

## **Determinants of Social Spending in Latin America**

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## Abstract

### Determinants of Social Spending in Latin America and the Caribbean

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We examine the determinants of social expenditure in an unbalanced pooled time series analysis for 22 Latin American and Caribbean countries for the period 1970 to 2000. The data are from a new data set assembled by the co-authors and collaborators. The social spending data are calculated from IMF sources and allow us to separate out education and health spending from social security and welfare spending. We extend the Coppedge coding of Latin American parties to a wider set of countries and years. We also code constitutions in order to develop an adapted Huber and Stephens (2001) constitutional structure veto points measure. Thus, for the first time, we present an analysis of social spending in Latin America and the Caribbean with a full complement of partisanship, state structure, economic, and demographic variables that have been employed in studies of advanced industrial countries. We find that seat share of right-wing parties in the legislature is a highly significant predictor of social security spending, whereas seat share of left-wing parties is a significant predictor of health and education spending. Veto points depress health and education but not social security spending.

## *The Question Posed*

At the beginning of the 21<sup>st</sup> century, most social scientists agree that investment in human capital is necessary for economic and social development. Such investment requires public expenditures on health, education, and a social safety net that provides resources to families to survive without relying on the labor of their children. Yet, we understand relatively little about the factors that shape the general level of social expenditures and their allocation to categories of social programs in developing countries. What we do know is that there is great variation across countries in the share of GDP allocated to social expenditures and in the way that these funds are allocated to different types of social expenditures. What we do not know is what causes this variation. Does the state of the economy dictate expenditures, or the needs of young and old populations, or the constellation of political forces and institutions? In what follows we will provide an analysis of the determinants of social spending for Latin American and Caribbean countries.

There is good theory and a solid empirical literature on the determinants of social expenditures, most commonly referred to as welfare state expenditures, in OECD countries, going back some three decades (Stephens 1979, Wilensky 1976). These studies have demonstrated that variables favored by all three theoretical approaches to welfare state development, power constellations (Huber and Stephens 2001) or power resources (Korpi 1983), state centric (Immergut 1992, Weir, Orloff and Skocpol 1988: 16-27), and logic of industrialism approaches (Wilensky 1975) have statistically significant effects (Hicks 1999, Huber, Ragin, and Stephens 1993, Swank 2002). Given that decisions about social expenditures are essentially political, it is not surprising that the presence of parties with different world views and social bases in government and the degree of concentration of political power are the powerful explanatory variables (Huber and Stephens 2001).<sup>1</sup>

We would expect that the same theoretical approaches would be useful in explaining patterns of social expenditures in Latin America and the Caribbean, but that the various causal factors would assume a somewhat different weight than in advanced industrial countries. Economic and political changes over the second half of the 20<sup>th</sup> century have been much more fundamental and frequent in Latin American and Caribbean countries. Therefore, we would expect the state of the economy to be of great importance for social expenditures. In contrast, we would not expect strength of political parties with different world views and social bases to have as powerful an effect on social expenditures as in the advanced industrial countries. It is long-term incumbency of parties that matters for the development of distinctive types of welfare states with different patterns of social expenditure. In most Latin American and Caribbean countries, political systems have not been democratic for long enough periods to allow for the establishment of strong parties with periods of incumbency allowing them to put their imprint on major social policy schemes. Nevertheless, there are some Latin American and Caribbean countries with long democratic experiences and strong parties, so we clearly do expect to see such an effect.

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<sup>1</sup> Depending on the operationalization, corporatism (Swank 2002) or social democratic corporatism (Hicks 1999) both of which are very highly correlated to party incumbency, may appear as the strongest statistical determinant of social spending. Comparative historical evidence argues for party government as the principal causal variable.

There are only a few studies of the determinants of social expenditures and their composition in Latin America (Avelino et al. 2002, Brown and Hunter 1999, 2004, Kaufman and Segura 2001, Wibbels 2003), and they all use a lagged dependent variable or first differences for the dependent variable. This essentially turns their analyses into analyses of changes in spending from one year to the next. What we are interested in are the determinants of long-term patterns of social expenditures which are indicated by levels of expenditure. Similarly, we are interested in the long-run effects of economic, social, and political variables. We would not expect one year of democracy or of dominance of one political tendency or another in the legislature to make a major difference in the formation of social policy. It takes time for democratic institutions to function properly and for political power distributions to leave an imprint on major policies. We have shown elsewhere that an extrapolation of short-term effects to the long term greatly underestimates the impact of political party dominance (Huber and Stephens 2001). What matters for the achievement of different levels of social expenditures is the cumulative record of democracy and strength of different political forces.

Only one of the studies of social expenditure in Latin America includes a measure of political power distributions, the political orientation of presidents (Kaufman and Segura 2001), and none of them include a measure of state structure. Here we are providing the first systematic analysis of the party political and state structure determinants of social spending, based on a coding of all political parties in 22 Latin American and Caribbean countries and a measure of their representation in the lower house of the legislature in the period of 1970-2000, and a coding of constitutional decentralization of political power.

### *Theory and Hypotheses*

One of the main theoretical perspectives on the formation of the welfare state in advanced industrial countries has been power resources theory (Stephens 1979, Korpi 1983, Esping-Andersen 1985), which emphasizes organizational strength of labor and the left. In our further development of this perspective into power constellation theory (Rueschemeyer, Stephens and Stephens 1992, Huber and Stephens 2001), we take into account the organizational capacity of other groups and state structure as well. In particular, we explain the development of the distinctive Three Worlds of Welfare Capitalism (Esping-Andersen 1990) with long-term incumbency of social democratic (left), Christian democratic (Christian center), or secular center and right parties, respectively (Huber and Stephens 2001). Both social democratic and Christian democratic parties favor generous social expenditures, but they differ in their preferences for redistribution. Social democratic parties are committed to reducing social inequality and construct welfare states that are heavily redistributive. Christian democratic parties are committed to keeping people out of poverty and the redistribution that is achieved through the welfare states is governed by the goal of poverty reduction not reduction of inequality (Bradley et al. 2003, Moller et al. 2003, van Kersbergen 1995). Secular center and right parties, in contrast, favor residual welfare states that take care of those who cannot insure themselves in the market. Even though the structure of these residual welfare states is redistributive also, the amount of redistribution effected is limited by the comparatively small size. The main concern of these parties is to keep taxes low to benefit higher income earners.

The most distinctive aspect of welfare states built under social democratic auspices is that they provide a variety of social services, from health to child care to elderly care and labor market training and retraining (Huber and Stephens 2000). These services facilitate high labor force participation among both men and women and thus help to strengthen the tax base and make the welfare state sustainable. Christian democratic welfare states provide fewer such services and rely heavily on transfer payments. This makes it more difficult for women to combine paid work with family responsibilities and thus leads to lower female labor force participation. Entitlement to transfers is based on employment and earnings in Christian democratic welfare states and on a combination of citizenship or residence and employment in social democratic welfare states, which leads to more redistribution in the latter. Entitlement to free or subsidized services is mostly based on citizenship or residence, enhancing the redistributive profile of the welfare state. Residual welfare states, also labeled liberal welfare states to denote the political tendencies promoting them, provide few services and only limited transfers, and entitlement is often means tested.

The expectations regarding preferences of left parties travel relatively well to Latin America and the Caribbean.<sup>2</sup> Generally, these parties favor social programs that are redistributive and benefit the large majority of underprivileged citizens. Christian center parties have not been as numerous as in Europe, but their policy preferences have been similar to those of European Christian democratic parties. They have professed a commitment to social justice and to combating poverty, within the general framework of a class conciliation project. Secular center and right parties have held somewhat different policy preferences from their counterparts in advanced industrial societies, shaped by differences in the social and economic context. On the one hand, they have favored low taxes also. On the other hand, before the 1990s there was hardly a private social insurance market, specifically for pensions, so even the middle and higher income earning constituencies of these parties looked to the state for social protection. Accordingly, secular center and right parties tended to support some kinds of social security spending.

