intermediate income countries, including Latin America, but did not indicate any region-specific effects. We still have nothing resembling a consensual understanding of whether Latin American patterns deviate from the global ones.

Four Measures of Democracy and Their Evolution in Latin America

For our dependent variable, we use four measures of democracy: a trichotomous scale of democracy (Mainwaring et al. 2001), the Przeworski et al. (2000) dichotomous measure, Freedom House scores for the post-1972 period (Gastil 1991), and the Polity scale (Gurr, Jaggers, and Moore 1990). The Mainwaring et al. trichotomous measure classifies governments as democratic, semidemocratic, or authoritarian for the period from 1945 until 1996. Freedom House annually assesses the state of civil liberties and political rights in most nations of the world. Its scores range from 2, most democratic, to 14, most authoritarian. We inverted this score so that higher values represent higher levels of democracy, creating a scale that ranges from 0 (most authoritarian) to 12 (most democratic). The Polity dataset covers all countries in our sample for the period 1800–1999 (Polity IV Project 2000). This source provides an indicator of institutional democracy and another of institutional autocracy, both ranging from 0 to 10. We subtracted the latter from the former, building a single scale of democracy ranging between –10 and 10.[2]

The four measures of democracy are strongly correlated. The Mainwaring et al. three-point scale correlates (Pearson correlation) at .82 with the ACLP dummy, at .82 with Freedom House scores and at .85 with the Polity variable. The ACLP dummy correlates at .79 with Polity and .80 with Freedom House scores, and Polity classifications correlate at .85 with Freedom House. All correlations are significant at the .01 level (2-tailed).

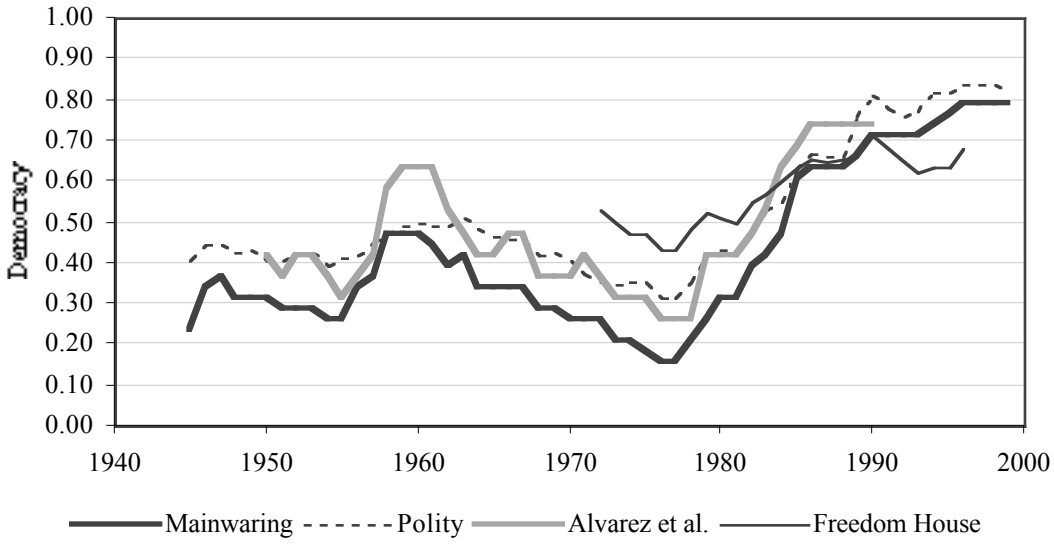
We use four different measures of democracy because none is impeccable, and working with multiple measures of the dependent variable makes results more robust. Elkins (2000) and Mainwaring et al. (2001) have shown that substantive results can change with different measures of the dependent variable, even when they are highly correlated.

Figure 1 below depicts the evolution of democracy in 19 Latin American countries according to our four indicators.[3] In Figure 1 (though not elsewhere in the paper), for purposes of comparability, the indicators were normalized to range from 0 to 1. The Polity

score was normalized as POLITYN=(POLITY+10)/20. The Freedom House score was recoded as FHN=FH/12.

FIGURE 1

Evolution of Democracy in Latin America (1945–99)



All four indicators depict a similar trend. Democracy expanded somewhat in the late 1950s and early 1960s, then hit a nadir in the 1970s, followed by an unprecedented surge during the 1980s. Figure 1 thus confirms the existence of a wave of democratization that started in the late 1970s and stabilized during the 1990s.

Methodology

We primarily analyze what factors at a random moment are favorable to democracy. This is a different question than the one posed by Przeworski and Limongi (1997) and Przeworski et al. (2000), who focus primarily on the survival rates of democracies once established. We focus on the factors favorable to democracy at a random point in time because the number of democratic breakdowns (five from 1945 to 1996, and even if we include breakdowns of semidemocratic regimes, there are only 21 cases) is too low for some quantitative analyses. For our time-series cross-section analysis (TSCS), a case consists of one regime in one year. For any given year, there are 19 cases (one for each country), and each country yields 52 cases (one for each year), totaling 988 observations from 1945 to 1996.

Because we test our findings using four different scales of democracy, we rely on three different regression analysis techniques. We develop a multinomial logit model (MNLM) for the trichotomous classification of regimes. Multinomial logistic regression—also known as multicategory or polychotomous logit (Agresti 1996: 205–11; Long 1997, chapter 6)—models the impact of our predictors on a dependent variable that has more than two categories (democracy, semidemocracy, and authoritarianism, in our case). The MNLM simultaneously estimates the probability of a case falling in each regime type as opposed to a baseline category, which in our case is authoritarianism.[4] We use binary logistic regression for the Przeworski et al. (2000) dichotomous (democracy-dictatorship) classification of political regimes (also testing fixed-effects models). For the interval measures of democracy (Freedom House and Polity VI), we rely on ordinary least squares with panel-corrected standard errors (Beck and Katz 1995).[5]

Per Capita Income and Democracy in Latin America: Linear Effects

We begin by using per capita income as a proxy for level of development. Although per capita income is not necessarily the most important factor that is associated with development and promotes democracy, there are two reasons for beginning with it: data on per capita income are readily available and usually correlate strongly with most other measures of development, and this particular measure has been used with frequency, making it easier to build on or challenge established findings.

We begin with the simple bivariate relationship between per capita income and democracy. Table 1 arrays the data in a simple form, using cut points. At the low and high income categories, the data are consistent with the argument that wealthier countries are more likely and poor countries are less likely to be democracies. Otherwise, however, the Latin American pattern diverges from what Przeworski and Limongi (1997) found at a global level; they showed a monotonic relationship between per capita income and likelihood of democracy. In Latin America, this pattern is far from monotonic. The likelihood of democracy increases to 59 percent in the $1,200–1,799 per capita range, but then plummets to 38 percent in the $1,800–2,399 category and to 23 percent in the $2,400–3,199 category.

We now shift from using these cut points to regression models with our four measures of democracy as the dependent variable. Table 2 presents the results of regression models on the relationship between per capita income and democracy. Models 2.1 and 2.2 use the categorical measures of democracy, while 2.3 and 2.4 explore the linear link between development and democracy using Freedom House and Polity scores, respectively. All four models are significant at a .001 level. In Model 2.3, a $1,000 increase in per capita income produces a .835 mean increase in inverted Freedom House scores**.** In substantive terms, this

impact is modest; as a result of the nonlinearity apparent in Table 1, the slope is rather flat. The recoded Freedom House scores range from 0 (least democratic) to 12, so a .835 increase is very modest, while a $1,000 increase in per capita income (1980 dollars) represents a tremendous increase. During the 52 years included in our dataset, ten of the nineteen countries in the dataset failed to register a $1,000 increase in per capita income, and one more (Panama) reached a $1,000 increase for one year only but slid back below that level by 1996. Of the eight countries that recorded a $1,000 or more increase, it took on average 34 years to remain consistently above that level.

