Democracy and Social Spending in Latin America, 1980–92

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What is the effect of regime type on public expenditures for social programs? We investigate the relationship between democracy and the change in social spending—controlling for GDP, the debt, inflation, and age structure of the population—through a time-series cross-sectional panel data set for 17 Latin American countries from 1980 to 1992. The results show that, especially in poor countries during economic crisis, democracies increase the allocation of resources to social programs relative to authoritarian regimes. This suggests that the latter are more constrained by economic forces, whereas democracies are more constrained by popular demands. Hence, calls to abandon broad categorizations of regime type appear to be premature: Democracy can matter in systematic and substantial ways.

What are the policy consequences of democracy? This debate rests in large measure on the extent to which democracy renders political leaders accountable to the public. Some scholars argue that regime type strongly affects the constraints that politicians face. In their view, electoral pressures compel democratic politicians to allocate resources away from investment toward consumption (de Schweinitz 1962; Dornbusch and Edwards 1991; Malloy 1987; Skidmore 1977). Others contend that there is no systematic relationship between regime type and the room politicians have to maneuver; the simple distinction between authoritarianism and democracy does not capture important features that influence political behavior (Geddes 1995; Haggard and Kaufman 1992, 1995; Nelson 1990; Przeworski and Limongi 1993; Remmer 1986, 1990, 1991; Schneider 1995).

Recent evidence from Latin America indicates that democratically elected politicians now seem quite willing to enact neoliberal programs, which often include a reduction in social expenditures, even when they impose real costs on their constituents. Authoritarianism no longer seems to be a prerequisite for subjecting society to the painful policies associated with market reform. The mixed evidence concerning the link between regime type and policy outputs has led some analysts to advocate abandoning broadly construed regime categories based on the overall rules of the game. They favor an examination of more narrowly defined institutions, such as the structure of decision making, the system of government (presidentialism versus parliamentarism), the relative power of technocrats, the composition of governing coalitions, and relations among business, labor, and the state (e.g., Geddes 1995; Remmer 1990; Schneider 1995). Philippe Schmitter's (1992) disaggregation of democracy into five “partial regimes” (clientelism, concertation, elections, representation, and pressure politics) exemplifies the effort to break down the composite concept of democratic regime.

Our findings suggest that calls to abandon regime type as an object of inquiry are premature. Using a time-series cross-sectional data set, we investigate the effect of regime type on social spending in 17 Latin American countries from 1980 to 1992. Following previous empirical work on the politics of social spending (Hicks and Swank 1992), we construct a model of social spending for Latin America. It includes a number of variables that represent both economic and political constraints on social spending. We use a fully interactive analysis of covariance model to test whether democratic and authoritarian regimes respond differently to each constraint.

A consistent pattern emerges from the results. Authoritarian regimes display greater sensitivity than their democratic counterparts to economic constraints. For example, when facing low levels of per-capita income and negative rates of growth, authoritarian governments reduce social spending at a faster rate than democracies. When economic constraints subside, however, authoritarian regimes increase spending at a faster rate. By contrast, democracies show greater sensitivity to political constraints. That is, they are relatively more sensitive to demographic changes in (and consequent pressures from) the electorate. Thus, regime type influences politicians’ behavior under certain conditions.

Our findings add a new twist to an old debate. Rather than affecting the level of government benefits under all circumstances, regime type may be more influential in determining which constraints matter. This implies that each side of the debate is not entirely correct or entirely mistaken. When faced with severe economic constraints, democratic politicians increase spending, whereas authoritarian regimes decrease spending. Democratic politicians are, however, not so

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weak that they always outspend their authoritarian counterparts.

The article proceeds as follows. In the first section we review the relevant literature on democracy and discuss its consequences for social spending. In the second section we present the research design and model specification. In section three we report the results. Our interpretation of the results is given in section four. Section five presents conclusions.

DEMOCRACY AND SOCIAL SPENDING IN LATIN AMERICA

Authoritarian rulers are generally not dependent on competitive elections for their political survival and are in a position to repress societal discontent. Will they spend less on social programs in order to favor other goals, such as allocating more resources to economic investment? Can variations in public policy be explained by virtue of the simple fact that authoritarian regimes tend to insulate decision makers from the public? The literature concerned with the connection between regime type and social welfare benefits hinges in large measure on this issue.

The literature tends to assume that public spending on social programs is a necessary—although not sufficient—instrument in the struggle to raise the living standards of the poor. Any expectation that democracies are more likely than authoritarian systems to spend more on social programs is rooted in the premise that social provisions rank high on the political agenda of the poor (or at least politicians assume they do), and open electoral competition and the right to associate freely give the poor effective political influence. Because the poor comprise a large proportion of the electorate in most developing countries, democratic governments cannot easily ignore or repress their demands. Even if the underprivileged do not actively push for welfare-enhancing reforms, politicians may well direct social provisions their way in an effort to gain votes.

Quantitative cross-national analyses within Latin America that lend some support to this argument include Ames (1987) and Sloan and Tedin (1987). In an examination of 17 Latin American countries between 1945 and 1980, Ames (1987) finds that heightened electoral competition tends to increase social spending. He notes, however, that middle-class and regional constituencies (not the poor per se) are often the beneficiaries of new government expenditures. In their study of 20 Latin American countries, Sloan and Tedin (1987) employ a multivariate model and time-series cross-sectional data from 1960 to 1980 to analyze the relationship among regime type, regime age, and public policy outputs. Their results suggest that democratic regimes perform considerably better on health and educational measures than traditional authoritarian regimes and slightly better than bureaucratic-authoritarian regimes, but they rank below socialist systems. In short, both studies underscore the significance of politics and public policy—especially the role of democracy—in bringing about policy changes that could potentially enhance welfare.

