Social Spending and Elections:
An Examination of Latin American Third Wave Democracies, 1980-2008

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Abstract

During the period in which Latin America underwent the most lasting and widespread wave of democratization, we test whether governments targeted increases in social spending to coincide with presidential elections in a panel of eighteen Latin American democracies from 1980 to 2008. Results confirm that governments increase health and social security expenditures during elections and that democracies that were most apt to channel increases in social spending to coincide with elections were those in the transition stage of democratization.

Keywords: Political budget cycles; Elections; Social spending; Latin America.

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1. Introduction

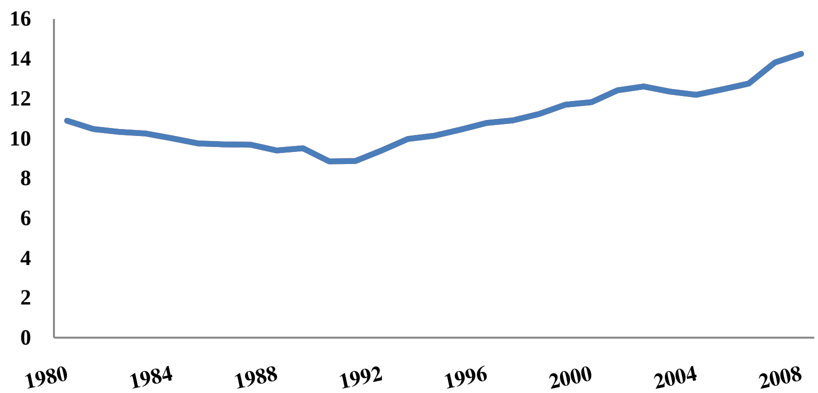
The empirical research on political business cycles has produced a strong body of research to show that electoral cycles are particularly marked in the case of fiscal policy (Drazen, 2000; Franzese, 2002). In the cross country literature on the subject, this pattern has been posited to be due to the propensity of politicians to employ government fiscal policies to influence electoral outcomes in developing countries, and "new democracies" in particular (Block, 2002; Brender & Drazen, 2005).

An important insight of the political budget cycle (PBC) theoretical framework is that incumbents reallocate the composition of government expenditures to favor projects with high immediate visibility during elections (Rogoff 1990). Empirical research seeking to test this theory has focused on examining if there are variations in the composition of government expenditures during elections. Given their magnitude both in terms of the number of citizens involved and the absolute and relative volume of payments relative to real disposable personal and national income, the electoral-economic cycle affects of transfer payments, such as social security and social assistance, are particularly well-suited for testing PBC theory.

In this paper we test if there are surges in social spending during Latin American presidential elections in the so-called "third wave" of democracy (Huntington, 1991). The experiences of recently re-established Latin American democracies in a period marked by episodes of heightened macroeconomic volatility followed by the adoption of painful stabilization measures provides fertile ground for testing political budget cycle (PBC) theories and recently formulated arguments on the acuteness of these patterns for young fragile democratic regimes in developing countries. Between the late 1970s and 1990s, the majority of countries in Latin America experienced a founding election marked by the participation of formerly banned political parties and the retreat of the military (Hagopian & Mainwaring, 2005). Indeed, transitions to democracy occurred in Argentina, Bolivia, Brazil, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Peru and Uruguay between 1978 and 1990. Democracy returned in Panama and Paraguay in the mid 1990s and Mexico in 2000.

While there has been a marked rise in welfare expenditures over the last three decades in Latin America, there have also been periods of significant contractions in the level of resources directed at education, health, social assistance and pensions. During the 1980s, the average share of social spending declined from 10.9 percent to 9.5 percent of GDP. Since then, there has been a significant increase in the allocation of government resources for welfare expenditures. Between 1998 and 2008, governments in the regions devoted an average 12.5 percent of GDP to social protection. But, the increase in resources has been unevenly distributed within and across countries. While there has been a less than one percent of GDP increase in health and education spending across the nearly three decades, the average share of resources devoted to old age and pensions rose from 3.5 percent of GDP to nearly 6 percent.

Figure 1. Average Social Spending as a Share of GDP in Latin America, 1980-2008



Based on an examination of presidential elections between 1980 and 2008, this paper seeks to answer three main questions. Are presidential elections in Latin America catalysts for increases in social spending? Does social spending rise uniformly across programs in the year of an election, or do governments give greater priority to certain types of expenditures that benefit specific voters? Are presidential elections held during democratic transitions more likely to provoke larger changes in budget allocations for social programs and if so, for what types of programs? In order to answer these questions, we undertake an in-depth, cross-national examination of whether there are important changes in government expenditures on education, health and pensions during elections with careful attention to this pattern in strictly competitive presidential elections. Given the widespread transition towards democracy in the region during the period of our study, we seek to examine whether there are significant differences in how recent democracies allocate resources.