TABLE 1

Per Capita Income and Regime Types in Latin America, 1945–96

GDP per capita	Regime Type # Country-Years			% Democracies	Total
	D	SD	A		
Under $400	0	0	58	0	58
$400–799	58	87	195	17	340
$800–1,199	46	46	104	23	196
$1,200–1,799	103	22	51	59	176
$1,800–2,399	35	7	49	38	91
$2,400–3,199	12	16	25	23	53
$3,200 or more	56	1	17	76	74
Total	310	179	499	31	988

Coding for regime type:
D = Democracy
SD= Semidemocracy
A=Authoritarianism

Sources: Mainwaring et al. 2001 for regime classification; Economic Commission for Latin America for GDP per capita.

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In principle, a positive correlation between per capita income and the likelihood of democracy could occur because democracies promote more rapid economic growth than nondemocracies. If this were the case, even if the two kinds of regimes started out at the same per capita level, the democracies would end up with a higher per capita income, accounting for the positive correlation. This type of bicausality is not a problem with our Latin American sample because democracies did not grow at a faster pace than nondemocracies. The average annual per capita growth rate for democracies was 1.59 percent; for semidemocracies it was 1.10 percent, and for authoritarian regimes it was 1.64 percent. An ANOVA model predicting growth using the regime as an independent variable yields a meager R^2 of .002, and it fails to reach statistical significance (p=.452).

TABLE 2

Per Capita Income Effects on Democracy (1945–96) (Linear Models)

Model	2.1 Mainwaring		2.2 Przeworski	2.3 Freedom House	2.4 Polity
Dependent variable	D	SD			
GDP per capita (thousands)	.778**	–.035	.410**	.835**	1.555**
	(.085)	(.122)	(.080)	(.070)	(.185)
Constant	–1.553**	–.987**	–.657**	5.610**	–1.688*
	(.138)	(.157)	(.126)	(.165)	(.613)
R^2				.08	.05
Nagelkerke pseudo-R^2	.13		.05		
G^2	119.80**		29.15**		
N	988		779	475	952

Model 2.1: Multinomial logistic regression coefficients (standard errors).
Model 2.2: Binary logistic regression coefficients (standard errors).
Models 2.3: Unstandardized regression coefficients (panel-corrected standard errors). Results remained consistent in models with lagged DV (panel-specific AR(1) process).

Models 2.3: Unstandardized regression coefficients (panel-corrected standard errors). Results with lagged DV (panel-specific AR(1)) were not significant but retained signs.
* Significant at .05 level; ** at .005 level

Table 2 suggests that level of development is a stronger predictor of democracy than of semidemocracy. The first model shows that the probability of democracy—as opposed to the baseline category, authoritarianism—tends to increase with GDP per capita, but the same finding does not apply for semidemocratic regimes. Most semidemocratic regimes exist at early stages of development (under $1,200), when countries attempt to depart from traditional, authoritarian rule but may be unable to sustain full-fledged democracies. Seventy-four percent of the cases of semidemocracy in our sample had a per capita income under $1,200, and 87 percent were under $1,800. At later stages of development, such regimes usually evolve into full democracies or recede into open authoritarianism. Only 11 percent of the regime-years with an income per capita equal to or greater than $1,800 are semidemocracies, as opposed to 47 percent being democratic, and 42 percent being authoritarian.

Per Capita Income and Democracy: Curvilinear Effects

Table 1 on first impression appears to support the arguments of Huntington (1968), Lipset et al. (1993), Muller (1995), and O'Donnell (1973), that in third world countries, modernization may at certain points produce pressures toward authoritarianism rather than foster change supportive of democracy. O'Donnell (1973) argued that the conflicts produced by the industrialization process helped trigger the coups that installed bureaucratic-authoritarian regimes in Brazil (1964) and Argentina (1966). The exhaustion of an "easy" phase of import substitution industrialization created a zero-sum situation. Without attracting new capital intensive industries, these countries would face critical developmental bottlenecks. The push toward industrialization in more capital intensive sectors required more technocratic, orthodox economic policies inconsistent with the maintenance of democratic regimes.

If O'Donnell's argument is generally right (rather than limited to the 1960s and 1970s or to a few countries), and if his indicators of modernization correlate with per capita income levels,[6] we should find four different phases for the relationship between per capita income and democracy in Latin America. At an early to intermediate stage of development, economic growth would support democracy. This moment would be followed by a second period when retraction is likely; economic development would show nonsignificant (or even negative) effects on the regime. After this "bureaucratic-authoritarian" regression, the rela-

tionship would turn positive in a third phase until it stabilized at a higher per capita income in the final one.

To test this idea, we allowed two bends in the logistic function by including a quadratic and a cubic term in the model. The quadratic and cubic terms allow for the nonlinearity described in the previous paragraph. A negative slope for the squared GDP term would mean that the function is shaped as an inverted U curve, and a positive coefficient for the cubed GDP term would create an opposite, upward trend at higher levels of development. To model the nonlinear effects in Models 3.3 and 3.4, we used the equation

$$Y_{i,t} = a + b_1(GDP_{i,t}) + b_2(GDP_{i,t}^{\ 2}) + b_3(GDP_{i,t}^{\ 3}) + b_4(GDP_{i,t}^{\ 4})$$

where **Y** is the predicted value for an interval measure of democracy for country i at time t, and GDP is gross domestic product per capita measured in 1980 US dollars.[7] According to the previous findings, we should expect $b_1>0$, $b_2<0$ (marking the retraction of democracy), $b_3>0$ (for the new stage at which the negative bureaucratic authoritarianism configuration is overcome), and $b_4<0$ (at the point of stabilization). The results are presented in Table 3.

TABLE 3

Per Capita Income Effects on Democracy (1945–96) (Nonlinear Models)

Model	3.1 Mainwaring		3.2 Przeworski	3.3 Freedom House	3.4 Polity
Dependent variable	D	SD			
GDP per capita (thousands)	8.596** (1.090)	2.799* (1.022)	6.620** (.967)	11.480** (1.809)	23.626** (2.801)
GDP^2	–4.023** (.594)	–1.556* (.630)	–3.399** (.545)	–7.276** (1.421)	–15.133** (2.230)
GDP^3	.575** (.094)	.229* (.109)	.504** (.087)	1.824** (.402)	3.721** (.657)
GDP^4				–.151** (.037)	–.297** (.062)
Constant	–5.451** (.569)	–2.228** (.453)	–3.526** (.476)	1.160 (.726)	–10.544** (1.330)
R^2				.15	.11
Nagelkerke pseudo-R^2	.21		.14		
G^2	195.23*		86.89*		
N	988		779	475	952

Model 3.1: Multinomial logistic regression coefficients (standard errors).
Model 3.2: Binary logistic regression coefficients (standard errors). Results remained consistent in fixed-effects model.
Model 3.3: Unstandardized regression coefficients (panel-corrected standard errors). Coefficients remained consistent in auto-regressive model (panel-specific AR(1) process).