Many prominent analysts of Latin America doubt that the region's new democratic governments will advance policies to enhance social spending. In their view, two limitations are crucial: (1) the debt crisis of the 1980s and the neoliberal adjustment of the early 1990s and (2) the inordinately strong position of business and the military in these countries.

Authors who focus on the first limitation see Latin America's economic problems as a straitjacket (Conaghan and Malloy 1994; Petras, Leiva, and Veltmeyer 1994; Petras and Morley 1992; Powers 1995). The debt crisis and subsequent stabilization efforts have forced drastic reductions in social spending. Continuing apprehension over fiscal deficits will prevent future expansion. The intensified role of international actors (such as the International Monetary Fund) and the constraints they impose on governments in the region effectively check the pressures exerted by voters and interest groups to increase expenditures. Stallings (1992) focuses on international lending institutions and their demands for austerity as a counterweight to electoral demands for government programs.

Analysts who point to the second limitation argue that the political bases for increasing social benefits are lacking in contemporary Latin America (Karl 1990; O'Donnell 1988; Silva 1992–93). As a precondition for agreeing to the reestablishment of democracy, elite sectors—especially big business and the military—insisted on strict guarantees of their core interests and in some cases managed to institutionalize these prerogatives. Because private entrepreneurs would have to endure heavier taxation to pay for higher social spending and the military would have to forgo resources for itself, both groups oppose an increase in benefits. Their strength within the new democracies of Latin America presumably allows them to block initiatives to expand social programs.

Do empirical data substantiate the claim that contemporary Latin American democracies are especially unlikely to allocate resources for social programs? A rigorous test of the question can be achieved by examining the relationship between regime type and social spending during a time when many Latin American countries faced severe economic problems and underwent regime transitions that gave military and business elites unprecedented political influence.

RESEARCH DESIGN AND MODEL SPECIFICATION

We examined annual data on social spending for 17 countries in Latin America between 1980 and 1992. Our analysis includes all the cases for which data are available, and these represent a good cross-section within the region. The sample constitutes well over 90% of Latin America's GDP (in 1992). The data are comprehensive for a part of the world in which com-

1 The countries are listed in Table 1.
parable information for multiple countries over such a long period is rare.

The data form a time-series cross-sectional (TSCS) data set that includes multiple (13) observations for each country in the sample. Because we are using TSCS data, autocorrelation and heteroskedasticity become a concern. Relying on OLS estimates of the standard errors is problematic in the TSCS framework because, although the coefficients from the OLS model will be consistent, estimates of the standard errors may be misleading due to panel heteroskedasticity or spatial correlation of the errors. Beck and Katz (1996) advance a solution that addresses these problems while retaining the data in a form that allows for a more intuitive interpretation of the results. They recommend using OLS with panel corrected standard errors (PCSEs) once serial correlation has been removed from the disturbances.

One way to handle serial correlation is to include a lagged dependent variable on the right-hand side of the equation (Beck and Katz, 1996), which allows for an explicit treatment of the long-term dynamics of the relationship. We estimated several models using this approach but found the coefficients on the lagged dependent variables were very close to one, which suggests the variables may be integrated. Under the circumstances, Beck and Katz recommend first-differencing the dependent variable so long as the primary theoretical focus remains on short-term effects. Since our theoretical concerns can be addressed fully by specifying a short-term model (no lagged dependent variables), we decided to first difference the dependent variable to avoid the statistical complications associated with integrated variables. We then used OLS to calculate the coefficients and used PCSEs to estimate their significance.

We employed an analysis of covariance model (ANCOVA) to test whether democratic and authoritarian governments differ significantly in their response to economic and political pressures when deciding on social spending. Note that the independent variables (except the democracy dummy variable) are lagged one year. Here we follow the approach of Hicks and Swank (1992). To avoid “ specification searching” for optimal lags, we lagged all the control factors one year. This is realistic, since economic developments take time to affect political decisions and policy outcomes. It also makes the model’s direction of causality explicit: If the independent variables in year \( t - 1 \) are correlated with this year’s spending, then we can infer with greater confidence that the direction of causality is in fact running from the factors specified on the right-hand side of the equation to the dependent variable on the left-hand side. The regression model is given below.

Social Spending, \( - \) Social Spending\(_{-1} \)

\[ a_{1} + b_{1}(\text{GDP/capita}_{-1}) + b_{2}(\Delta \text{GDP/capita}_{-1}) + b_{3}(\text{Debt Service Ratio}_{-1}) + b_{4}(\text{Democracy Dummy}_{-1}) + b_{5}(\Delta \text{GDP/capita}_{-1}) + b_{6}(\text{Democracy Dummy}_{-1} \times \text{GDP/capita}_{-1}) + b_{7}(\text{Democracy Dummy}_{-1} \times \Delta \text{GDP/capita}_{-1}) + b_{8}(\text{Democracy Dummy}_{-1} \times \% \text{ of pop. over 55}_{-1}) + b_{9}(\text{Democracy Dummy}_{-1} \times \% \text{ of pop. over 55}_{-1}). \]

Since the dummy term for democracy is coded 0 for authoritarian regimes and 1 for democracies, the coefficients \( a_{1}, b_{1}, b_{2}, b_{3}, \) and \( b_{4} \) record the estimates for the authoritarian cases. \( \) The coefficients \( b_{5}, b_{7}, b_{8}, \) and \( b_{9} \) provide estimates of the difference between the democratic and authoritarian cases. For example, \( b_{1} \) gives the estimate for the effect of GDP/capita on the change in social spending in authoritarian regimes. The coefficient for the interactive term between democracy and GDP/capita, \( b_{6} \), indicates the difference between the effect of GDP/capita on the change in social spending for democracies and authoritarian regimes. The corresponding \( t \)-ratios for the interactive terms—calculated with PCSEs—denote the statistical significance of the differences. The ANCOVA model, then, is designed to test whether being democratic or authoritarian alters, in a substantive and statistically significant sense, the relationship between the independent variables and the change in social spending. For example, the model can tell us whether economic growth (or lack thereof) has the same influence on social spending in democratic and authoritarian regimes and whether the estimated difference is substantively and statistically significant.