The paper is structured in five additional sections following this introduction. Section 2 reviews existing political budget cycle theory and empirical evidence that suggests that welfare spending may be prone to surges during elections. We also review findings that have argued that elections in the early stages of democratization may cause countries to be particularly vulnerable to fiscal policy manipulation. Section 3 describes the time-series-cross-sectional data set employed for hypothesis testing. Section 4 introduces the model specifications that will be used for hypothesis testing in this paper and the battery of alternative models that were used to check our findings for robustness. Section 5 presents and discusses the results of the empirical analysis. The final section concludes the paper with a summary of the key findings.

2. Review of the Literature

There is a robust literature on political budget cycles that has focused attention on if electoral cycles are stronger and more persistent for outlays on social expenditures and in particular social security transfers. Empirical work on transfer cycles has largely been developed based on the study of democracies in developed countries and this research documents that there are marked rises in social spending prior to both national and local elections (Alesina, 1988; Hicks & Swank, 1992; Keech & Pak, 1989; Kneebone & McKenzie, 2001; Mebane Jr., 1994; Schultz, 1995; Tufte, 1978).

Tufte's (1978) research has become one of the seminal studies on electoral cycles and is illustrative of the arguments commonly found in subsequent research on political welfare cycles. Focusing on national elections in the United States between 1960 and 1976, Tufte describes the dramatic increase in transfers preceding presidential elections, which totaled $200 billion per year by 1976. He reports that social security benefits, which comprise half of total transfers and include payments for old age, survivors, disability and health insurance, were more likely to increase in the year preceding presidential elections and that these increases were also timed to begin in the early months of the year in advance of U.S. national elections in November. The increases in payroll taxes paid by the working population, however, only took effect at the beginning of the calendar year. These earlier findings have also been confirmed by Alesina (1988), who found that transfers, measured as total personal payments to U.S. citizens less personal contributions to social insurance as a share of GNP, followed a political budget cycle in a study of U.S. elections between 1961 and 1985.

Scholars have pointed out that that the electoral payoff from investing in education, health and social security may not produce the same rewards for politicians at the ballot box as these programs benefit different constituencies whose interests are often competing. Cox and McCubbins (1986) develop a model to show electoral as a redistributive game in which each candidate promises redistributions of welfare among the various groups in their constituencies. Building on this theoretical framework, Mebane (1994) argues that in pay-as-you-go social insurance schemes payers want to lower benefits (to pay lower taxes), while recipients want taxes raised to increase social security payments. He posits that it is furthermore important to distinguish between means-tested beneficiaries (e.g. lower-income groups who are less educated, poorer and less apt to vote), non-means tested recipients (e.g. retirees who are very apt to vote) and taxpayers. In a study of monthly transfer payments and contributions in the United States from 1948-1987, he finds that the expenditures on means-tested programs (e.g. unemployment, social assistance, etc.) and payroll taxes were slightly reduced in the year of U.S. midterm and presidential elections.

Empirical research to examine if there are electoral cycles for redistributive social spending in developing countries has been limited.[1] In a cross-national study of developed and developing democracies, Persson and Tabellini (2005) do not find that there are statistically significant increases in social spending prior to or after presidential elections between 1960 and 1998. These authors argue that spending on social programs, like social insurance and pensions, are examples of broad redistributive programs that benefit large groups of the population only in developed countries. As a result, they argue that the absence of political cycles in social spending in a sample including developing democracies is due to the fact that many of the programs of the modern welfare state in developed countries are not easily tailored to well-

[1] A much larger set of research on political budget cycles in developing countries has focused on infrastructure and public work investments. For an overview of this research, see Vergne (2009). Country-specific studies have generally confirmed stronger patterns for electoral cycles on infrastructure in developing countries. González (2002) confirms a election cycle in infrastructure investments in Mexican federal elections. For state legislative assembly elections in India over the period 1960-1994, Khemani (2004) finds that there is a positive and large effect on road construction by state public works departments prior to voting periods. Drazen and Eslava (2010) confirm higher levels and budget shares of government spending directed at including infrastructure investments (both urban road and rail networks and water and energy power plants) in the year prior to elections in Colombian municipalities from 1987 to 2000.

defined groups of citizens in developing countries and generally aid smaller segments of the urban population.