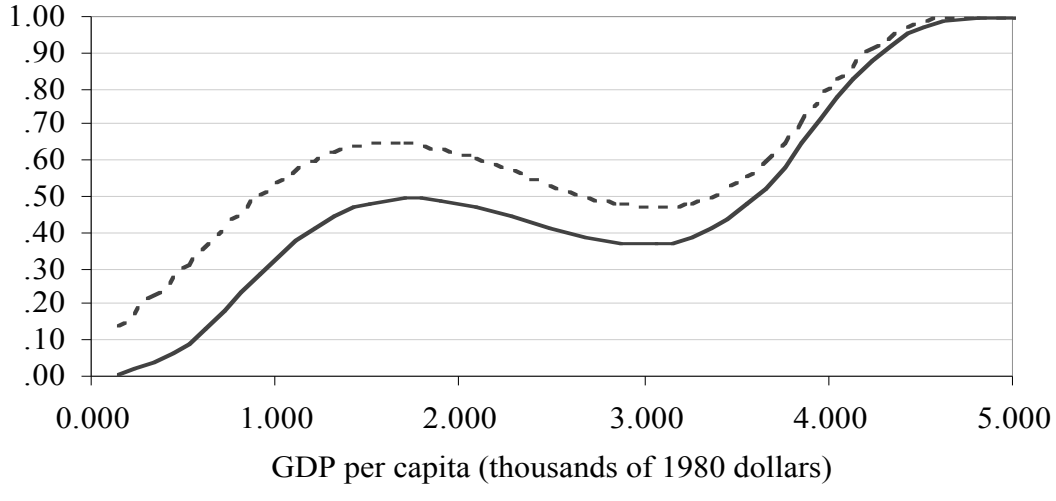
Model 3.4: Unstandardized regression coefficients (panel-corrected standard errors). Results with lagged DV (panel-specific AR(1)) were not significant but retained signs.
* Significant at .05 level, **.005 level

The results in all four models support those expectations. All coefficients are significant and of the expected sign, indicating that the likelihood of democracy declines above a certain per capita income level until another threshold where the likelihood of democracy again increases. Then the likelihood of democracy stabilizes again at a higher level.

Figure 2 below plots the behavior of Model 3.1 to convey the substantive meaning of the coefficients. According to Model 3.1, based on the trichotomous Mainwaring et al. coding, the first "bend" (stationary point) for the function predicting democracies occurs at the $1,657 threshold in 1980 US dollars. The second stage—recovery—begins after $3,007. The expected probability of democracy reaches .50 at $1,657 but recedes to .37 at $3,007. As expected, the likelihood of semidemocracy increases at lower per capita income levels and diminishes later on when political regimes are likely to be full democracies or outright authoritarian regimes. Table 3 also displays some measures of fit for logistic regression: a basic G-square test (similar to the F-test in OLS) for the model as a whole, and the Nagelkerke pseudo-R^2. In all four models, the overall fit improves in comparison to the corresponding models in Table 2, but their predictive capacity is still low. This model predicts 61 percent of the cases of democracy and 77 percent of authoritarian years, but fails to predict any instances of semidemocracy, which are invariably anticipated as cases of democracy or authoritarianism. The third model tests those findings using the ACLP dummy. Because this is a lenient indicator of democracy, the plot for Model 3.2 (not displayed here to save space) is very similar to the dotted curve for democracies *and* semidemocracies in Figure 2.

FIGURE 2

Expected Probability of Democracy



The nonlinearity per se is hardly surprising since Dahl (1971), Diamond (1992), Huntington (1984, 1991), Jackman (1973), and Przeworski and Limongi (1997) had all previously argued that above a certain per capita income, the likelihood of democracy would not substantially increase. But for Latin America, the main reason for nonlinearity is the decline between $1,657 and $3,007 per capita income, not, as is the case with a broader sample, because of a leveling off at a higher level. [8] The empirical result is consistent with arguments of Muller (1988, 1995) and O'Donnell (1973), both of whom posited a decreasing likelihood of democracy at certain stages of development.

Education and Democracy

Among the scholars who have emphasized it, the reason for the correlation between per capita income and democracy is a matter of contention. Some analysts (e.g., Lipset 1959) argue that increasing wealth in and of itself increases the likelihood of democracy. Several (e.g., Diamond 1992; Lipset 1959) claim that increasing education leads to a more democratic political culture. Rueschemeyer et al. (1992) maintain that wealth serves as a proxy for changes in the class structure and that the changes in class structure are the critical variable; Diamond (1992) and Lipset (1959) also note the changes in class structure in explaining the correlation between per capita income and democracy.

In this section and the next one, we test the impact of two of these variables—education and one aspect of class structure—while controlling for per capita GDP. One possibility is that greater wealth is strongly associated with higher education levels, which in turn favor a more democratic political culture (Diamond 1992: 117–125; Lipset 1959). Dahl (1971: 74–75), Gasiorowski and Power (1998), Hadenius (1992: 84), Helliwell (1994: 230–231), and Santos (1985) see higher education levels as supportive of democracy. Between 1945 and 1996, education standards in Latin America rose dramatically and in more linear fashion than per capita income. If education enhances the prospects for democracy independently of per capita income, this effect should appear in the quantitative results.

We controlled for the effects of education by adding the gross ratio of secondary school enrollment to the previous models.[9] The correlation between GDP per capita and secondary education is .49 for all countries and all years, positive as expected, but low enough to prevent collinearity problems. The results of this test are mixed. The education coefficient is always positive, but it is statistically insignificant at a .05 level in the Freedom House and Polity models. (Because of spatial constraints, we do not report full results.) All other coefficients remained significant and of the expected sign.

Although education is statistically significant in two models, its substantive effect is surprisingly limited once one controls for per capita income. Coefficients are nonsignificant in models with GDP and education (not reported due to reasons of space) and even *negative* once we control for the size of the agricultural labor force (Table 4 below). The results do not substantially support the notion that education has a powerful independent impact on the likelihood of democracy. Thus the data on education show that for Latin America, at least between $800 and $3,199 per capita income, political outcomes have been quite autonomous with respect to level of modernization.

Modernization, the Rural Labor Force and Democracy

Modernization also produces important changes in the class structure, and these changes in turn have been hypothesized to be favorable to democracy. In his classic analysis, Lipset (1959) argued that one of the reasons behind the correlation between per capita income and democracy was that economic development fostered change in the class structure. In his retrospective assessment of Lipset, Diamond (1992: 119–121) also argued that one of the reasons why higher per capita income is favorable to democracy is that modernization promotes changes in class structure.

Although Rueschemeyer, Stephens, and Stephens (1992) come from a different theoretical tradition than modernization theorists, they focused on the same phenomenon that modernization theory observed: the strong correlation between indicators of modernization and democracy. They diverge from modernization theorists in their interpretation of this relationship. Rueschemeyer et al. argue that higher per capita income serves as a proxy for changes in the class structure and that the latter is decisive for the development of democracy. "(C)apitalist development is associated with democracy because it transforms the class structure, strengthening the working and middle classes and weakening the landed upper class" (p. 7). According to Rueschemeyer et al., "The working class was the most consistently pro-democratic force. The class had a strong interest in effecting its political inclusion …" (p. 8). They also argue that a powerful landed aristocracy is inimical to democracy (pp. 60–61).

Some claims related to Rueschemeyer et al.'s argument could be reasonably tested quantitatively although they themselves do not do so. To test a related claim, we rely on the numerical size of classes, which is admittedly not a perfect measure of the power of classes. Political power stems in part from organization, which is a political process, and the size of a class does not tap organization. Nevertheless, a structural view should emphasize the structural position of class actors rather than organizational qualities. For this reason, the size of

different classes should be relevant to testing Rueschemeyer et al.'s arguments; indeed, they explicitly argued that class size is an important determinant of democracy (p. 59).