**Dependent Variable**

To measure the emphasis governments place on social programs, we collected data on Social Spending per Capita (in 1987 dollars). Public spending is especially subject to politics in many Latin American countries, where budgets show considerable variation from year

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2 The dimensions of the data set are 17 countries by 13 periods. Although the number of periods \( t \) is smaller than we would have liked, using Beck and Katz’s (1996) prescription for time-series cross-sectional data (panel corrected standard errors) is appropriate (Nathaniel Beck, personal communication).

3 Note, however, that the panel corrected standard errors will only give unbiased estimates of the standard errors if the problem of autocorrelation has been addressed. We tested for remaining auto-correlation in all the regressions using the Lagrange multiplier test suggested by Beck and Katz (1996). We found no remaining auto-correlation once we differenced the dependent variable.

4 When the regime type dummy variable is zero (the authoritarian cases), all the interactive terms \( b_{1} \) through \( b_{9} \) become zero, which leaves only \( a_{1} \) and \( b_{1} \) through \( b_{7} \) representing estimates for the authoritarian cases.

5 As described in the CEPAL report (Cominetti 1996, 6), the figures for spending per capita were calculated indirectly by taking social spending as a percentage of GDF and then expressing it in dollar terms using World Bank estimates of countries’ GDP expressed in 1987 dollars. Three cases out of 204 were missing. We used StaTa’s interpolation routine to fill in the three missing cases (Stata Statistical Software: Release 6.0, College Station, Texas: Stata Corporation, 1999). The data we use have been updated since the original CEPAL report; Bolivia and Colombia have been added.

781
TABLE 1. Summary Statistics of Social Spending in Latin America and Regime Type Classification by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Year of Maximum Value</th>
<th>Year of Minimum Value</th>
<th>Democratic Years</th>
<th>Authoritarian Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>542.73</td>
<td>536.15</td>
<td>73.22</td>
<td>429.3</td>
<td>646.0</td>
<td>1987</td>
<td>1992</td>
<td>1983–92</td>
<td>1980–82</td>
</tr>
<tr>
<td>Brazil</td>
<td>197.22</td>
<td>195.70</td>
<td>24.70</td>
<td>159.6</td>
<td>242.6</td>
<td>1990</td>
<td>1984</td>
<td>1985–92</td>
<td>1980–84</td>
</tr>
<tr>
<td>Chile</td>
<td>208.09</td>
<td>203.55</td>
<td>33.05</td>
<td>240.1</td>
<td>343.1</td>
<td>1982</td>
<td>1989</td>
<td>1990–92</td>
<td>1980–89</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>282.75</td>
<td>290.25</td>
<td>60.87</td>
<td>198.3</td>
<td>364.4</td>
<td>1989</td>
<td>1982</td>
<td>1980–92</td>
<td>1980–89</td>
</tr>
<tr>
<td>Honduras</td>
<td>70.47</td>
<td>72.25</td>
<td>5.61</td>
<td>61.2</td>
<td>77.7</td>
<td>1992</td>
<td>1981</td>
<td>1982–92</td>
<td>1980–81</td>
</tr>
<tr>
<td>Panama</td>
<td>381.05</td>
<td>389.70</td>
<td>32.37</td>
<td>325.0</td>
<td>415.7</td>
<td>1983</td>
<td>1990</td>
<td>1980–90</td>
<td>1991–92</td>
</tr>
<tr>
<td>Paraguay</td>
<td>43.14</td>
<td>44.15</td>
<td>10.02</td>
<td>28.4</td>
<td>56.2</td>
<td>1982</td>
<td>1989</td>
<td>1991–92</td>
<td>1980–90</td>
</tr>
<tr>
<td>El Salvador</td>
<td>61.95</td>
<td>55.45</td>
<td>15.28</td>
<td>47.1</td>
<td>93.5</td>
<td>1981</td>
<td>1990</td>
<td>1984–92</td>
<td>1980–83</td>
</tr>
<tr>
<td>Uruguay</td>
<td>416.38</td>
<td>419.65</td>
<td>60.20</td>
<td>332.7</td>
<td>517.7</td>
<td>1992</td>
<td>1984</td>
<td>1985–92</td>
<td>1980–84</td>
</tr>
</tbody>
</table>

Independent Variables

Although Latin American politicians have shown wide latitude in budgetary decision making, they are confronted by a number of important economic constraints arising from international as well as domestic sources: GDP per capita, growth in GDP per capita, the debt service ratio, and inflation. By interacting GDP per capita, growth in GDP per capita, the debt service ratio, and inflation with the democracy dummy variable, we can ascertain whether democratic and authoritarian governments respond differently to these constraints.

The GDP per Capita (Logged) data are included to control for the level of a country's economic develop-

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6 Categories of programs included under "social spending" differ somewhat between Ames (1987) and Cominetti (1996).
7 For example, it is important that such items as preschool and primary school education or sports (physical education) versus academic education be consistently treated (either kept separate or merged) across cases.

The data probably underrepresent social spending in federal countries. Figures at the municipal and state level were available for Brazil, however, and using those in place of the central government data had no effect on our results.
interwoven. Poor countries cannot marshal the kind of resources that wealthier countries devote to social spending. To the degree that GDP per capita is correlated both with social spending and democracy, controlling for this factor is necessary.