Just like in advanced industrial societies, different kinds of social programs in Latin America and the Caribbean have different distributive implications and thus can be expected to have different determinants as well. The bulk of social spending goes to social security (mostly pensions, but also a few other kinds of transfers such as family allowances and maternity benefits) and to health and education. Other social services are few and far between, and transfers in the form of social assistance are generally very low as well.<sup>3</sup> Thus, we will concentrate on analyzing two categories of social expenditures: social security and welfare, and health and education.

Typically, social security schemes are employment based and were first established for privileged groups and later extended to other groups (Malloy 1979, Mesa-Lago 1978, Huber 1996). In the great majority of countries social security coverage remained confined to formal sector employees, which means that often 20% to 60% of the economically

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<sup>2</sup> Party names are very poor predictors of party policy preferences in Latin America and the Caribbean. The labels of social democratic or labor party have been adopted by parties whose policy preferences are more centrist or even to the right of center. Our coding is explained below.

<sup>3</sup> Social assistance is grouped with social security and welfare spending in our data, but it accounts for a very small percentage of the total in this category only. [check]

active population remained excluded. Moreover, different categories of employees have had different schemes with different contributions and benefits, and often the state has subsidized particularly privileged categories. De Ferranti et al. (2004: 268-72), in a study for the World Bank, found that in most countries the regressive components of social security spending outweigh progressive components. In contrast, spending on public health and public education tends to be more progressive. There are regressive components of these expenditures, specifically where health care is privately provided but publicly paid for and where a large share of education spending goes to higher education, but in general the progressive components tend to outweigh the regressive ones (de Ferranti et al. 2004: 263-4). In related work, our research team has confirmed that the case evidence presented by the World Bank study can be generalized. We found that health and education spending has a depressing effect on inequality, whereas social security spending is associated with higher inequality (Huber et al. 2004).

Our hypotheses, then, are that we should find a positive effect of left party strength on health and education spending and none or a negative one on social security and welfare spending. Christian democratic parties, to the extent that they were strong enough to have an effect at all, should have a positive effect both on health and education and on social security spending. Secular center and right parties should have a positive or neutral effect on social security spending and a negative effect on health and education spending.

The prerequisite for political parties to leave their imprint on social policy patterns, of course, is the existence of democracy over a considerable period of time. It takes time for parties to gain coherence and establish roots in social bases, as well as for legislatures to pass major pieces of legislation and for that legislation to be implemented. In particular, it takes time for parties representing the interests of less privileged groups to consolidate. These groups and parties need to have the freedom to organize and establish linkages in order to gain representation in competition with parties representing privileged groups and thus enjoying a financial advantage. In studies of advanced industrial democracies, democracy does not figure as a variable because there are no non-democratic cases outside of Southern Europe in the post-WW II period. In Latin America and the Caribbean, in contrast, there is great variation in the length of time for which a country has been democratic. Thus, we expect the countries with the longer democratic traditions to have more developed social policy programs.

Again, we might expect a difference between our two categories of expenditures. As just noted, democracy is crucial to allow for the emergence of parties representing the interests of underprivileged groups. Thus, we would expect democracy to be important for expenditures with a redistributive character, i.e. health and education. Since social security spending tends to benefit more privileged groups disproportionately and these groups are advantaged in gaining political influence, we would not expect length of democratic experience to have a strong impact on social security spending. Indeed, the historical record tells us that social security schemes for privileged groups were sometimes instituted by authoritarian regimes (Malloy 1979). Given that our theoretical expectation is that the effect of democracy is to enable the emergence and consolidation of political parties representing the interests of the underprivileged, we might expect the direct effect of democracy on health and education spending to disappear once we introduce a measure of party strength.

State centric theories have emphasized the importance of the nature of state institutions in shaping the formation of welfare states. More centralized authority facilitates the passing of more comprehensive legislation, both in building and reforming social policy schemes. Studies of various kinds of government expenditures in Latin America have shown the importance of federalism for expenditure patterns (Gibson, Calvo, and Falleti 2004, Weyland 1996). In quantitative studies of social spending in advanced industrial countries, measures of veto points in the political process have had a consistently negative effect on expenditures (Huber, Ragin and Stephens 1993, Hicks 1999, Swank 2002). We expect the same basic relationship to hold in Latin American and Caribbean countries for broad-based expenditures, that is, health and education. However, we cannot expect this effect to be as strong and consistent as for advanced industrial countries. The effect is negative because veto points enable opposition groups to block or modify legislation expanding social expenditure. However, the effect could turn positive when retrenchment is on the agenda because veto points enable opponents of cuts to mobilize against these cuts. In Latin America, retrenchment was on the agenda for a large part of the time period analyzed here, so the positive and negative effects could counterbalance each other. On the other hand, IMF programs imposed on Latin American and Caribbean countries in this period were often extremely stringent and executives often bypassed the normal political process in implementing cuts, so that veto points became less relevant. So, we should expect the negative effect on expansion to remain visible.

Again, our expectations regarding social security spending are complex. If one just applies the hypotheses based on findings for advanced industrial countries, one would expect constitutional veto points to depress spending. However, constitutional veto points are only important for democratic political processes. Therefore, if we are contemplating the possibility that democracy has no impact on social security spending, we should also contemplate the possibility that veto points have no effect. There are additional reasons why one might not expect a negative effect of veto points on social security spending. If social security programs for privileged groups were established under authoritarian regimes and then mature under democratic regimes, they will drive up expenditures without supplementary legislation that could be blocked or modified at veto points. On the contrary, if democratic regimes try to curtail expenditures on programs for privileged groups, these groups may be able to take advantage of veto points to block retrenchment. Still, using the same argument as for health and education spending, we can say that veto points potentially available to groups resisting cuts were often circumvented by executives with IMF backing. Thus, we will stick with the original hypothesis about the negative effect of veto points on social security spending.

What is loosely called the logic of industrialism perspective on welfare state development has emphasized structural factors, needs and resources, to explain patterns of social expenditures (Wilensky 1975). Industrialization brings greater affluence to a society and thus more resources for governments to allocate to a variety of social programs. Industrialization also promotes urbanization and the growth of the proportion of elderly people due to advances in life expectancy, which in turn require the construction of social safety nets and drive up social expenditures, particularly for pensions. Whereas it is problematic to assume that needs will necessarily be met and available resources spent accordingly, once we control for the political factors that account for the decisions to meet them, these needs should increase spending and a stronger resource base should facilitate spending increases. Thus, we would expect a positive effect of GDP per capita, urbanization, and the proportion of the elderly population on social

security spending in Latin American and Caribbean countries, as well as a positive effect of GDP per capita, urbanization, and size of the school age population on health and education spending. In a situation of scarcity of resources and trade-offs between different kinds of expenditures, we would expect size of the elderly population to have a negative effect on health and education spending and size of the school age population to have a negative effect on social security and welfare spending.