TABLE 4

Models with Education and Agricultural Work Force, 1960–90

Model	4.1		4.2	4.3	4.4
Dependent variable	Mainwaring		Przeworski	FH	Polity
	D	SD			
GDP per capita (ths.)	6.527**	–4.042*	3.276**	9.820**	14.999**
	(1.886)	(1.728)	(1.313)	(2.241)	(3.269)
GDP^2	–4.743**	–.524	–2.963**	–7.353**	–15.643**
	(.953)	(.935)	(.688)	(1.572)	(2.444)
GDP^3	.772**	.237	.511**	1.896**	4.453**
	(.143)	(.155)	(.107)	(.436)	(.727)
GDP^4				–.155**	–.378**
				(.040)	(.071)
Education	–.028*	–.047**	–.036**	–.019	–.000
	(.010)	(.014)	(.009)	(.017)	(.032)
Labor force in agriculture [a]	–.179**	–.198**	–.133**	–.087**	–.290**
	(.022)	(.025)	(.017)	(.018)	(.027)
Constant	5.747**	13.578**	6.485**	7.115**	10.616**
	(1.748)	(2.023)	(1.363)	(1.662)	(2.718)
G^2	277.46**		132.67**		
R^2				.16	.22
Nagelkerke pseudo=R^2	.44		.27		
N	589		589	361	568

Model 4.1: Multinomial logistic regression coefficients (standard errors).
Model 4.2: Binary logistic regression coefficients (standard errors). Results remained consistent in fixed-effects model.
Model 4.3: Unstandardized regression coefficients (panel-corrected standard errors). GDP and education coefficients retained signs but became insignificant in panel-specific AR(1) model. Agriculture variable remained significant at .05 level.
Model 4.4: Regression coefficients (panel-corrected standard errors). Coefficients became insignificant in panel-specific AR (1) model.
a. Percent of labor force in agriculture (1960–1990). Source: World *Bank's World Development Indicators*, 1998.
* Significant at .05 level; **.005 level

To test the claim about the effect of the landed aristocracy on democracy, we used the share of the labor force engaged in agriculture. This is not an exact measure of Rueschemeyer et al.'s claim, but it is should be a reasonable proxy for Latin America. If a low share of the labor force is engaged in agriculture, the landed elite will usually be a less powerful actor. If a high percentage of the labor force is employed in agriculture, the landed

elite will generally be more powerful.[10] Even if this measure is not a perfect proxy for Rueschemeyer et al.'s hypothesis, in and of itself it assesses a related class argument, namely, that a large rural sector (and a correspondingly small urban working class) is unfavorable to democracy. However imperfect the percentage of the labor force in agriculture is as a measure of the power of landlords, in Latin America this percentage declined over decades as the power of landlords also declined. As hypothesized, a larger percentage of labor force in agriculture consistently worked against democracy. A multinomial logit model with this variable as the only explanatory factor (not reported here to save space) accounts for 53 percent of the years of democracy and 61 percent of all regime-years in the 1960–90 period. Table 4 presents results using the other independent variables in addition to agriculture. The coefficient for agricultural labor force remained significant (at .005) and of the expected sign in all four models. The agriculture variable was correlated with per capita GDP (in 1980 dollars) at –.77, but this association did not create strong problems of collinearity.

Models 4.1 to 4.4 present the logistic and OLS regression coefficients for the four measures of democracy. In all four models, the effects of income remained significant, and a larger share of the labor force in agriculture diminished the likelihood of democracy. Contrary to our ex-ante expectations, the education variable again performed erratically; it was not statistically significant in the two models with continuous dependent variables, and the coefficient was significantly *negative* for the logistic models.

We again need to look at the substantive as well as the statistical impact of the share of the labor force in agriculture. A 1 percent increase in the share of the labor force in agriculture accounts for, on average, a .087 decrease in Freedom House scores. Thus it takes an 11.5 percent increase in the share of the labor force in agriculture to generate an expected decrease of 1 in Freedom House scores. In our sample, the size of the agricultural labor force ranged from 12.0 percent (Venezuela in 1990) to 79.9 percent (Haiti in 1960), with a standard deviation of 16 percent. A hypothetical country moving from the position of Venezuela to the Haitian class structure would be expected to lose 5.9 points in the Freedom House score. This is a greater substantive impact than education has. Nevertheless, if we used only the class variable, we would get a very low R^2 (.08 for Polity and .10 for Freedom House, a .12 Nagelkerke for the ACLP dummy), which means that this class variable alone serves as a poor predictor of democracy in Latin America.

Our findings thus provide limited support for arguments regarding the inimical effects of the landed elite on democracy. Moreover, once the size of the agricultural work force and these other independent variables are included, the quantitative data do not support the contention that a large industrial labor force has been supportive of democracy in Latin America. When we added an independent variable for the percentage of the labor force in

manufacturing to the independent variables shown in Table 4, the coefficient was not significant at conventional levels in any of the models.[11]

These findings suggest that, for Latin America, other factors strongly mediate the relationship between social structure and political regime. Although Rueschemeyer et al. (1992) are correct in pointing to the landed elite as a central opponent of democracy in many countries, in Latin America periods of urbanization and modernization that eroded the power of the landed elite have sometimes been unfavorable to democracy. Development can upset an equilibrium in democratic politics by strengthening progressive or radical urban forces that seek sweeping change. This change may trigger more authoritarian tendencies among entrenched elites and middle sectors that desire social stability. Under these conditions, the erosion of the landed elite's political power may coincide with a declining likelihood of democracy.

The Weak Impact of Development Variables on Regime Type

We could look at other independent variables associated with the level of development, but it seems unlikely that any other variable would dramatically change the findings. Increases in wealth and changes in the class structure had statistically significant effects on democracy in Latin America from 1945 to 1996. Substantively, however, their effect was modest. These structural variables give only modest leverage in understanding the prospects for democracy in any random country at a given point in time; other factors must also be important.

The explanatory power of the modernization variables is weak even though several are statistically significant. If we delete the poorest ($0–799 per capita income) and wealthiest ($3,200 or more) categories from Table 1 above, there is no monotonic increase in the likelihood of democracy as per capita income increases. With this truncated sample, the coefficients for Model 2.1 (the linear specification) become statistically insignificant. The coefficients for Model 3.1 (the N-curve specification) remain significant and of the expected sign for democracy, but become insignificant for semidemocracy. Within the $800–3,200 per capita income zone, democracy can emerge and stabilize at a fairly low per capita income, and authoritarianism can prevail at a fairly high level. Compared to the robust impact of higher per capita income on democracy reported by other scholars for the global level, for Latin America between 1945 and 1996 this impact was weak.

If one expected a linear relationship (or a linear pattern until a threshold, followed by leveling off) between the level of development and democracy, Latin America would present three anomalies. First, several comparatively wealthy countries have had long periods of authoritarian rule. For much of the post–1950 period, Argentina stands out as a democratic

underachiever in light of its high level of modernization. Mexico is also an outlier: authoritarian until 1988 (when it became semidemocratic) despite having one of the higher per capita incomes in the region in recent decades. Similarly, Chile and Uruguay, with their comparatively high levels of modernization, should not have experienced democratic breakdowns in 1973.

The second anomaly is that some poor countries have sustained democracy for a considerable time since 1978. Based on the low level of modernization, one would not expect democracy or semidemocracy to have survived in Bolivia, El Salvador, Honduras, or Nicaragua in the 1980s and 1990s. Nor would one expect poor countries such as the Dominican Republic, Ecuador, and Peru to be at the forefront of the wave of democratization that began in 1978. Moreover, democracy emerged and was stable for decades in Chile (Valenzuela and Valenzuela 1983) and Uruguay early in the 20th century despite low levels of modernization. Costa Rica's per capita income was a meager $633 (in 1980 dollars) in 1949, when the current democratic regime came into being.

The final anomaly is that if the conventional modernization argument applied, the number of democracies would increase as countries attained a higher level of development. Periods of economic growth would be followed by a burgeoning of democracy, assuming that the growth enabled some countries to achieve the absolute level of development expected to promote democracy. Periods of substantial economic decline might lead to authoritarian regressions. The actual record is more equivocal. Declining standards of living in the 1980s prompted fewer authoritarian involutions than any of Latin America's previous waves of democratization.

Conversely, the authoritarian involutions of the 1960s and 1970s occurred on the heels of the rapid growth of the previous decades. Between 1950 and 1980, the growth of per capita income in Latin America was spectacular. Per capita income for the region as a whole increased 116 percent in these three decades. These increases should have fostered more democracy. If economic growth promoted democracy, then one would have expected more democracies in 1976 than in 1960. In fact, the opposite was the case; there were more democracies between 1958 and 1967 than between 1973 and 1974 and between 1976 and 1977. Moreover, the incidence of patently authoritarian regimes was greater in the mid-1970s than in the period between 1958 and 1963. Yet the region as a whole had a substantially higher per capita income in the mid-1970s than it did in 1960.