The figures for GDP per capita are taken-from Summers and Heston's (1991) data set, which bases estimates of output on purchasing power parities.9 Several measures of output are available in that data set. The per-capita income variable used in the analysis below allows for cross-temporal as well as cross-sectional comparisons; the specific measure we use is real GDP per capita in constant U.S. dollars based on a chain index. This provides a more accurate estimate of GDP through time. So that linear methods of estimation can be applied to the data, we use a logarithmic transformation of the variable.

Annual Percentage Growth in GDP per Capita represents an important constraint on government spending. According to some analysts (e.g., Stallings 1992, 51), big spending, "populist" political strategies are more likely to be adopted when the economy is expanding. To the extent that social spending represents an integral part of such strategies, we need to take into account the annual percentage change in GDP per capita. A growing economy generates the kind of revenue that makes increased public spending possible. Lack of economic growth places an important limit on public spending. To operationalize growth, we used the Summers and Heston data, calculating the percentage change in GDP per capita (the same chain indexed measure) on an annual basis.

Debt Service Ratio represents total debt service as a fraction of the exports of goods and services (including workers' remittances). The ratio accounts for an important constraint on government spending stressed by many observers of contemporary Latin America. A high ratio indicates that a large portion of export earnings is earmarked for debt repayment. Since a large share of Latin America's external debt was contracted or assumed by the public sector, high debt service can indicate the pressures faced by the government to fulfill external obligations by restricting domestic spending, particularly on social programs (Haggard and Kaufman 1992, 10). Therefore, we include the debt service ratio as a crucial control factor. The figures were taken from the World Debt Tables published by the World Bank.10

Inflation constitutes another control. The measure of inflation we use is the annual CPI inflation recorded from December to December.11 Inflation can have a direct and indirect effect on social spending. High inflation may be one indication that government is living beyond its means and printing money. When inflation rates are high, there is pressure for governments to curb spending. Social programs are often the first to go. To the extent that governments attempt to curb inflation by reducing the fiscal deficit, inflation has a direct effect on social spending and should be included in our model. Inflation may also affect the ability of citizens to assess accurately the extent to which real government expenditures are rising or falling. In a highly inflationary period, it becomes difficult for consumers to calculate relative prices. The same problem applies when constituents attempt to assess the real value of government spending during periods of high inflation. Inflation can obscure both government revenues and expenditures. A variable for inflation was included in every regression. In each estimation, the coefficient for inflation and its interaction with democracy produced insignificant results. We also performed the regressions with inflation logged, which produced insignificant coefficients as well. Since inflation did not help explain the variance in social spending nor did it affect the coefficients of the other variables, it was dropped from the analysis.

In addition to the economic factors described above, we added a constraint that is more political in nature: Percentage of the Population over 55 Years of Age (when pension coverage begins in many Latin American countries). This variable differs from the economic constraints in that its effect on social spending filters primarily through political institutions rather than directly through markets. For example, domestic political forces—not the economy—pressure politicians to spend more on social security as the population ages.12 The decision to increase social security expenditures is made more to mollify a particular constituency than out of economic necessity. Since an important component of social spending is social security, an older population increases social expenditures. This variable is especially important in view of the observable variance in age structure among Latin American countries. In the vast majority of cases, 5–12% of the population is age 55 or older, but Argentina and Uruguay have much higher proportions—roughly 16% and 20%, respectively. To control for the possibility that such distinctive demographic patterns could drive our results, we took age data from the international database provided by the U.S. Bureau of the Census (1999) and included them in our analysis.13

9 A description of the method used to construct the data set is presented in Summers and Heston (1991). We used the most current version of the data: Mark 5.6. To download the data, see Summers and Heston 1999.


11 To download the data see (Bruno and Easterly 1999). The data set was constructed by Michael Bruno and William Easterly (1988). The original source of the inflation data was collected by the IMF and published in the International Financial Statistics (various years). Because the inflation variable included some very large numbers interspersed with relatively low rates of inflation, we tried logging the inflation variable to check whether it affected our results. Logging inflation had no substantive effect on any of our estimates.

12 Governments are usually contractually obligated to increase spending as the number of retirees grows, but at times they fail to provide the level promised. Although Hicks and Swank (1992) regard the age profile of the population as an economic constraint, we maintain that the decision to spend on social security is ultimately political because it is not directly dictated by the market.

13 The data can be retrieved online (United States Census Bureau 1999). Although the Census Bureau's data are fairly comprehensive, there are some missing cases. In each case a substantial amount of anterior or posterior data were available. Therefore, we capitalized on the available data and interpolated backward or forward, depend-
Finally, the measure of Democracy we use was developed by Alvarez, Cheibub, Limongi, and Przeworski (1996). It is based on a distinction between authoritarian and democratic regimes. In this study, dichotomizing regime type has an important theoretical rationale: It allows us to test whether the most basic characteristics that distinguish democracies from authoritarian systems have an effect on politicians’ behavior. Theoretically interesting conclusions about these basic characteristics can be drawn if significant differences between the two regime types are revealed. Finer distinctions can be made and further investigation pursued if the simple dichotomy fails to capture important differences in economic and social policy outputs.

Alvarez et al. base the operationalization of their measure of democracy on Robert Dahl’s (1971) concept of polyarchy—the imperfect version of democracy that exists in the real world. Dahl’s definition is founded on two essential features of democratic governance: inclusiveness and public contestation. To be classified as an authoritarian regime, at least one of the following conditions must hold (we paraphrase Alvarez et al. 1996, 14):

Rule 1. “Executive Selection”: The chief executive is not elected.

Rule 2. “Legislative Selection”: The legislature is not elected.

Rule 3. “Party”: There is no more than one party. Specifically, this rule applies if (1) there are no parties, or (2) there is only one party, or (3) the current term in office ends in the establishment of a nonparty or one-party rule, or (4) the incumbents unconstitutionally close the legislature and rewrite the rules in their favor.