In the past two decades, the impact of globalization on public expenditure patterns has commanded increasing attention. Scholars studying welfare states in advanced industrial societies have come to a general agreement that the transition to the service economy and demographic changes have had a stronger constraining effect on welfare states than increases in trade (e.g. see the essays in Pierson 2001). Deregulation of capital markets has deprived governments of tools for macroeconomic management and thus made employment stimulation more difficult, but not forced significant cuts in social expenditures (Huber and Stephens 1998, Scharpf and Schmidt 2000). In developing countries, the impact of globalization has been more dramatic. Opening of heavily protected economies has taken place rapidly and brought significant economic dislocations. The debt crisis of the 1980s and the central role played by the International Monetary Fund (IMF) in dealing with this crisis have exposed these countries to very strong external pressures for austerity. Opening of capital markets along with opening to trade has made these countries vulnerable to volatility induced by rapid inflows and outflows of capital. Foreign direct investment has assumed great importance in the eyes of policy makers and thus has been able to demand concessions.

We would expect foreign direct investment, fiscal deficits, and the presence of IMF programs to have the following effects on social spending. Foreign investors want low taxes, particularly low payroll taxes, traditionally the most important source of funding for social security schemes. On the other hand, if we assume a longer time horizon, they might be interested in a better educated and healthier labor force and thus actually favor higher expenditures on health and education, financed out of revenue generated from other than corporate taxes. Thus, we would expect a negative effect of FDI on social security spending and a neutral or weak positive one on health and education spending. Fiscal deficits sooner or later call for austerity policies and we would expect them to have negative effects on both kinds of social expenditures. The IMF is the key enforcer of austerity through the conditionality associated with stand-by loans. Thus, we would expect presence of an IMF agreement to be associated with lower levels of both kinds of social expenditures also.

Trade openness has received considerable attention in the literature and has been approached with contradictory hypotheses. A well established view of the effect of trade openness in advanced industrial countries is that the economic vulnerabilities created by trade openness, specifically the risk of job losses, generated demands for social protection and thus an expansion of the welfare state (Cameron 1978, Katzenstein 1985). Welfare state programs designed to protect workers from the negative effects of job losses would be unemployment insurance, labor market services, and public health care rather than health insurance tied to employment. Rodrick (1997) has made a similar argument for developing countries. However, in Latin America and the Caribbean, unemployment insurance is minimal or non-existent, as are labor market services. Given that social security and welfare expenditures go mostly to pensions, we would not expect to see a positive effect of economic openness. Demands for

public health care from workers threatened by job losses in contrast might be reinforced by the awareness of political elites that human capital is essential to be able to compete in open world markets and thus have a positive effect on health and education spending. The opposite hypothesis would hold that economic openness causes volatility and periodic balance of payments crises that then call for austerity and a lowering of social expenditures, which would result in a negative relationship. However, this negative effect would be indirect and thus should be captured by measures of deficits and IMF programs. Given the contradictory nature of these expectations and previous findings, we adopt a non-directional hypothesis for the effect of trade openness on both types of spending.

If one considers trajectories of macroeconomic and fiscal management in Latin America and the Caribbean over the past three decades of the 20<sup>th</sup> century, it is clear that they went through three clearly distinct phases. The 1970s were a period of expansion of budgets based on easy borrowing on international markets. The 1980s, starting in 1982, were the period of the debt crisis, economic contraction, budgetary austerity, and reverse capital flows from Latin America to the creditor countries. In the early 1990s the budgetary constraints eased as capital began to flow back to Latin America and economic growth resumed. Starting in the mid-1990s a number of financial crises had regional ripple effects and slowed growth again. These trends affected all the countries in the region, though with somewhat different timing and to different degrees. Therefore, if we take the 1970s as a baseline, we would expect a negative period effect for 1982-1990 on levels of social spending. The expectations for the 1990s are more ambiguous; the 1990s were clearly an expansionary phase, but there was a lot of ground to make up and it is not clear whether most countries surpassed the levels of social expenditures of the 1970s.

### *Measures of the Dependent and Independent Variables*

Our measures of social spending as a percentage of GDP are derived from two IMF volumes. Social spending is reported in the Government Finance Statistics Yearbook (GFS), where the IMF disaggregates central government spending into combined spending on social security and welfare and into combined spending on health and education.<sup>4</sup> GDP is reported in the International Financial Statistics Yearbook. Both spending and GDP are reported in current local currency units.

The social spending figures we use include only outlays by the central government. Several authors fault this specification because it excludes state and local spending (Rodriguez 2004, Kaufman and Segura 2001). Several countries administer social programs at sub-national levels, with trends towards decentralization beginning as early as the 1980's. When available, GFS reports these sub-national spending figures only if the sub-national unit "has the power to raise a substantial portion of its revenue from sources it controls and its officers are independent of external administrative control in the actual operation of the unit's activities" (IMF, 1986, p 14). In our sample, GFS reports state and local spending only for Argentina and Bolivia. The extent of state and local spending across our sample, however, is most likely

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<sup>4</sup> Kaufman and Segura (2001) use the same measure and source as one of their specifications of social spending. Health spending includes those health expenditures which are provided as parts of social security and educational programs, such as health care provided as part of old age social security schemes.

understated because, according to the GFS manual, such spending figures may simply be unavailable in some countries. On the other hand, and in defense of our approach, the overwhelming majority of the country-years in our data set administer their social programs only at the national level; consequently, the overwhelming majority of our spending figures include all government spending. Furthermore, we are substantively interested in the effect of national political dynamics on national level spending. If we were to include state level spending, we would be making a specification error because such spending is *not* subject to national political dynamics, but to independent political dynamics playing out at the state level.

Our political variables are derived from Coppedge (1997). In his project, he consulted country experts to classify political parties which contested elections for the lower house or constituent assemblies in 11 countries of Latin America from as far back as 1912. His classification scheme contains two primary dimensions and several residual categories. First, it includes a left-right dimension, defined primarily in social and economic terms. He is concerned with a political party's ideology and class appeals and with its relative prioritization of growth and redistribution. This dimension is divided into five categories: left, center-left, center, center-right, and right. Second, it includes a religious dimension of two categories, Christian and secular. It distinguishes those parties which do and do not base their ideology or programs in the Catholic Church, the Bible, or religious philosophy or seek to defend the interests of the Catholic Church and to reduce the separation of church and state. Finally, his classification scheme contains three residual categories: personalist, other, and unknown. For our purposes, it is sufficient to say that these residual categories all contain parties that are not classifiable according to left-right or Christian-secular criteria.

In two respects, we rather directly adopted his work. First, we adopted his classification scheme.<sup>5</sup> Second, in all but one case, we adopted his classification of parties for the country-years that fall within our sample. We make one revision: Coppedge classified the Peronists of Argentina as "other," while we classify them as secular center-left during the democratic episodes between 1945 to 1973; as secular center during the democratic years from 1974 to 1989; and as secular center-right from 1990 onward.

We use his classification scheme to expand the coverage to the full range of countries and years that fall within our analysis.<sup>6</sup> After classifying each party, we summed the proportion of the seats held by each category for each country-year.<sup>7</sup> This results in 13 annual series (secular left, secular center-left, secular center, secular center-right, secular right, Christian left, Christian center-left, Christian center, Christian center-right, Christian right, Personalist, Other, Unknown) for each country. Each series indicates the seat share in the lower house or constituent assembly held by secular left parties, secular center-left parties, etc. During years which are non-democratic, as defined by our democracy variable, all categories are scored as zero. For each category, we cumulated the seat share from 1945 to the year of observation. Finally, to construct each of our political independent variables, we tallied various party

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<sup>5</sup> See Coppedge (1997) for detailed category descriptions.

<sup>6</sup> Unlike Coppedge (1997), we did not use expert surveys. Instead, two members of our team independently consulted numerous primary and reference materials in order to code each political party. Then, on parties for which there was a disagreement, the entire research team convened to make a final decision.