Polyarchy has survived in Latin America's poor and intermediate income countries, and authoritarianism has thrived even in the wealthier ones. For Latin America, the predictive power of modernization variables for democracy is limited; regime types have had considerable autonomy vis-à-vis such variables, at least at intermediate levels of development.

Is the Latin American Pattern Distinctive?

The data already presented seemed to reveal a different relationship between per capita income and democracy for Latin America than one finds on a global level. To assess the magnitude of this difference, we used per capita income data measured at 1985 Purchasing Power Parities—available for 135 countries between 1950 and 1990—and regime classifications from Przeworski et al. (2000) and the Polity IV Project (2000). Because Przeworski et al. used a dichotomous regime variable (democracy versus nondemocracy), we used logistic regression to assess the impact of differences in per capita income on the likelihood of democracy. The results (Table 5, Models 5.1 versus 5.3) show that per capita income has a much greater predictive capacity on regime type at the global level than for Latin America. The Nagelkerke Pseudo-R^2 is .45 for the basic logistic (linear) model at the global level and just .05 for Latin America. Estimates using the Polity scores depict a similar pattern.[12] In addition, the coefficients for per capita income are higher for the global set of countries than for Latin America.

TABLE 5

The Linear Effect of Per Capita Income on Democracy: Latin America, the World, and Non-Latin America Cases between $834 and $8,233 Per Capita Income

	Global[a]		Latin America		Non-Latin America between $834 and $8233	
Model	5.1. ACLP	5.2. Polity	5.3. ACLP	5.4. Polity	5.5. ACLP	5.6. Polity
Per cap. GDP	0.535*	1.303*	0.247*	1.050*	0.542*	1.634*
	(0.018)	(0.028)	(0.050)	(0.151)	(0.027)	(0.075)
Constant	-2.205*	-4.735*	-0.758*	-3.109*	-2.381*	-5.387*
	(0.067)	(0.142)	(0.152)	(0.480)	(0.104)	(0.281)
% Correct						
Authoritarian	89.5		74.9		88.6	
Democratic	59.3		37.1		53.5	
Nagelkerke R^2	.45		.05		.30	
Adj. R-square		.36		.06		.20
N	4,126	3,891	749	722	2,107	1,934

ACLP models: Logistic regression coefficients (standard errors).
Polity models: OLS coefficients (standard errors).
* Significant at .005 level (two-tailed tests).
[a] Global sample for ACLP: 135 countries; for Polity: 124 countries covered by both sources.
Source: Przeworski et al. data set, Polity IV dataset.

This difference between Latin America and the global pattern could stem from any combination of two causes. One possibility is that the relationship between per capita income and regime type is *generally* indeterminate at the per capita income levels that characterize Latin America. In this explanation, the poor and wealthy countries drive the strong

global impact of per capita income on regime type. Because few very poor countries are democratic and almost all wealthy countries are democratic, we expected that this explanation would account for at least some of the difference between the Latin American pattern and the global one. The other possibility is that even among countries within Latin America's income range, the impact of per capita income on regime type is weaker in Latin America than elsewhere.

To test these potential explanations, we took all cases in the world that had per capita incomes between the lowest ($834, Haiti in 1970) and highest ($8,233, Venezuela in 1978) Latin American per capita incomes cases included in our analysis.[13] The results (Table 5) support both of the hypotheses mentioned in the previous paragraph. First, although the coefficients for Models 5.1 and 5.5 are virtually the same, the predictive capacity of per capita income is lower for countries in this income range than it is globally (compare Model 5.1 with 5.5 and Model 5.2 with 5.6).

Second, the lower impact of per capita income on regime type in Latin America is only partially explained by the stage of development of Latin America in the second half of the 20th century. The Pseudo-R^2 (Nagelkerke) is .30 for non-Latin American countries in Latin America's income range as opposed to .45 for the whole sample and .05 for Latin America. The better fit for countries at similar stages of development outside Latin America shows a much stronger impact of per capita income on regime type than exists in Latin America. The fit is still modest compared to the results including all countries.

Thus, part of the reason for the weak impact of per capita income on regime type in Latin America is that in all countries within this income range, per capita income has a weaker impact on regime type than in does globally. Even compared to other countries in the same income range, however, in Latin America per capita income has a weak impact on regime type.

Using the Alvarez et al. and Polity data sets, we can also verify whether a) the N-curve appears for the global data set and b) the N-curve appears for other countries in the same income range as Latin America. This is another means of testing for the specificity of the Latin American cases. The results appear in Table 6. Tests using the Polity measure exclude the GDP^4 term employed in previous specifications to avoid problems of multicollinearity detected in several models.

TABLE 6

The Nonlinear Effect of Per Capita Income on Democracy: Latin America, the World, and Non-Latin America between $834 and $8,233 Per Capita Income

	Global		Latin America		All cases excluding Latin America		Non-Latin America between $834 and $8,233	
Model	6.1 ACLP	6.2 Polity	6.3 ACLP	6.4 Polity	6.5 ACLP	6.6 Polity	6.7 ACLP	6.8 Polity
GDP	1.387*	2.041*	5.467*	14.836*	0.773*	1.913*	0.512	0.651
	(0.156)	(0.019)	(0.778)	(1.748)	(0.154)	(0.207)	(0.359)	(1.018)
GDP^2	-0.216*	-0.039	-1.511*	-3.901*	-0.481	-0.005	-0.033	0.125
	(0.040)	(0.033)	(0.232)	(0.491)	(0.036)	(0.035)	(0.100)	(0.281)
GDP^3	0.015*	-0.002	0.126*	0.313*	0.003	-0.003	0.005	-0.000
	(0.003)	(0.002)	(0.021)	(0.040)	(0.002)	(0.002)	(0.008)	(0.022)
Constant	-2.964*	-5.965*	-5.732*	-16.293*	-2.756*	-6.100*	-2.222*	-4.098*
	(0.162)	(0.254)	(0.764)	(1.776)	(0.166)	(0.261)	(0.351)	(0.969)
% Correct								
Authoritarian	87.6		59.6		92.0		90.8	
Democratic	62.3		60.6		69.1		49.3	
Pseudo-R^2	.46		.14		.56		.30	
Adj. R^2		.38		.13		.43		.20
N	4,126	3,891	749	722	3,377	3,169	2,107	1,934

ACLP: Logistic regression coefficients (standard errors).
Polity: OLS coefficients (standard errors).
* Significant at .005 level.
Sources: Przeworski et al. data set, Polity IV data set.

Although the N-curve is statistically significant at the global level, it has a very weak substantive impact. The Pseudo-R^2 barely increases compared to the linear model (.45 to .46), whereas the N-curve model substantially improves the fit for Latin America (.05 vs. .14). In contrast to what occurs using only the Latin American cases, a plot charting the regressions with the polynomials shows a strictly monotonic increase in the likelihood of democracy as per capita income increases. The N-shaped curve vanishes if we use the Polity measure or if we remove the Latin American cases from the sample (Models 6.5 and 6.6). The contrast between results for Latin America and results for other countries between the $834 and $8,233 per capita income range is even starker (Models 6.7 and 6.8). The N-curve phenomenon is not significant for countries outside Latin America with a per capita income of between $834 and $8,233. In short, the relationship between the level of development and regime type in Latin America is very distinctive, both compared to the global set of countries and to other countries in the same income range. It is distinctive both in the weak impact of level of development on regime type and in the N-curve.

Explaining Latin American Exceptionalism

What explains these two related yet analytically discrete aspects of Latin American exceptionalism? We focus mainly on the distinctive N-curve in Figure 2. Because most of the literature has not observed such an N-curve, it has not addressed this issue. Nevertheless, two authors have posited the existence of an N-curve for at least some cases and attempted to explain it: O'Donnell (1973) and Muller (1988, 1995).[14]

O'Donnell's initial argument (1973) focused on Argentina (1966–73) and Brazil (1964–85), and later work included Chile (1973–90), Uruguay (1973–84) and the later Argentine military dictatorship (1976–83) as cases of bureaucratic authoritarianism (BA). He did not purport to explain the N-curve that we find for 19 countries, but it is plausible that the BA cases could explain the N-curve for our larger set of cases and longer historical period. If the results in Tables 1 and 2 are a product of these five BAs, then we should get different results by leaving them out.