Rule 4. “Type II Error”: A regime passes the previous three rules, but the incumbents have continuously held office by virtue of elections for more than two terms or without being elected for any duration and, until today, or the time when they are overthrown, they have not lost an election.

In the vast majority of cases, the classifications are not controversial. Yet, there are some countries in Latin America that are difficult to place in either category. To guard against our results being driven by a unique schema, we used another classification of regime type based on Gurr’s Polity III indices and compared the results to our original estimates. We also altered the categorization by Alvarez et al. of Brazil as democratic from 1980 to 1984. Given the heavy presence of the Brazilian military in the government (including the presidency) until 1985, there is strong justification for regarding the country as authoritarian during those years. The unaltered version of the Alvarez categorization, the modified version, and the dichotomized form of Gurr’s Polity III classification all generated similar results. We report the results produced by the modified version of the Alvarez measure. The country classifications based on the schema we use is presented in Table 1. To make the interpretation of the coding more intuitive within the context of our analysis, we assigned authoritarian cases 0 and democratic cases 1.

To construct a dichotomized form of Gurr’s Polity III data, we followed the work of Londregan and Poole (1996) by subtracting Gurr’s AUTOC score from the DEMOC score (which we call the D-A score); this produced a measure of democracy that ranges from −10 to 10 (the latter being the most “democratic” score). The resulting distribution of D-A scores was not continuous but, rather, distinctly bimodal. To compare our previous results with estimates based on Gurr’s measure, we divided Gurr’s D-A score in two: Cases above 4 were considered democratic, cases below 4 were coded authoritarian. Using the dichotomized form of Gurr’s Polity III data produced estimates that did not differ significantly (in fact, results were stronger across the board) from those based on the Alvarez et al. measure.

RESULTS

The regression results reveal a clear and distinct pattern. Social spending in authoritarian regimes is relatively more sensitive to economic constraints, while in democracies it is relatively more sensitive to political pressures from groups that benefit from social spending. The regression estimates are presented in Table 2.

Our findings with respect to the economic variables

17 Mexico is difficult to classify. Alvarez et al. (1996, 12) disqualify it as democratic based on the Type II Error: “Blatant fraud [by the PRI in 1988] constitutes prima facie evidence that the incumbents were not predisposed to permit a lawful alternation of office.” We are comfortable in labeling Mexico authoritarian, but there is some justification for judging it otherwise after 1988. When we recoded Mexico as democratic between 1989 and 1992, some of the coefficients in our model dropped below conventional levels of significance, but the signs of the coefficients did not change.

18 See Jaggers and Gurr 1995 for a description and analysis of the Polity III data. See Gurr and Eckstein 1975 for a presentation about the Polity I and Polity II data. To download the data see Jaggers and Gurr 1999.

19 Four represented a natural break point, since there were no cases with D-A scores of either three or four.

20 A battery of diagnostic tests (DFITs, Cook’s distance, leverages, and residual plots) identified six cases very distinct from the rest of the data: Argentina 1982, 1988, 1989; Chile 1982; and Uruguay 1981, 1983. Each stood out in both the residual plot and one or more of the diagnostic tests above. We decided to include dummy variables for each outlier. Further investigation revealed that the outliers all entailed very drastic, unrepresentative changes in the independent or dependent variables, that is, political and economic events that stand out in terms of their intensity or peculiarity. Dummies for the outlier cases were included in every regression but are not reported in Table 2 for presentation purposes.
are summarized as follows. At low income levels, authoritarian regimes tend to decrease social spending relative to democracies. As income rises, authoritarian regimes increase spending more rapidly than democracies—the difference between the democratic and authoritarian slopes for GDP/capita is negative (−33.0). As debt service payments eat up a larger percentage of export revenue, democracies increase spending on social programs relative to their authoritarian counterparts—the difference between the democratic and authoritarian slopes for the debt service ratio is positive (27.5). Conversely, as the debt burden eases, authoritarian regimes respond by restoring spending levels at a faster rate than democratic regimes. Finally, democracies are less responsive to changes in economic growth than are authoritarian regimes—the difference between the democratic and authoritarian slopes is negative (−103.0). As the economy expands, authoritarian regimes raise levels of social spending faster than democracies. Conversely, as economic growth declines, authoritarian regimes more effectively reduce the resources allocated to social programs.

Our findings with respect to the age of the electorate are as follows. As a society ages (i.e., the electorate grows older), democracies respond by increasing spending on social programs more rapidly than authoritarian regimes; the difference between the democratic and authoritarian slopes for the percentage of the population age 55 and older is positive.

The stability of the estimates is strong. The estimates and their significance stand up to a number of tests. First, varying the specification of the model has little if any effect on the results. We also varied the lag structure of the model. With only one exception, the signs of the coefficients remain the same regardless of whether the dependent variable is regressed on data for year \( t \), year \( t - 1 \), or a combination of both.\(^{21}\) As a further test, we estimated the model in Table 2 using a different dependent variable.\(^{22}\) Since the majority of previous work on social spending in the OECD nations employs social spending as a percentage of GDP (i.e., Hicks and Swank 1992), we transformed our social spending per capita measure by dividing it by GDP per capita.\(^{23}\) Since both the numerator and denominator are expressed in per-capita terms, the quotient is equivalent to social spending as a percentage of GDP. We then differenced the new dependent variable. The estimates from the previous models were robust, and the signs remained the same on every coefficient. Although the previous level of significance declined on the coefficient for the age of population variable, the coefficients on the remaining interactive terms maintained their level of significance.\(^{24}\)

Exactly how much of an effect does regime type have? Starting with the difference between the intercepts for the democratic and authoritarian cases, we find that democratic regimes increase spending by a