<sup>7</sup> Our procedure of tallying seat shares differs from Coppedge (1997), who tallied vote shares. We make this choice on the grounds that seat shares are more consequential for policy than vote shares.

categories, as described in Table 1. For example, the variable “Leftist Lower House” is the cumulative total since 1945 of the proportion of seats held by secular left, secular center-left, Christian left, and Christian center-left parties in the lower house or constituent assembly.

For the variable measuring the political orientation of the executive, we used the classification of the party of the president to score a given category as 1 if the president’s party is of that category and to score it as 0 otherwise. Again, the variables “Leftist Executive,” “Rightist Executive,” and “Centrist Executive” are tallies of the various categories defined in Table 1 and cumulative since 1945.

Our measure of democracy is based upon a trichotomy, where democracy is coded as 1, semi-democracy as .5, and authoritarianism as 0. Mainwaring, Brinks, and Pérez-Liñán (2001) score 19 countries of Latin America for the period of 1945-1999. We extend the coverage to include the remaining countries of our sample and the year 2000. Our independent variable cumulates the annual series since 1945. We measure veto points created by the constitutional structure with an additive index of federalism (none=0, weak=1, strong=2), presidentialism (absent=0, present=1), and bicameralism (absent=0, weak=1, strong=2). Thus, a high score indicates high dispersion of political power and the presence of multiple veto points in the political process.

Four variables comprise our measures of globalization. Trade openness is measured as exports and imports as a percentage of gross domestic product. Foreign direct investment measures net inflows of investment as a percentage of gross domestic product. We measure a central government’s deficit by subtracting total expenditures from total revenues, as a percentage of gross domestic product. Finally, we use a dichotomy to measure whether or not a country has repurchase obligations to the IMF in a given year. To derive our independent variable, we then cumulate the dichotomy from 1970.

For the logic of industrialization thesis, we employ three variables. First, we use real gross domestic product per capita, adjusted for purchasing power parities. Second, we test the effect of the percentage of the population which is 65 and older for the model predicting social security and welfare spending and of the percentage of the population which is under 15 years of age for the model predicting spending on health and education. Finally, we include an urbanization variable, which measures the percentage of the population which live in areas defined as urban.

### *Analytic Techniques*

We use an unbalanced panel data set with 407 observations from 22 Latin American and Caribbean countries: Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela. The social spending data was available for varying time periods for the countries. There are a minimum of nine and a maximum of 31 observations per country. The data span the period 1970 to 2000. With few exceptions, the observations are annual. A central problem in estimating regression models from panel data is that the assumption of independence of errors

across observations is unlikely to be satisfied. As a result OLS produces incorrect standard errors for the regression coefficients (Greene 1993).

There are several strategies to deal with correlated errors in panel data. One approach assumes serially correlated errors within each unit (country) obeying a unit specific autoregressive process (which may optionally be constrained to be the same across units). This approach requires what Stimson (1985) calls temporally dominated time-series of cross-sections, i.e., data structures consisting of relatively few units observed over many equally spaced time points (Beck and Katz 1995:635-4; Beck 2001). Since the average number of time points (18) is smaller than the number of units (22), our data set precludes this approach.

Another approach is to estimate a random effect model (REM) in which the error term contains a unit-specific component that differs across units but is constant over time for a given unit. Such an error structure would arise if unmeasured unit-specific causes, such as systematic measurement differences or other overlooked aspects of the social and cultural makeup of a country, affect the dependent variable in the same way at each point in time over the period of the data. The stable unit specific component implies that observations for the same unit at different time points are all correlated by the same amount,  $\rho$ . The REM strategy is feasible with our data; one attractive feature of REM is that it allows estimating the value of  $\rho$ . However, REM requires relatively strong assumptions, such as equal correlations among errors within units.

Because it is not substantively essential in this study to measure  $\rho$ , we adopt an alternative estimation strategy that addresses the correlation problem while requiring a minimum of assumptions on the behavior of the errors. We combine OLS estimation of the regression coefficients, which provides consistent estimates of the regression coefficients, with the use of a *robust-cluster* estimator of the standard errors. The standard (i.e., non-cluster) Huber-White or "sandwich" robust estimator of the variance matrix of parameter estimates was discovered independently by P. Huber (1967), White (1980) and others (see Long and Ervin 2000 for a detailed description). It provides correct standard errors in the presence of any pattern of heteroskedasticity (i.e., unequal variances of the error terms) but not in the presence of correlated errors (i.e., nonzero off-diagonal elements in the covariance matrix of the errors). The robust-cluster variance estimator is a variant of the Huber-White robust estimator that remains valid (i.e., provides correct coverage) in the presence of *any* pattern of correlations among errors *within* units, including serial correlation and correlation due to unit-specific components (Rogers 1993; see also Sribney 1998; StataCorp 1999: 256-260). Thus the robust-cluster standard errors are unaffected by the presence of unmeasured stable country-specific factors causing correlation among errors of observations for the same country, or for that matter any other form of within-unit error correlation.<sup>8</sup>

The robust-cluster estimator of the standard errors is only impervious to correlations of errors *within* clusters. It requires errors to be uncorrelated *between* clusters. The

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<sup>8</sup> Long and Ervin (2000) find that the alternative robust estimator HC3 proposed by MacKinnon and White (1985) performs better than the standard Huber-White robust estimator in small samples in the presence of heteroskedasticity. However HC3 is not defined for clustered data and not impervious to correlated errors within clusters. Thus HC3 is not suitable for our data.

latter assumption might be violated if unmeasured factors affect the dependent variable in all units at the same point in time. Global economic fluctuations, such as the debt crisis period in Latin America discussed above, could produce such contemporaneous effects. To evaluate the potential impact of such unmeasured period specific factors we re-estimated the models with indicator variables for the debt crisis (1982-90) and for the 1990s (1991-2000); the baseline category corresponds to 1970-82.

The proportion of the population over 64 and the proportion of the population under 15 proved to be very highly negatively correlated ( $r=-.84$ ). When they were entered together with the other independent variables, the independent variables were multi-collinear. Thus, we enter only one of the two demographic groups in the equations, opting for the aged in the case of social security and welfare spending and the young in the case of health and education spending since these groups would appear to be the most relevant recipients of the two types of spending. Substituting the other demographic variable in the equations did not appreciably affect the coefficients of the other independent variables.

### *Results*

The results of our analysis, using our left-center-right classification of parties, are shown for social security and welfare spending in Table 3 and for health and education spending in Table 4. The equation in column 1 shows the results for the control variables only, column 2 for parties only, and column 3 for all variables. The equation in column 4 adds the period dummies. Not surprisingly, given that most social security and welfare spending in Latin America and the Caribbean is pension spending, the size of the elderly population is highly significant in all equations in Table 3 and also substantively important: A one percent increase in the aged population results in a 1.06% of GDP increase in social security and welfare spending. Also as expected, budget deficits are indeed strong barriers to social security and welfare spending.

None of our other economic and demographic variables are significant, nor is state structure. Contrary to our expectations, foreign direct investment has no significant downward effect on social security and welfare spending, though the coefficient is correctly signed. Trade openness has no significant effect either, working neither as a stimulus for expansion of a social safety net nor as a constraint on spending. Openness is not highly correlated with budget deficits (-.25), so there is little indication of an indirect constraining effect either. Surprisingly, presence of IMF agreements does not have a significant depressing effect on expenditures. This may indicate that expenditures on benefits to which recipients feel entitled are difficult to cut, even under stringent austerity programs. However, the dummy variable for the debt crisis period, 1982-89, has a significant negative effect, indicating that the international economic shock did lead to cuts in social security spending.