Muller (1995) argued that the likelihood of regime breakdown increases, resulting in an N-curve, as income increased in intermediate income countries because their pattern of economic growth exacerbated income inequalities. Growing inequalities in turn fueled class conflict. "When democratic institutions with universal male or adult suffrage are introduced into an extremely inegalitarian society, those among the subordinate classes who resent inequality will seek to reduce the gap between the rich and poor by using the electoral process to reassign property and income. Political attempts to reassign property and income, through policies like land reform, taxation of personal income, and welfare spending are, in turn, likely to be resented by the dominant, wealthy classes. …(C)onflict over inequality may substantially increase the likelihood of a breakdown of democracy" (p. 968).

While diverging sharply from modernization arguments in positing the down slope of the N-curve, Muller and O'Donnell followed most modernization claims in postulating a tight connection between economic development patterns and regime outcomes. Both emphasized the explanatory power of the structural factors they analyzed. An alternative interpretation of the N-curve could focus on region-specific political cycles. Latin American democracies and semidemocracies have only rarely broken down after 1977, even at low levels of development, and until 1977 they were quite vulnerable to breakdown, even at moderately high levels of development. If we define a breakdown as any episode in which a democracy or semidemocracy becomes an authoritarian regime, 21 breakdowns took place between 1945 and 1977, but only one breakdown (Peru in 1992) occurred between 1978 and 1996. The discrete-time breakdown rate is 20 times higher (.079) for 1945–77 than for 1978–99 (.004), providing support to Huntington's (1991) contention that the third wave of democ-

ratization involves different political dynamics than earlier waves. Democratic durability at low per capita incomes after 1977 and authoritarianism at moderately high per capita incomes until 1977 may account for the weak, nonlinear relationship between level of development and democracy in Latin America.

This suggests that the down slope in the N-curve in Figure 2 might be partly an artifact of timing—of *when* different countries experienced regime regressions and of *when* other regimes grew economically, and that this temporal sequence happened to coincide with several regimes that fell in the $1,657–3,007 per capita income zone. If—to provide but one example—several of Latin America's more developed countries experienced democratic breakdowns when their per capita income was between $1,657 and $3,007, this would contribute to the down slope of the N-curve, yet the effect of greater per capita income might be spurious; the critical triggering factor might be some period effect.

TABLE 7

Alternative Explanations for the N-Curve

	7.1 Excluding BAs		7.2 Excluding Gini>.50		7.3 Year effects	
Dependent Var.	D	SD	D	SD	D	SD
Predictor						
GDP	15.60**	4.52**	10.23**	3.47*	14.42**	7.99**
	(2.11)	(1.47)	(1.39)	(1.35)	(1.42)	(1.36)
GDP^2	-8.86**	-2.58*	-4.77**	-1.64*	-7.22**	-4.45**
	(1.33)	(1.07)	(0.73)	(0.83)	(0.77)	(0.82)
GDP^3	1.49**	0.39	0.66**	0.21	1.06**	0.67**
	(0.24)	(0.22)	(0.11)	(0.14)	(0.12)	(0.14)
Constant	-8.49**	-2.89**	-5.92**	-2.79**	-4.66**	-1.05
	(0.98)	(0.58)	(0.76)	(0.59)	(1.36)	(1.26)
					…	…
N	780		468		988	
Nagelkerke R^2	.263		.313		.499	

Multinomial regression coefficients (standard errors). Results remained consistent using other measures of democracy.
Year dummy coefficients not displayed due to reasons of space.
* Significant at .05 level, ** Significant at .005 level.

We present basic tests of these three alternative explanations in Table 7. To address the Bureaucratic-Authoritarian thesis, we tested Model 3.1 excluding Brazil and the Southern Cone countries (Argentina, Chile and Uruguay). This is not a test of O'Donnell's argument, but rather of whether his argument accounts for the N-curve. All coefficients in Model 7.1 remained significant and of the same sign. The replication of Models 3.2, 3.3 and 3.4 generated equivalent results. Thus, the curvilinear effects of per capita income are

not restricted to the Southern Cone and Brazil. Since we have removed the BA cases, the declining likelihood of democracy between $1,657 and $3,007 per capita income is not related only to *bureaucratic* authoritarianism.

The BA argument, then, cannot fully account for the N-curve at this certain income range.[15] Other forms of authoritarianism are also pervasive in the two medium high (within Latin America) income categories shown in Table 1 above (i.e., $1,800–2,399 and $2,400–3,199 per capita income). The Mexican authoritarian regime fits in the $1,657 or higher category from 1967 on, as did the Argentine regimes of 1945–66. None of these regimes were BAs, yet they contribute to the down slope of the N-curve.

Bollen and Jackman (1995) disputed Muller's argument on compelling statistical grounds. Unfortunately, there are not enough data on income inequalities in Latin America to provide reliable time-series. We can, however, identify those countries with historically high levels of inequality and exclude them from the sample. If the N-curve is the product of income distribution, the functional shape of the relationship should change as we delete the extreme cases. We used all available data points on income inequality among individuals based on nationwide samples from the World Income Inequality Database. [16] Model 7.2 presents the replication of Model 3.1 when we exclude all countries with an average Gini coefficient greater than .500 (Brazil, Bolivia, Chile, Colombia, El Salvador, Honduras, Guatemala, Mexico, Peru and Paraguay). Since all coefficients are significant and of the expected sign, the findings in Model 3.1 are not challenged by the exclusion of highly unequal cases. We performed the same analysis excluding countries above different thresholds (.55, .45) and the results remained consistent. We also used an alternative measure of inequality from the World Income Inequality Database (the Gini coefficient for households from national samples), but the results were not altered.

The historical evidence also challenges Muller's hypothesis. If egregious inequalities at certain income levels helped explain breakdowns, then the 1980s and 1990s should have been rife with breakdowns. Since 1978, democratic and semidemocratic governments in Latin America have been stable despite probably having even higher levels of inequality than plagued the region before then. The World Income Inequality Database indicates that several Latin American countries (including Argentina, Brazil, Chile, Colombia and Panama) experienced a deterioration in income distribution in the post-1978 period, and in no case has income distribution clearly improved since 1978. Despite this probable deterioration in income distribution, democracy has been far more stable since 1978 than in the past. Moreover, if income inequalities were the decisive explanatory factor, Latin American democracies should be less stable than African democracies because the former have higher levels of inequality, but the opposite has been true since the beginning of the third wave of

democratization. Finally, Muller presents no evidence, and we do not know of any, that these countries were more unequal when they broke down than they had been earlier, at lower levels of development, when some of them were stable democracies.

More than Muller suggested, the translation of social inequalities into political conflict depends on a political process (Moore Jr. 1978). Key actors—especially left-or-center-populist or leftist parties and union leaders—must politicize the inequalities and mobilize support for change. How much mobilization and conflict actually results from social inequalities cannot be extrapolated simply from the level of inequality. It is the political polarization that can accompany social inequalities, not inequalities *per se*, that can endanger democracy. It is not empirically clear that, as Muller (1995: 969) claims, "when income inequality is high or increasing, then the working class will be susceptible to the appeals of revolutionary socialism." To the contrary, working class revolutionary activity in Latin America declined in the 1980s and 1990s even as income inequalities probably worsened (and certainly did not improve) in the region. It is problematic to infer from a structural situation of inequalities to antisystem political behavior that produces strains in political regimes.