<table>
<thead>
<tr>
<th>Variables(^a)</th>
<th>Democratic Cases</th>
<th>Authoritarian Cases</th>
<th>Difference between Democratic and Authoritarian Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff. (s.e.) t-ratio</td>
<td>Coeff. (s.e.) t-ratio</td>
<td>Coeff. (s.e.) t-ratio</td>
</tr>
<tr>
<td>Annual growth in GDP/capita(_{t-1})</td>
<td>−8.0 (38.4) −0.2</td>
<td>95.0* (37.5) 2.5</td>
<td>−103.0* (53.5) −1.9</td>
</tr>
<tr>
<td>GDP/capita (logged)(_{t-1})</td>
<td>−9.2 (10.2) −0.9</td>
<td>23.7 (17.5) 1.4</td>
<td>−33.0* (19.1) −1.7</td>
</tr>
<tr>
<td>Debt service ratio(_{t-1})</td>
<td>6.8 (9.3) 0.7</td>
<td>−20.7 (15.5) −1.3</td>
<td>27.5 (18.2) 1.5</td>
</tr>
<tr>
<td>% of population over 55 years(_{t-1})</td>
<td>297.6* (50.5) 5.9</td>
<td>−74.6 (71.7) −1.0</td>
<td>372.2* (83.2) 4.5</td>
</tr>
<tr>
<td>Constant</td>
<td>5.2 (32.1) 0.2</td>
<td>−72.2 (57.0) −1.3</td>
<td>77.4 (61.6) 1.3</td>
</tr>
</tbody>
</table>

\( R^2 = .60, N = 17, T = 12 \)

Note: Numbers in parentheses are panel corrected standard errors. \(* p < .05, \) \( \) \( \) Dummy variables for six outlying cases were included in the regression but are not reported here for presentation purposes (see note 20).

\(^{21}\) Only one coefficient changes sign: the interactive term between democracy and the annual growth in GDP/capita. The change in sign

\(^{22}\) To construct the new dependent variable, we simply divided the social spending per capita measure by the unlogged form of the GDP per capita measure taken from the Penn World Tables.

\(^{23}\) As an additional test of stability, we ran fixed effects with the lagged model and found that every coefficient on the interactive terms retained its sign with the exception of GDP per capita. Only four of the sixteen country dummy variables registered a significant \( t \)-ratio. This makes sense because the dependent variable was differenced, which eliminates a substantial portion of the cross-national variation. Adding sixteen new variables diminished the significance of most of our coefficients, which came as no surprise, given such a small \( t \). Judging by the stability of the estimates when subjected to the sixteen additional variables, it appears that a nontrivial portion of our estimates is being generated by within-country variation. The intuition that democratization matters within countries holds.
margin of $77 per capita over their authoritarian counterparts when all other variables are zero. One
should be aware, however, that no cases approach that
condition: No countries have zero debt service ratios or
GDP per capita figures at zero. Nevertheless, the
substantial difference between the authoritarian and
democratic constant terms (the democracy dummy
coefficient) generates important effects under other
circumstances. To gain a better understanding of the
substantive difference in social spending between
democratic and authoritarian countries, it is instructive to
consider the predicted values for each regime type
under a variety of specific conditions.

The clearest difference between authoritarian re-
gimes and democracies appears at very low levels
of economic development. For countries with per-capita
income close to $1,000, democracies typically increase
spending by $24 per capita more than their authoritarian
counterparts. For countries so poor, a difference
of $24 per capita is a significant sum. To demonstrate
its magnitude, we calculated the mean values of annual
social spending for countries in the relevant income
range between 1980 and 1992. The following spent the
least per capita on social programs: Peru ($40), Guat-
emala ($42), Paraguay ($43), El Salvador ($61), and
Honduras ($70). For Honduras—the biggest spender of
the group—$24 represents roughly one-third of all
social spending. In a country so impoverished, this
amount could determine whether programs vital to
basic needs, such as vaccinations for common child-
hood diseases and prenatal health care, receive fund-
ing. The predicted difference between democratic and
authoritarian regimes, therefore, can be very impor-
tant.

The importance of regime type is conditional on
income levels. As we observed at the $1,000 per capita
level (Honduras, Nicaragua, El Salvador, Guatemala),
the poorest democracies increase spending by a sub-
stantial margin over authoritarian regimes, controlling
for the other independent variables in our model. Once
a GDP per capita income level of approximately $4,000
is attained, regime effects wash out. At the highest
income levels, the substantive difference between au-
thoritarian and democratic regimes is relatively small:
At a GDP per capita level of $6,300 (e.g., Mexico and
Venezuela), authoritarian governments increase spending by only $2 per person over democracies. This

FIGURE 1. Predicted Values for the Change in Social Spending (1987 Dollars per Capita) by Annual Growth in GDP per Capita

<table>
<thead>
<tr>
<th>Annual Growth in GDP/Capita (Reverse Scale)</th>
<th>Change in Social Spending (1987 Dollars per Capita)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.15</td>
<td>-15.0</td>
</tr>
<tr>
<td>-0.075</td>
<td>-10.0</td>
</tr>
<tr>
<td>0.00</td>
<td>-5.0</td>
</tr>
<tr>
<td>0.075</td>
<td>0.0</td>
</tr>
<tr>
<td>0.15</td>
<td>5.0</td>
</tr>
<tr>
<td>0.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

is relatively minor when compared to the $24 advan-
tage democracies hold at low income levels ($1,000 per
capita).

With respect to economic growth, authoritarian and
democratic responses are quite different. As growth
declines, relatively little change occurs for the democ-
ratric cases, but authoritarian regimes severely curtail
social spending. Figure 1 illustrates the relationship,
holding all other variables constant at their mean
values.