Given the dynamics of social security spending, the lack of a significant effect of state structure was expected. Length of democratic rule is not significant for social security spending either, even when parties are not in the equation, indicating the restricted and privileged nature of many social security schemes. The party effects confirm this picture; social security

spending is clearly a right-wing project, as the strength of right-wing parties in parliament is a significant predictor. Strength of center parties significantly reduces social security spending, and strength of the left is not significant but also has a negative coefficient.

In the case of health and education spending, the period dummies are not significant, so we focus on equation 3 in Table 4 as our best estimate.<sup>9</sup> As a comparison of Tables 3 and 4 demonstrates, the determinants of health and education spending are very different from those of social security and welfare spending. Size of the youth population has a significant positive effect on health and education spending indicating a need effect parallel to the effect of the aged population on social security spending. Trade openness has a significant positive effect, indicating greater emphasis on the development of human capital in more open economies. GDP per capita has a significant positive effect also. As in the case of social security spending, deficits are significant barriers to spending on health and education.

Among the political variables, both the presence of veto points and the strength of the democratic record in column 1, before parties are introduced, are significant. As expected, the presence of veto points depresses levels of health and education spending and long periods of democratic rule push them up, supporting the view that democracy makes it possible for advocates of spending that benefits the less privileged to organize and acquire political influence. Once parties are introduced into the equation in column 3, democracy loses significance, but strength of left parties is significant. In the equation with the parties only, left party strength is the only significant variable. These results suggest that expansion of health and education spending is a political project carried by the left.

In Table 5 we present the alternative political codings. In columns 1 and 2 the political variables are cumulative years of executives of a given political orientation, coded according to the same criteria as the parties. None of the coefficients for party families are significant, a finding which at first sight is surprising for scholars studying Latin America. Much has been written about overpowering executives and weak legislatures in the past two decades, so one would have to expect a stronger effect of presidents than parties. On the other hand, the literature on first and second generation reforms has recognized the importance of broad-based policy making for reforms of the health, education, and pension systems, so one would expect a stronger role of legislatures in those areas than, for instance, in macroeconomic management. One could also extend this argument to the construction phase of major social policy projects.

In columns 3 and 4 parties of the center, center right, and right are combined but then divided according to their religious orientation, Christian versus secular, a similar coding to Huber and Stephens' (2001) coding of parties in advanced industrial societies. For social security and welfare spending, the party groupings are not significant with this coding. This suggests that a religious coloring does not unite center and right parties for or against social security schemes; if we distinguish center from right-wing parties regardless of religious orientation, we find that strength of the former depresses social security spending levels and strength of the latter pushes them upward (Table 3). For health and education spending, we get a

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<sup>9</sup> With the addition of the period dummies, there is a high degree of intercorrelation among the independent variables, which, though not reaching conventional levels of multicollinearity, results in coefficient instability and some strange results, such as the significant and positive coefficient for the IMF.

positive effect of Christian center, center right, and right parties in addition to the positive effect of left parties.<sup>10</sup>

### *Conclusions*

Our findings have demonstrated that the broad theoretical perspectives that dominate the study of advanced welfare states are also useful for the analysis of social expenditure patterns in Latin America and the Caribbean. Of course, the critique leveled at the early welfare state studies that were based on analyses of expenditures is also valid for Latin America and the Caribbean. High social expenditures per se do not make for an effective welfare state. We need to know what the funds are being spent on. As a first step in this direction, we have analyzed spending on social security and welfare and on health and education separately, guided by the fact that in other work we have found these two categories of spending to have opposite effects on income inequality (Huber et al. 2004). Future steps will have to involve a more complete mapping of transfers and social services and the development of welfare state typologies, following the pioneering proposals made by Filgueira and Filgueira (2002).

We have been able to demonstrate for the first time that politics matter and how politics matter for the long-term development of social expenditure patterns in Latin American and Caribbean countries. Social security spending has been a project of the political right, and strength of the democratic record has not had any significant influence on its development. This squares with our knowledge that most of social security spending is regressive and that higher levels of social security spending are associated with higher levels of inequality. Privileged groups were better able to extract benefits from authoritarian as well as democratic governments, or at least to protect the benefits under established schemes.

In contrast, length of democratic rule has been important for spending on health and education. It has been important because it has allowed forces promoting the interests of the less privileged to organize, form or join parties, and work through them to influence policies. This interpretation is supported by the fact that strength of the democratic record loses significance once parties are introduced and left parties emerge as significant determinants. Given that the democratic process was important for the development of adequate investment in health and education, it is also plausible that the presence of veto points in that process served as a barrier to expansion of such programs, in contrast to its non-significance for social security spending.

Among the economic variables, deficits were crucial obstacles to expansion of both kinds of expenditures. High deficits depressed levels both of social security and of health and education spending. This suggests that governments who were not willing or able to generate adequate levels of revenue were prevented from expanding social programs in the longer run. Trade openness had no impact on social security spending but a positive impact on health and education spending. The most plausible interpretation is that governments in more open economies have realized that their countries require a stronger human capital base in order to be competitive in international markets. One might also suggest reverse causality, that is,

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<sup>10</sup> A variant of this coding with Christian left parties coded as Christian rather than left yielded very similar results.

governments who had invested in a stronger human capital base found it easier to open their economies and compete in world markets.

The other globalization variables, foreign direct investment and the presence of IMF programs were not significant for either category of expenditures. We interpret this as evidence that the constraints on social expenditures resulting from economic globalization are less severe than commonly assumed. This squares fully with the tenor of the literature on welfare state retrenchment in advanced industrial societies; there is still room for political choice and generous welfare states can be maintained as long as they are labor mobilizing and not subsidizing inactivity. Welfare states in Latin America and the Caribbean have a long way to go to develop such labor mobilizing welfare states, but strong investment in health and education is a first step.

Demographics are important for the welfare state in Latin America and the Caribbean just as they are in advanced industrial societies. The share of the population in different age groups shapes the proportion of GDP spent on social security in both kinds of societies. For any given social security program, a greater number of elderly people mean more claimants and thus higher expenditures. A large young population also pushes up spending on health and education in Latin American and Caribbean countries. In advanced industrial societies, in contrast, a large elderly population drives up health expenditures, as typically the most expensive health care is received in the last years of life. The technical capacity and the cost of medicine for prolonging life are not as advanced in Latin America and the Caribbean.

While we found significant effects of political variables they were not as strong as those found in advanced industrial democracies. We can further explore the magnitude of difference by comparing the inner and outer bounds of the variation explained by parties in the two groups of countries. The outer bound, which attributes all overlaps in variation explained to the party effect, is measured by the variation explained by parties when they are entered alone in the regression equation. Column 2 of Tables 3 and 4 shows that this figure is 32% in the case of social security and welfare spending in Latin America and the Caribbean and 25% in the cases of health and education spending. In our re-analysis of Huber and Stephens' (2001) data for eight indicators of welfare effort in advanced industrial democracies, we find that two variables, social democratic and Christian democratic government, explained between 39% and 65% of the variation in the indicators. The inner bound is measured by the additional variation parties explain once they are added to an equation with all other independent variables (compare the equations in columns 1 and 3 in Tables 3 and 4). The inner bound for parties' effect on health and education is 1% and for social security and welfare, 9%. For eight indicators of welfare effort in advanced industrial democracies, the inner bound of variation explained ranged from 1% to 14%.