The structural explanations offered by O'Donnell (1973) and Muller (1988, 1995) fail to account for the weak relationship and the nonlinear pattern linking the level of development and democracy in Latin America. If we remove the BA cases or the highly unequal countries, the level of development still has a much weaker impact on democracy in Latin America than in other countries in the same income zone.

To examine the hypothesis that the down slope is partly a product of timing, we ran a third model including dummy variables for every year between 1945 and 1995. Year dummies are expected to capture the impact of historical trends, international forces, and waves of democratization. If the N-curve is an artifact produced when countries entered the $1,657–3,007 range of income per capita, the adjustment of the intercept every year should eliminate the polynomial form. Model 7.3 suggests that this is not the case, as all terms in the model mirror the findings in Model 3.1. The use of other measures of democracy did not alter the findings.

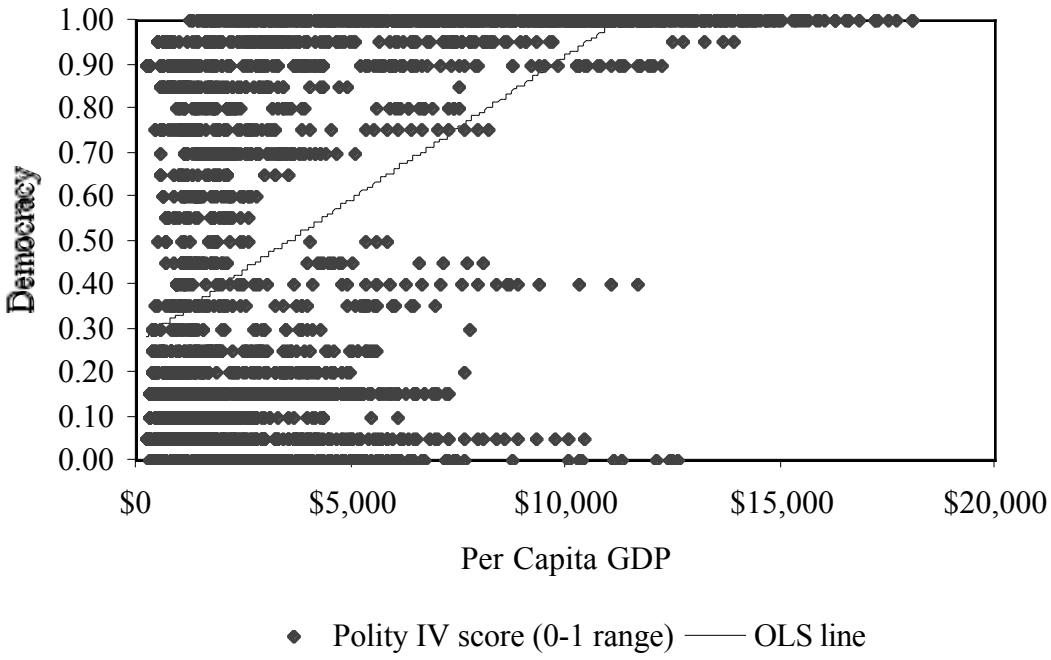
To test whether the curvilinear effects have declined after the third wave of democratization, we divided the sample in two groups (observations between 1945 and 1977 and from 1978 to 1996) and ran Models 4.1 to 4.4 for the two subsamples. The mean levels of democracy were substantially lower before 1978 (an average Polity score of –1.55 for 1945–77, as opposed to 3.45 for 1978–96), but the N-curve is present in both periods. Coefficients for 1945–77 were significant and of the same sign of the ones displayed in Table 4 except for education, which emerged as a significant variable and retained a negative sign

in all models and GDP^3, which was collinear with GDP^4 in the estimation for Freedom House data (presumably due to the small number of years covered by FH before 1978). For 1978–96, results were again similar to those in Table 4, except that no GDP term was significant for the prediction of semidemocracies.[17] There are period effects for Latin America that support Huntington's (1991) argument that the third wave of democratization is distinctive, but they do not account for the N-curve.

Because these attempts to explain the N-curve based on deductively derived hypotheses did not prove fruitful, we also looked at the data inductively. Figure 3 below shows the scatterplot plotting per capita income against Polity scores, which we used because they are more continuous than our dichotomous and trichotomous measures and exist for a longer time than Freedom House scores. Whereas O'Donnell's argument about bureaucratic authoritarianism and Muller's arguments about income inequalities and democracy focus on the medium-high income, low democracy cases, the scatterplot shows that the N-curve also exists because of cases that combine low income and a high level of democracy. An explanation of the N-curve must be aware of both sets of cases.

FIGURE 3

Polity IV Scores, by Per Capita GDP (124 Countries, 1951–1990)



The N-curve could be caused by some structural effect of the level of development on regime type, as Muller argued and as modernization theorists agreed from very different perspectives, or else it could result from a large but not structurally determined clustering of cases of a high level of democracy despite low level of development, of a low level of democracy despite moderately high per capita income, or from both of the above. In this article, we cannot definitively resolve which kind of explanation is more powerful because it is essentially impossible to conceive of every single structural explanation that might be tested, but no evidence supports any existing structural explanation.

We are skeptical that for structural reasons a higher level of development between roughly $1,657 and $3,007 really was likely to decrease the level of democracy. (The $1,657 figure is the point at which the probability of democracy begins to decline in Figure 2; the $3,007 figure is the point at which it increases again.) The plausibility of structural explanations of the N-curve is enhanced if increasing per capita income induced a democratic retraction between roughly $1,657 and $3,007 in some countries, and conversely it is weakened if such a process did not occur frequently. If, at the extreme, there are no country cases in which, because of some specifiable mechanism, a greater per capita income produces decreasing levels of democracy between $1,657 and $3,007, then the structural argument is less plausible. If, to the contrary (a hypothetical example), the N-curve existed because one group of countries was consistently in the northwest quadrant of a scatterplot (high level of democracy, low per capita income) while another group was consistently in the southeast quadrant, the structural argument is less convincing unless there is some historically antecedent (i.e., before the data set begins) reason why the higher level of per capita income pushed one set of countries into a lower level of democracy and then they got stuck there.

Of the 19 countries in the data set, only Chile and Uruguay experienced democratic regressions when their per capita incomes were between $1,657 and $3,007 1980 dollars. These are the only two countries that plausibly fit an argument that some structural factor triggered a decline in the level of democracy because of increases in per capita income between $1,657 and $3,007. Only two other countries, Argentina and Panama, experienced a democratic regression when their per capita incomes were close to that band. If we eliminate these four countries from the data set, the N-curve still remains statistically significant. The N-curve therefore cannot be explained by any structural argument that causally links democratic regressions to an increasing per capita income between $1,657 and $3,007.[18]

Conclusions

Three conclusions stand out. First, whereas the large N literature shows that modernization is highly favorable to democracy, for the Latin American cases the level of development has a weak impact in explaining the vicissitudes of democracy. With the probable exception of Haiti at the very poor end and the cases above $3,200 per capita income in 1980 dollars at the high end, the structural effects of modernization have not had much impact on the prospects for democracy. The weak impact of level of development on regime type in Latin America means that to understand the vicissitudes of democracy in Latin America, social scientists need to look at other kinds of variables.

Second, the relationship between the level of development and democracy is distinctive in Latin America compared not only to the global set of countries, but also to other countries in the same income zone. Part of the distinctiveness of the impact of level of development on regime type in Latin America vis-à-vis the global pattern is that regime type is generally more indeterminate at intermediate levels of development. We expected this finding because on a global level, the countries with highest per capita incomes have been very likely to be democratic, while countries with very low per capita incomes have usually been authoritarian (Dahl 1971: 62–80; Przeworski et al. 2000). During the decades under examination in this paper, almost all Latin American countries were in an intermediate category according to modernization variables, precisely where one would expect greatest uncertainty as to regime type.