As Figure 1 indicates, the difference between regime
types grows considerably as economic performance
declines. For example, the calculated change in spend-
ing differs between democratic and authoritarian re-
gimes by $18 per capita when all variables are held
constant at their mean values and economic growth
contracts 10%, as occurred in some Latin American
countries during the 1980s. For poorer countries (in-
come of $2,000 per capita), a 10% decline in growth
results in a difference of $24 per capita. Clearly,
economic constraints factor heavily into the calcula-
tions authoritarian governments make when devising
their spending strategies.

What is the effect of constraints that are more
political in nature? Democratic regimes appear to be
more sensitive than authoritarian systems to demo-
graphically induced political pressures. As the popula-
tion above age 55 grows, democracies increase spend-
ing relative to their authoritarian counterparts. Figure
2 provides an illustration. Just two percentage points
above the mean (the mean value of the population
variable is 9.8%), democracies increase spending rela-

27 To generate Figure 1, we varied the values for economic growth and multiplied the remaining coefficients by the mean value of their corresponding variables.

28 To make this calculation, we multiplied the GDP/capita coefficient by the log of $2,000 and the economic growth coefficient by -.10. All other coefficients were multiplied by the mean value associated with their corresponding variable.
tive to their authoritarian counterparts by $12 per person. Once the older population reaches 16% or 20% (Argentina and Uruguay), the difference grows to $32 or $46 per capita, respectively. For countries that spend less than $200 per capita (9 of the 17 countries in the data set) on social programs, the difference between regime types represents a significant fraction of the budget.

To conclude, every coefficient in our model of social spending for Latin America supports the observation that authoritarian governments place greater weight on addressing the exigencies of the market, whereas democratic governments respond more to political pressures. Social spending is relatively more sensitive to changes in economic growth, the debt, and GDP per capita in authoritarian regimes; it is comparatively more responsive to demographic changes in the electorate in democratic contexts.

INTERPRETATION OF RESULTS

How do we account for the pronounced pattern that emerges from the statistical estimates? First, why do democracies respond more to political constraints and authoritarian regimes more to the exigencies of the market? Second, why does democracy matter at some levels of economic development but not others? We advance some plausible explanations here, but to ascertain with certainty why the pattern exists, further investigation is required.

The most straightforward and plausible reason democratically elected politicians tend to allocate greater resources (than do authoritarian leaders) to social programs when faced with rising debt burdens, slower growth, and budget deficits hinges on the notion of electoral competition. This analysis is inspired by the literature on rational choice, which focuses on individual actors and their rational interest calculations (Ames 1987; Geddes 1994). Politicians who deliver social benefits to their constituents hope to garner votes and ensure political survival. Providing a collective good by resolving the debt problem or establishing macroeconomic stability is not likely to have that effect. Benefits delivered to constituents while in office can build lucrative associations and loyalties upon which politicians can draw after their term ends. Also, even if a given politician does not continue in office, political cronies and party allies can often benefit electorally from the patronage and programs s/he delivered while in power. At the same time, no individual politician—except for possibly a president, whom the citizenry holds responsible for the welfare of the country as a whole—has an incentive to cut back on social spending and forgo building clientele in order to contribute to the broader cause of financial solvency. Authoritarian rulers, by contrast, need not be concerned with short-term popularity, reelection, and respect for civil liberties and human rights. They can thus cut back on social expenditures in response to rising debt burdens and related economic pressures.

The willingness of democratic politicians to accommodate demands for specific benefits is conditional, our results indicate, on the level of economic development. In poor countries, democratic leaders protect social spending—relative to authoritarian politicians—in the face of economic hardship. To explain why democracy's effect on social spending is greater in poorer countries, it is useful to distinguish between two forms of popular influence on politics: (1) that achieved through a variety of societal associations, such as unions, nongovernmental organizations, and special interest groups associated with producers and consumers and (2) that wielded through elections.

In developing countries with a relatively high level of GDP (e.g., Brazil and Argentina), civil society tends to be better organized. Higher levels of education and urbanization typically found in wealthier countries (Lipset 1981) render societal groups better able to press their claims on the state. Even in the context of authoritarianism (where elections are usually absent), organized interests can frequently influence policymaking. Authoritarian rulers find it difficult to repress these kinds of organizations altogether. An important part of their strategy to placate such groups may well include directing social benefits to their members. As Ames

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29 We were somewhat surprised that the significance of the debt ratio variable was rather inconsistent across all the models, since the period under examination witnessed such a significant debt crisis. We ran auxiliary regressions (using the lagged model), substituting a quadratic term for the debt service ratio as well as simply adding the quadratic term to the regression. Adding the quadratic term had no effect on the magnitude or significance of the debt service ratio or on the other coefficients of the model. Simply substituting the quadratic term did increase the significance of the interactive term between democracy and the debt service ratio.
(1987) shows, many authoritarian regimes use the budget as an instrument for increasing support.30

This practice is consistent with the most counterintuitive result generated by our estimates: As economic development reaches higher and higher levels, authoritarian regimes begin to overtake democracies in social spending.31 Perhaps because they lack the legitimacy conferred by elections, wealthy authoritarian governments use state resources as an important method of appeasing groups with the means and connections to challenge them. For example, the Brazilian military regime (1964–85) directed massive funds toward university education in an effort to tame student opposition. Instead of pursuing a purely repressive strategy, which would have been hazardous, particularly given the middle-class status of most university students, the regime tried to buy their political quiescence (Ames 1987; Brown 1995). In short, when they can afford it, authoritarian regimes use social spending as a crucial means of building political support. Conversely, democracy affords government leaders a certain degree of procedural legitimacy, which lowers the need to placate groups through high spending on social programs.