Kaufman and Segura (2001) did find a presidential effect on social spending in Latin America, but with a different coding from ours. They used a dichotomy only, popularly based or non-popularly based, and found that popularly based presidents had a positive effect on social security spending and a negative effect on health and education spending. They explain this with the argument that popularly based presidents had unions as a major social base and that social security spending benefits union members. With our coding following a more conventional left – center – right distinction, we do not find any effects of political orientation of the president. We attribute this to the fact that major social policy schemes are complicated legislative projects and do not lend themselves to rule by decree. Scholars studying Latin

American politics have emphasized the power of presidents, and presidents of course do have the power to set the agenda. However, major new policies or policy reform projects do need the consent of the legislature (Madrid 2003).

Finally, for advanced industrial democracies, Huber, Ragin, and Stephens (1993) found that a party classification which placed all Christian democratic parties of the center and right together and all secular center and right parties together explained more variation in social spending than the traditional left-center-right classification which ignored religion. We did not find that in this study of Latin America and the Caribbean. Though such a classification performed as well for health and education spending (column 3, Table 4 and column 4, Table 5), it explained less variation in social security and welfare spending (column 4, Table 3 and column 3, Table 5). This suggests that Christian parties in Latin America and the Caribbean have not developed as distinctive an identity and program and as important a presence as European Christian democracy.

## References

- Avelino, George, David S. Brown, and Wendy Hunter. 2002. "Democracy, Social Spending, and the Two Logics of Globalization in Latin America, 1980-1999." Paper presented at the American Political Science Association Annual Meeting, August 28-September 1. Boston, MA.
- Beck, Nathaniel and Jonathan N. Katz. 1995. "What to do (and Not to Do) with Time-Series-Cross-Section Data in Comparative Politics." *American Political Science Review* 89 (3):634-647.
- Bradley, David, Evelyne Huber, Stephanie Moller, François Nielsen, and John Stephens. 2003. "Distribution and Redistribution in Post-industrial Democracies." *World Politics*. Vol. 55, No. 2 (January) 193-228.
- Brown, David, and Wendy Hunter. 1999. "Democracy and Social Spending in Latin America, 1980-92." *American Political Science Review* 93: 779-90.
- Cameron, David. 1978. "The Expansion of the Public Economy", *American Political Science Review* 72: 1243-1261.
- Coppedge, Michael. 1997. "A Classification of Latin American Political Parties." Working Paper Series #244. The Helen Kellogg Institute for International Studies, University of Notre Dame.C
- De Ferranti, David, Guillermo E. Perry, Francisco H.G. Ferreira, and Michael Walton. 2004. *Inequality in Latin America: Breaking with History?* Washington, D.C.: The World Bank.
- Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
1985. *Politics Against Markets*. Princeton: Princeton University Press.
- Filgueira, Carlos H. and Fernando Filgueira. 2002. "Models of Welfare and Models of Capitalism: The Limits of Transferability." In Evelyne Huber (ed.) *Models of Capitalism: Lessons for Latin America*. University Park, PA: Pennsylvania State University Press. 127-58.
- Gibson, Edward L., Ernesto F. Calvo, and Tulia G. Falleti. 2004. "Reallocative Federalism: Legislative Overrepresentation and Public Spending in the Western Hemisphere." In Edward L. Gibson (ed.) *Federalism and Democracy in Latin America*. 173-96.
- Greene, William H. 1993. *Econometric Analysis*. (2<sup>nd</sup> edition.) Englewood Cliffs, NJ: Prentice Hall.
- Heston, Alan, Robert Summers, and Bettina Aten. Penn World Table Version 6.1, Center for International Comparisons at the University of Pennsylvania.

- Hicks, Alexander. 1999. *Social Democracy and Welfare Capitalism: A Century of Income Security Policies*. Ithaca, NY: Cornell University Press.
- Huber, Evelyne. 1996. "Options for Social Policy in Latin America: Neoliberal versus Social Democratic Models." In Gøsta Esping-Andersen (ed.) *Welfare States in Transition: National Adaptations in Global Economies*. London: Sage Publications.
- Huber, Evelyne, Charles Ragin, John D. Stephens, David Brady, and Jason Beckfield, *Comparative Welfare States Data Set*, Northwestern University, University of North Carolina, Duke University and Indiana University, 2004. (<http://lissy.ceps.lu/compwsp.htm>).
- Huber, Evelyne, Charles Ragin, John D. Stephens. 1993. "Social Democracy, Christian Democracy, Constitutional Structure and the Welfare State." *American Journal of Sociology* 99: 711-49.
- Huber, Evelyne, and John D. Stephens. 2001 *Development and Crisis of the Welfare State: Parties and Policies in Global Markets*. Chicago: University of Chicago Press.
2000. "Partisan Governance, Women's Employment and the Social Democratic Service State." *American Sociological Review* 65: 323-42.
1998. "Internationalization and the Social Democratic Model." *Comparative Political Studies*. Vol. 31, No. 3, June 1998, pp. 353-97.
- Huber, Evelyne, Francois Nielsen, Jenny Pribble, and John Stephens. 2004. "Social Spending and Inequality in Latin America and the Caribbean." Paper delivered at the Meetings of the Society for the Advancement of Socio-Economics, Washington, D.C., July 8-11.
- Huber, Peter J. 1967. "The Behavior of Maximum Likelihood Estimation Under Nonstandard Conditions." In L. M. LeCam and J. Neyman, eds., *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability 1*, Berkeley, CA: University of California Press.
- Immergut, Ellen. 1992. *The Political Construction of Interests: National Health Insurance Politics in Switzerland, France and Sweden, 1930-1970*. New York: Cambridge University Press.
- International Monetary Fund. Various Years. *Government Finance Statistics Yearbook*. Washington: IMF.
- International Monetary Fund. Various Years. *International Financial Statistics Yearbook*. Washington: IMF.
- International Monetary Fund. 1986. "A Manual on Government Finance Statistics." Washington: IMF.
- Katzenstein, Peter. 1985. *Small States in World Markets: Industrial Policy in Europe*. Ithaca: Cornell University Press.

- Kaufman, Robert R. and Alex Segura-Ubiergo. 2001. "Globalization, Domestic Politics, and Social Spending in Latin America." *World Politics*, 53, 4 (July): 553-88.
- Korpi, Walter. 1983. *The Democratic Class Struggle*. London: Routledge and Kegan Paul.
- Long, J. Scott and Laurie H. Ervin. 2000. "Using Heteroscedasticity Consistent Standard Errors in the Linear Regression Model." *The American Statistician* 54.
- Madrid, Raúl L. 2003. *Retiring the State*. Stanford, CA: Stanford University Press.
- Mainwaring, Scott, Daniel Brinks, and Aníbal Pérez-Liñán. 2001. "Classifying Political Regimes in Latin America, 1945–1999." *Studies in Comparative International Development*, Spring 2001, 36:1.
- MacKinnon, James G. and Halbert White. 1985. "Some Heteroskedasticity Consistent Covariance Matrix Estimators with Improved Finite Sample Properties." *Journal of Econometrics* 29:53-57.
- Malloy, James M. 1979. *The Politics of Social Security in Brazil*. Pittsburgh: University of Pittsburgh Press.
- Mesa-Lago, Carmelo. 1978. *Social Security in Latin America: Pressure Groups, Stratification, and Inequality*. Pittsburgh: University of Pittsburgh Press.
- Moller, Stephanie, David Bradley, Evelyne Huber, Francois Nielsen, and John D. Stephens. 2003. "Determinants of Relative Poverty in Advanced Capitalist Democracies." *American Sociological Review*. Vol. 68, No. 1 (February) 22-51.
- Pierson, Paul (ed.). 2001. *The New Politics of the Welfare State*. Oxford University Press.
- Rodrik, Dani. 1997. *Has Globalization Gone Too Far?* Washington, DC: Institute for International Economics.
- Rogers, R. William H. 1993. "sg17: Regression Standard Errors in Clustered Samples." In *Stata Technical Bulletin* 13. Reprinted in *Stata Technical Bulletin Reprints* 3.
- Rueschemeyer, Dietrich, Evelyne Huber Stephens and John Stephens. 1992. *Capitalist Development and Democracy*. Chicago: University of Chicago Press.
- Scharpf, Fritz W. and Vivien A. Schmidt, (eds.) 2000. *Welfare and Work in the Open Economy. Two Volumes*. Oxford: Oxford University Press.
- Sribney, William. "Comparison of Standard Errors for Robust, Cluster, and Standard Estimators" (1998), at Stata FAQ Statistics, Stata Corporation at [www.stata.com/support/faqs/stat/cluster.html](http://www.stata.com/support/faqs/stat/cluster.html)); StataCorp, *Stata Statistical Software: Release 6.0* (College Station, TX: Stata Corporation, 1999), User's Guide 256-260.
- Stephens, John. D. 1979. *The Transition from Capitalism to Socialism*. London: Macmillan.