Surprisingly, the impact of level of development on regime type is much weaker in Latin America even than in other countries in the same income range. This result, which is contrary to Coppedge's (1997) finding that there are no differences across regions in the impact of level of development on democracy, means that in Latin America, distinctive regional political dynamics mediate the impact of the level of development on democracy. This finding is notable because in quantitative work on the impact of level of development on democracy, little attention has been given to distinctive regional effects. The fact that there are distinctive regional effects means that it is important for comparative political scientists to take seriously regional influences and trends. We also find that the relationship between level of development and democracy varies according to historical period; there are differences between the pre- and post-1978 periods.

Third, our analysis supports the earlier findings of O'Donnell (1973) and Muller (1988, 1995) that at some levels of development, the likelihood of democracy declines in Latin America. But we dispute their interpretations of this finding. The decline in the per-

centage of democracies in Table 1 as per capita income increases from $1,200–1,799 to $2,400–3,199 is not limited to bureaucratic authoritarianism (O'Donnell 1973), nor is it a consequence of high income inequalities (Muller 1988, 1995) or merely an artifact of timing. In analyzing the N-curve and, more broadly, Latin American exceptionalism to the worldwide relationship between level of development and democracy, it is as important to look at the democratic overachievers as the underachievers, though the latter phenomenon has received far more attention. Given the large number of cases that contribute to the N-curve and the great differences across those cases, we are skeptical that it is possible to find one or two modal patterns in the relationship between level of development and democracy that explain the N-curve. It is possible, but we think unlikely, that an omitted structural factor related to the level of development is driving the N-curve.

Our analysis opens one new research puzzle and sheds new light on an old one, both related to Latin American exceptionalism regarding the impact of level of development on democracy. The new research puzzle is to explain the large numbers of cases of democracy despite low levels of development, especially, but not only, in the post-1978 period. Most scholarship has focused on the failures of democracy in Latin America, and little scholarship has been attentive to the large number of democratic overachievers in the region. Few scholars have examined why democracy was possible in some countries despite a low level of development in Latin America (for an exception, see Valenzuela and Valenzuela 1983). This question is particularly relevant because as Przeworski et al. (2000) have observed, Latin America as a region has a higher level of democracy than the rest of the world than one would predict on the basis of per capita income alone.

The old research puzzle that appears in a new light on the basis of the quantitative data, and the other key half of the weak impact of level of development on democracy in Latin America, is to explain the democratic underachievers. This question appears in a new light above all because the countries that have on average been democratic underachievers relative to their per capita incomes—Paraguay, Argentina, Haiti, Mexico and Nicaragua were on average the most notable from 1945 to 1996—is not a set of countries that is normally grouped together. The difficulty of applying a single unified interpretation to a large number of cases (i.e., a country in a given year) of democratic underachievement on the basis of structural variables is substantial. It may not be fruitful to search for common causes of democratic underachievement on the basis of structural variables, but merely identifying which countries have been democratic underachievers relative to their level of development poses fascinating new questions about why different countries have frequently underperformed in democratic development.

Endnotes

[1] We use the terms "level of development" and "modernization" synonymously, and we frequently abbreviate the former by simply stating "development."
[2] We treated all "transition" values (–88, –66) in the Polity index as missing values.
[3] The countries are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. We do not include Cuba because the Economic Commission for Latin America and the Caribbean, which we used for much of our data, does not provide information on Cuba in most of its publications.
[4] The Mainwaring et al. classification of political regimes is ordinal, and the MNLM does not assume any order in the categories. We chose MNLM rather than ordered logits, which are specifically designed for ordinal scales because the latter assumes equal regression coefficients for all categories, despite different intercepts. Ordered logits allow for more parsimonious models and easier interpretation of the results. Unfortunately, score tests (Long 1997: 142–45) showed that this "parallel regression" assumption was violated in our models, so we decided not to impose such constraints on the analysis (see Agresti 1996: 211–16).
[5] Our model specification does not include the lagged dependent variable for theoretical as well as econometric reasons. The literature has not claimed that democracy at time *t* is an additive function of previous levels of democracy *and* current levels of development. Rather, it has typically assumed that absolute levels of development drive the process of democratization at any stage. In addition, the use of a lagged dependent variable is inappropriate with heavily trended variables, and it is nonviable for categorical outcomes. However, we report some information on AR (1) (autoregressive order 1) models for illustrative purposes. Despite these complications, we have sought to preserve a consistent model specification across our four measures of democracy.
[6] In O'Donnell's formulation, the key independent variable was the pattern of industrialization and not per capita income. Thus it is not certain that one can test his propositions using per capita income as a proxy. Nonetheless, the plausibility of his argument is greater if at a certain per capita income level, the likelihood of democracy decreases with further increments in per capita income.
[7] We depart from the specification by Lipset, Seong, and Torres (1993), who included just the quadratic and the cubic terms in the function, because we are allowing for a later stabilization period (Jackman 1973). The GDP^4 term is unnecessary with categorical dependent variables because the interpretation of the logistic function naturally involves some upper-limit since the probability of democracy, P(D), cannot be greater than 1.
[8] Although for reasons of simplicity we refer to the $1,657 and $3,007 thresholds later in the discussion, these figures are not fixed. Estimations of these points vary with the specification of the model. For Model 4.1 reported below (including secondary school enrollment and agricultural labor force), for example, the stationary points are estimated at $875 and $3,221, respectively.
[9] Data were available from 1960 to 1994 from the Word Bank's World Development Indicators, 1998. We estimated the series for 1961–64, 1966–69, 1971–74, 1981–84, and 1986–89. The series for Bolivia and Haiti reached only 1990.
[10] One conceivable exception might be cases of egalitarian land tenure systems with small farms that absorbed a high share of the labor force, but, with the possible exception of Costa Rica, Latin America has no such cases. Argentina may also be a partial exception: landowners had more political power than would be inferred on the basis of the size of the rural labor force.
[11] The share of the labor force in manufacturing was correlated at –.85 with the share of the labor force in agriculture, but variance inflation factors (VIFs) showed no serious multicollinearity.
[12] In the following pages we compare the R-squares as an informal test of our argument. Two important considerations usually prevent the comparison of the coefficient of determination across samples, but they do not hinder our conclusions in this case. First, differences in R^2

may result from the difference in variance across samples. This is exactly our point, as we argue that the "better fit" at the global level is explained by the greater variance in per capita GDP and levels of democratization (compared to the Latin American subsample). The second reason is that values for the adjusted R^2 and Nagelkerke R^2 are not fully independent from the N, which varies across samples (Nagelkerke 1991). Other things being equal, a larger N should *reduce* the value of those coefficients. The fact that the larger (global) sample presents a better fit reinforces our argument.

[13] These highest and lowest per capita figures reported in the remainder of this section are in the units used by Przeworski et al. (p. 81), namely, 1985 constant purchasing power parity dollars from the Penn World Tables.

[14] Lipset et al. 1993 also note the N-curve, but they do not explain it.

[15] Przeworski and Limongi (1997) observed that Argentina is an outlier; democracy broke down despite a high level of development. Because outliers can skew results, we removed Argentina from the analysis. The general pattern seen in Tables 1 and 2 persists without Argentina. Hence, just as the bureaucratic-authoritarian cases do not fully explain the N-curve, neither does Argentina.

[16] Original data are available at http://www.wider.unu.edu/wiid/wwwwiid.htm.

[17] We are indebted to an anonymous reviewer for this suggestion.

[18] The N-curve is remarkably robust, notwithstanding the modest slopes. We tested the model eliminating all observations with residuals smaller and greater than 8, 7, and 6 Polity points. In all tests, the nonlinear terms remained significant. When we discard all observations with errors greater or smaller than 5 Polity points, a problem of multicollinearity appears, and the cubic term must be dropped from the model. At this point, the analysis is reduced to 358 observations. The N-shape also remains in place if we selectively discard the under- or the overachievers. If we delete all observations with residuals smaller than -5, or all cases with residuals greater than +5 Polity points, all coefficients remain equally significant. A new N-curve easily refits the remaining cases after deleting the positive or negative outliers.

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