In sum, democracies protect social expenditures when other conditions, such as the state of the economy, threaten them. The effect of the debt, growth, and age variables suggests that a feature intrinsic to democratic systems—political competition—enhances social spending for all but the wealthiest democracies. The effect of the GDP per capita variable suggests that the broader socioeconomic context conditions the influence of democracy on social expenditures.

Before we proceed farther, some important rival explanations warrant attention. These focus on the unique period we studied, a time during which the number of democracies grew significantly (in our sample, from just over 40% in 1980 to roughly 84% in 1992). Because so many democratic cases are found in the latter half of the time series, it is possible the results are driven by democracy’s association with the different external environment that prevailed in the latter half of the period (the late 1980s and early 1990s).

The end of authoritarianism and rebirth of democracy are correlated with three important developments. The end of the Cold War allowed governments to shift spending away from the military and toward social programs. A modification in IMF policy permitted the inclusion of greater social spending in structural adjustment programs. Latin America moved toward recovery after the 1982 debt crisis. To the extent that these events coincided with democratization, our results may simply be the product of a spurious correlation.

An examination of spending on social programs over time indicates, however, that the main premise behind these alternative explanations—that spending increased during the latter half of the period—is false. The rival explanations make the tacit assumption that social spending grew over time, but when we fit a LOWESS smooth to the data between 1981 and 1992,32 the smooth showed that social spending remained stagnant over time.33 The growing number of democracies is associated with relatively little change in the mean level of spending. At first this seems to contradict our finding that regime type matters, but the relationship between democracy and increased spending does not emerge in simple bivariate views of the data; it is contingent on a number of economic and political factors. Democracies do not outspend their authoritarian counterparts in all situations. Democracies do, however, maintain minimum rates of spending in the face of severe economic hardship, whereas authoritarian regimes may not.

We are also aware that our estimates could be affected by the life-span of regimes. Perhaps fully discredited regimes (on their way out) behave differently from newly constituted governments. Old and new regimes may rely on different constellations of societal support that, in turn, affect social spending. To guard against the possibility that the age of regimes (and not regime type) drives the results, we added a variable to the model that records the regime’s age and interacted it with regime type.34 The new variable tests directly whether older regimes behave differently from younger ones. The coefficient was neither substantively nor statistically significant. Nor did it have any noticeable effect on the other coefficients or their significance. The informal test of the alternative theory’s premise along with the more formal test accounting for regime age indicate that our results are not being driven by the unique period of the data.

CONCLUSION

Does regime type affect social spending? Our investigation of 17 Latin American countries from 1980 to 1992 suggests that democratic regimes are associated

30 There may be another reason—related to the level of development and GDP per capita measure—that poor democracies engage in levels of social spending disproportionate to their wealth. Perhaps increases in GDP/capita transfer more readily into employment opportunities in wealthier industrialized countries (e.g., Argentina, Uruguay, Chile) compared to poor agrarian societies (e.g., Guatemala, Honduras), thereby lessening the need for programs that cost the government money.

31 The model implies that rich authoritarians outspend democracies, but we want to avoid overemphasizing the point, since the gap between the two regime types at high income levels is relatively small.

32 Put simply, the LOWESS smooth fits a weighted regression line for the values that lie in the neighborhood of each $x_i$. It then takes the residuals of that regression and assigns new weights to each point, depending on the size of the residual. The weighting procedure assigns smaller values to the points with the largest residuals. The residuals from that regression are collected once again, and the entire process is repeated until the weights converge. For a complete treatment of the LOWESS smooth see Cleveland 1979.

33 Although a bivariate analysis indicates there is no relationship between time and social spending, we still might find a positive relationship between spending and time once certain factors are controlled for. To assess this possibility, we regressed spending on time, the debt ratio, GDP/capita (logged), and economic growth. Once the linear effects of these variables were removed from social spending, there remained a negative correlation between time and the amount spent on social programs.

34 We used the measure of regime age (AGER) provided by Alvarez et al. 1996.
with higher rates of social expenditures when faced with important economic constraints. Democratic govern-
ment makes the most difference in impoverished countries. Democracies are also less likely than author-
itarian regimes to respond to high debt service ratios and poor economic performance by shrinking social
expenditures, which corroborates the claim advanced by Stallings and Kaufman (1989, 220) that “regime type
weighs more heavily in conditions of crisis.” Our results also corroborate Ames’s (1987) conclusion that height-
ened electoral competition enhances public spending in a variety of areas, including social programs.

The next step is to investigate how the increased social spending associated with democracy is distrib-
uted. Is it allocated to programs that reduce poverty and enhance equity? Does it go to programs that favor
the middle and upper classes or—perhaps as unfavorable for the poor—to regionally distributed patronage
and pork barreling? To answer these questions, broad categories such as educational spending need to be
disaggregated into primary and secondary versus university education; health expenditures need to be broken
down into basic preventative care versus costly curative programs. The implications for poverty reduc-
tion and an equitable distribution of income are sub-
stantial. Only by tracing more precisely the ultimate destination of social expenditures can we determine
whether and to what extent democratic systems empow-
er the poor and enhance equity. Meanwhile, our
findings allow for the possibility that democracy may
indeed improve social welfare.

At a time when many scholars advocate drawing
finer distinctions among regime types, the fact that a
rough, dichotomous distinction between democracies
and authoritarian regimes yields a significant difference
in social spending suggests it is premature to abandon
the idea that broad characteristics of political institu-
tions are fundamentally important. Also, in an era
when many scholars of Latin America are disillusioned
with the “exceptionality,” “delegative,” or “tutelary
nature of contemporary democracies in the region, our
results serve as a useful reminder that under certain
circumstances even highly imperfect democracies can
yield greater social provisions than their authoritarian counterparts.

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