- Stimson, James A. 1985. Regression in Time and Space: A Statistical Essay." *American Journal of Political Science* 29: 914-47.
- Swank, Duane. 2002. *Global Capital, Political Institutions, and Policy Change in Developed Welfare States*. New York: Cambridge University Press.
- Van Kersbergen, Kees. 1995. *Social Capitalism: A Study of Christian Democracy and the Welfare State*. London and New York: Routledge.
- Weir, Margaret, Ann Shola Orloff, and Theda Skocpol (eds.). 1988. *The Politics of Social Policy in the United States*. Princeton: Princeton University Press.
- Weyland, Kurt. 1996. *Democracy without Equity: Failures of Reform in Brazil*. Pittsburgh, PA: University of Pittsburgh Press.
- White, Halbert. 1980. "A Heteroskedastic-Consistent Covariance Matrix Estimator and a Direct Test of Heteroskedasticity," in *Econometrica* 48.
- Wibbels, Erik. nd. "Global Imperatives and Domestic Priorities: Internationalization, Business Cycles, and Social Public Spending in Latin America." University of Washington, Department of Political Science.
- Wilensky, Harold. 1975. *The Welfare State and Equality*. Berkeley: University of California Press.
1976. *The 'New Corporatism,' Centralization and the Welfare State*. London and Beverly Hills: Sage.
- World Bank. *World Development Indicators* 2003.

**Table 1**  
**Variable Descriptions and Proposed Effects**

<b>Variable</b> (Variable Shorthand)	<b>Description</b>	<i>Proposed Effect on</i> <i>Social Security Health &amp; Welfare Education</i>	
<i>Dependent Variables</i>			
SS & W as share of GDP (SS & W)	Central government spending on social security and welfare, as % of GDP. <sup>a</sup>		
H & E as share of GDP (H & E)	Central government spending on health and education, as % of GDP. <sup>a</sup>		
<i>Independent Variables</i>			
<i>Globalization Controls</i>			
Trade Openness (Trade Open)	Exports and imports, as % of GDP. <sup>b</sup>	+/-	+/-
Foreign Direct Investment (FDI)	Foreign direct investment, as % of GDP. <sup>c</sup>	-	+ or none
Deficit (Deficit)	Government revenue minus government expenditure, as % of GDP. <sup>c</sup>	-	-
IMF (IMF)	Scored 1 for each year a country has repurchase obligations with the IMF and 0 for each year it does not, cumulative since 1970. <sup>c</sup>	-	-
<i>State Structure Control</i>			
Constitutional Veto Points (Veto)	Veto points created by constitutional provisions. <sup>d</sup>	-	-
<i>Logic of Industrialization Controls</i>			
GDP per capita (GDP pc)	Gross domestic product per capita in 1000's of constant 1996 dollars and adjusted for PPPs. <sup>b</sup>	+	+
Old (Old)	% of population age 65 and older. <sup>c</sup>	+	-
Young (Young)	% of population age 14 and younger. <sup>c</sup>	-	+
Urban Population (Urban)	% of population living in areas defined as urban. <sup>c</sup>	+	+
<i>Political Control</i>			
Democracy (Democracy)	Scored as 0 for non-democracy, .5 for semi-democracy, and 1 for democracy, cumulative since 1945. <sup>e</sup>	+ or none	+

Period Dummies			
1982-1990 (82-90)	Scored as 1 for years 1982-1990 and as 0 otherwise.	-	-
1991-2000 (91-00)	Scored as 1 for years 1991-2000 and as 0 otherwise	+/-	+/-
<i>Political Variables</i>			
Leftist Lower House (Left LH)	Proportion of seats held by left and center-left parties, both secular and Christian, in the lower (or only) house of congress, cumulative from 1945. <sup>f</sup>	- or none	+
Rightist Lower House (Right LH)	Proportion of seats held by right and center-right parties, both secular and Christian, in the lower (or only) house of congress, cumulative from 1945. <sup>f</sup>	+ or none	-
Centrist Lower House (Center LH)	Proportion of seats held by center parties, both secular and Christian, in the lower (or only) house of congress, cumulative from 1945. <sup>f</sup>	+ or none	-
Leftist Executive (Left Exec.)	Scored 1 if president (or prime minister) is from a left or center-left party, both secular and Christian, and zero otherwise, cumulative from 1945. <sup>f</sup>	- or none	+
Rightist Executive (Right Exec.)	Scored 1 if president (or prime minister) is from a right or center-right party, both secular and Christian, and zero otherwise, cumulative from 1945. <sup>f</sup>	+ or none	-
Centrist Executive (Center Exec.)	Scored 1 if president (or prime minister) is from a centrist party, both secular and Christian, and zero otherwise, cumulative from 1945. <sup>f</sup>	+ or none	-
Non-Leftist Christian Lower House (Christian LH)	Proportion of seats held by Christian center, Christian center-right, and Christian right parties in the lower (or only) house of congress, cumulative from 1945. <sup>f</sup>	+	+
Non-Leftist Secular Lower House (Secular LH)	Proportion of seats held by secular center, secular center-right, and secular right parties in the lower (or only) house of congress, cumulative from 1945. <sup>f</sup>	+ or none	-

Sources: <sup>a</sup> IMF's Government Finance Statistics Yearbook (various years) and IMF's International Financial Statistics CD and Yearbook (various years); <sup>b</sup> Penn World Table Version 6.1; <sup>c</sup> World Development Indicators 2003; <sup>d</sup> expanded by the authors from Huber, Ragin, and Stephens (1997); <sup>e</sup> from Mainwaring et al. (2001) and expanded according to criteria of Rueschemeyer, Huber Stephens, and Stephens (1992); <sup>f</sup> adapted and expanded by the authors from Coppedge (1997), including the recode of Argentina's Peronists, as described in the text.

**Table 2**  
**Social Spending as a Percentage of GDP**

	<u>Social Security and Welfare</u>			<u>Health and Education</u>		
	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>
Argentina	5.6	3.6	8.5	1.6	.8	2.8
Barbados	5.0	2.6	8.0	10.1	8.8	13.1
Belize	1.3	.4	1.7	6.7	5.2	7.3
Bolivia	3.7	1.6	6.1	4.8	2.7	7.2
Brazil	7.7	5.9	12.7	2.8	2.0	5.0
Chile	8.7	6.2	14.3	5.9	4.5	9.4
Colombia	1.8	.8	3.0	4.1	2.8	5.6
Costa Rica	3.7	1.8	5.7	9.5	5.9	13.3
Dominican Republic	.9	.4	1.3	3.5	2.2	4.9
Ecuador	.2	.1	.3	4.6	3.7	6.1
El Salvador	.3	.1	.7	3.1	2.6	4.3
Guatemala	.6	.4	1.2	2.4	1.2	3.0
Guyana	2.2	1.3	3.0	9.4	6.9	11.9
Jamaica	.7	.4	1.2	7.5	2.5	9.8
Mexico	3.0	2.1	3.9	3.6	2.6	4.7
Nicaragua	3.0	1.4	6.0	5.9	3.0	9.7
Panama	4.5	2.8	5.4	9.0	8.0	10.4
Paraguay	2.2	1.1	3.7	1.9	1.2	3.8
Peru	.0	0	.1	4.4	3.5	5.4
Trinidad	2.6	1.5	4.6	5.9	5.3	6.2
Uruguay	13.9	8.2	19.7	3.3	2.4	4.4
Venezuela	1.6	1.0	3.0	6.1	4.7	7.2
All countries	4.1	0	19.7	5.1	.8	13.3

**Table 3**  
**Determinants of Social Security and Welfare Spending**

<i>Variables</i>	<i>Controls</i> (1)	<i>Parties</i> (2)	<i>Combined</i> (3)	<i>With Period</i> <i>Dummies</i> (4)
GDP pc	-0.25 (0.20)	-	-0.07 (0.23)	-0.03 (0.20)
Trade Open	-0.007 (0.009)	-	-0.007 (0.009)	-0.007 (0.009)
Democracy	0.04 (0.03)	-	-0.02 (0.05)	-0.03 (0.04)
FDI	-0.06 (0.09)	-	-0.07 (0.07)	-0.09 (0.09)
Urban	0.08* (0.04)	-	0.07 (0.05)	0.06 (0.04)
Old	0.97** (0.21)	-	1.09** (0.10)	1.06** (0.01)
IMF	0.001 (0.065)	-	-0.02 (0.05)	0.04 (0.05)
Deficit	-0.08** (0.02)	-	-0.08** (0.02)	-0.08** (0.02)
Veto	0.11 (0.48)	-	0.07 (0.33)	0.12 (0.33)
Left LH	-	0.09 (0.10)	-0.07 (0.08)	-0.06 (0.08)
Right LH	-	0.27* (0.15)	0.29** (0.10)	0.33** (0.08)
Center LH	-	0.11 (0.14)	-0.20 <sup>^</sup> (0.08)	-0.18 <sup>^</sup> (0.08)
debt crisis	-	-	-	-0.91* (0.40)
nineties	-	-	-	-1.43 (1.27)
Constant	-4.86* (1.95)	1.62 (0.64)	-5.74** (2.02)	-5.32 (1.79)
R-Square	0.64	0.28	0.73	.74
F-Test	F(9, 21) = 4.88**	F(3, 21) = 1.60	F(12, 21) = 32.36**	F(14, 21) = 51.18**
N	405	405	405	405

Robust Standard Errors in parenthesis; \* P < 0.05, \*\* P < 0.01; <sup>+</sup> one-tailed test except nineties and trade openness, <sup>^</sup> significant but sign of coefficient opposite of directional hypothesis

**Table 4**  
**Determinants of Health and Education Spending**

<i>Variables</i>	<i>Controls</i> (1)	<i>Parties</i> (2)	<i>Combined</i> (3)	<i>With Period</i> <i>Dummies</i> (4)
GDP p c	0.27* (0.15)	-	0.32* (0.17)	0.38* (0.17)
Trade Open	0.024** (0.007)	-	0.021** (0.007)	0.023** (0.007)
Democracy	0.09** (0.03)	-	0.03 (0.04)	0.01 (0.04)
FDI	-0.02 (0.07)	-	-0.07 (0.08)	-0.04 (0.07)
Urban	-0.03 (0.03)	-	-0.05 (0.04)	-0.06 (0.03)
Young	0.10* (0.05)	-	0.14** (0.04)	0.17** (0.04)
IMF	0.07 (0.05)	-	0.07 (0.05)	0.12 (0.06)
Deficit	-0.09** (0.03)	-	-0.10** (0.03)	-0.09** (0.03)
Veto	-0.77** (0.26)	-	-0.66* (0.28)	-0.64* (0.28)
Left LH	-	0.18** (0.06)	0.09* (0.04)	0.10* (0.04)
Right LH	-	-0.02 (0.10)	0.12 (0.10)	0.17 (0.10)
Center LH	-	-0.11 (0.08)	0.02 (0.04)	0.06 (0.04)
debt crisis	-	-	-	0.07 (0.34)
nineties	-	-	-	-1.33 (0.85)
Constant	-0.66 (3.58)	4.28** (0.66)	-1.54 (3.14)	-3.01 (2.85)
R-Square	0.65	0.28	0.67	.68
F-Test	F(9, 21) = 26.97**	F(3, 21) = 3.86*	F(12, 21) = 24.73**	F(14, 21) = 24.34
N	407	407	407	407

Robust Standard Errors in parenthesis; \* P < 0.05, \*\* P < 0.01; + one-tailed test except nineties and trade openness

**Table 5**  
**Determinants of Social Spending, Alternative Measures of Party Effects**

<i>Variables</i>	<i>SS &amp; W Executives (1)</i>	<i>H &amp; E Executives (2)</i>	<i>SS &amp; W Christian Parties (3)</i>	<i>H &amp; E Christian Parties (4)</i>
GDP pc	-0.21 (0.21)	0.25* (0.14)	-0.26 (0.20)	0.33* (0.14)*
Trade Open	-0.006 (0.008)	0.025** (0.006)	-0.005 (0.007)	0.017 (0.007)
Democracy	-0.03 (0.06)	0.05 (0.04)	0.04 (0.06)	0.04 (0.04)
FDI	-0.08 (0.10)	-0.04 (0.07)	-0.05 (0.09)	-0.08 (0.07)
Urban	0.07 (0.05)	-0.02 (0.03)	0.09** (0.03)	-0.06 (0.03)
Old	1.01** (0.21)	-	0.92** (0.20)	-
Young	-	0.06 (0.05)	-	0.11* (0.04)
IMF	0.05 (0.08)	0.04 (0.04)	0.02 (0.08)	0.09 (0.05)
Deficit	-0.08** (0.03)	-0.11** (0.03)	-0.07** (0.03)	-0.11** (0.03)
Veto	0.33 (0.49)	-0.65** (0.23)	0.14 (0.43)	-0.58* (0.32)
Left Exec.	0.05 (0.06)	0.03 (0.05)	-	-
Right Exec.	0.15 (0.11)	0.10 (0.07)	-	-
Center Exec.	0.05 (0.13)	-0.05 (0.06)	-	-
Left LH	-	-	-0.00 (0.10)	0.10* (0.04)
Christian LH	-	-	-0.06 (0.17)	0.16** (0.05)
Secular LH	-	-	0.01 (0.11)	0.01 (0.43)
debtcrisis	-1.14* (0.54)	-	-0.73 (0.48)	-
nineties	-1.77 (1.23)	-	-0.89 (1.32)	-
Constant	-5.16* (2.43)	0.08 (3.31)	-5.23* (2.00)	0.49 (3.55)
R-Square	0.66	0.68	0.65	.68
F-Test	F(14, 21) = 13.77**	F(12, 21) = 26.85**	F(14, 21) = 5.33**	F(12, 21) = 43.84**
N	405	407	405	407

Robust Standard Errors in parenthesis; \* P < 0.05, \*\* P < 0.01; one-tailed test except nineties and trade openness