The weakness of the cross-country evidence for politically- motivated welfare spending stands in stark contrast to the growing literature that has been devoted to examining political budget cycles in recently democratized developing countries. In this literature, one of the most often cited arguments made as to why we should expect to find greater political budget cycle effects in developing democracies focuses on the level of development of their political institutions (Brender & Drazen, 2005; González, 2002; Keefer, 2005; Keefer & Khemani, 2005; Persson & Tabellini, 2003). These studies argue that the dynamics of political competition are distinct in recent democracies due to both the experience level of voters and the level of maturity of political institutions. The lack of experience and limited information available to voters results their being more easily influenced in the first few elections. In addition, it has been argued that political institutions such as the legislature, the judiciary, central banking authorities, and the media may not be autonomous or institutionalized in the early stages of democracy (Schuknecht, 2000).

In the related literature on democratization, Przeworski (1991) contends that pressures to bring about greater representation are driven in great part by Keynesian coalitions that demand greater redistribution. During democratic transitions, he argues, these pressures are more acute as incoming elected governments come to power facing a huge backlog of unfulfilled demands, which often weakens their ability to effectively manage the economy. Based on the recognized confluence of economic and political crisis that usually precipitate democratic transitions, scholars have argued that the high stakes involved threatening a reversion to autocracy propel newly elected governments to continue to adopt policies that are unsustainable in the medium to long-run (Haggard & Kaufman, 1989).

Brender and Drazen (2005) provide an important contribution to the impact of recent democratization on PBCs by robustly testing for them in a cross-section of developed and developing countries from 1960-2001.[2] These authors argue that the pattern of political budget cycle in a large cross-section of countries is driven by "new democracies" and that fiscal manipulation no longer is statistically significant for established democracies once the sample is appropriately separated. Using the first four competitive elections to represent the "new democratic" period, Brender and Drazen (2005) find that there is a significant political deficit cycle for new democracies and argue that higher election-year expenditures in the "first few elections" are the lever triggering this effect. The authors argue that their findings resonate with earlier studies that have found that voters in developed economies are ''fiscal conservatives'' and often tend to remove deficit-producing incumbents from office (Alesina, Perotti, Tavares, Obstfeld, & Eichengreen, 1998; Peltzman, 1992). In contrast, they argue that voters in new democracies are "less experienced" with electoral economics and with the net result being higher

[2] It should be noted that this is not the only criterion that has been utilized to test for differences between "new" and "established" democracy periods based on a specific time period. Rodrik and Wacziarg (2005) define "New Democracy" as a variable that "takes on a value of 1 in the year(s) and subsequent five years of any major democratization (as defined by Polity IV), unless the process is interrupted by another major regime change, in which case the dummy is coded as 1 until the interruption"; "Established Democracy" is an indicator variable coded one for the sixth and subsequent years of a democracy (51).

spending and deficits in the first few elections after transition.

Building on these studies that have argued that the pattern of political budget cycles in a large cross-section of countries is driven by the experience of ‘‘new democracies,” Barberia and Avelino (2011) seek to verify if these patterns are robust in a panel of eighteen Latin American democracies from 1973 to 2008. The authors show that fiscal deficits worsen in the year of election in Latin American democracies, but that this pattern is not contingent on a country being in the early phase of its democratic transition. Rather, political budget cycles appear to be linked to reductions in the efforts of governments to collect taxes. As a possible hypothesis to explain these findings, the authors posit that this pattern may be explained by governments who are eager to appease those interests that are most threatening to their destabilization, namely the upper classes and military elites.

To date, the empirical research that has been undertaken on examining whether there are political cycles associated with welfare expenditures in Latin America has focused on country-specific studies. Together, these studies suggest that elections coincide with surges in social spending. González (2002) examines the impact of elections on government transfers during presidential and midterm elections in Mexico under PRI party dominance. In a study of 14 federal elections (both presidential and midterm Congressional elections), she finds that the growth rate of the share of Mexican central government expenditures on current transfers, which include subsidies to consumption, aid for cultural and social development, social security payments, and other nonfinancial transfers, did not increase in the previous six pre-election quarters, but did increase in the quarter of the election itself. Claiming to capture increased levels of “democratization” during elections as measured by lower scores on the Index of Political Coercion and the Autocracy Index, she argues that greater levels of “democracy” exacerbate political budget cycles as the PRI responded to the growing threat of losing power by spending more and more resources in election campaigns to ensure its victory. With the development of Mexico’s political institutions leading to improvements in transparency and accountability, she predicts that spending will increase with democratization.

In a cross-municipality study of expenditures in Colombia, one of Latin America’s oldest and most stable democracies, Drazen and Eslava (2010) find that municipalities increased spending on housing and health (in levels and as a share of the total budget) in election years, but did not find that similar patterns occurred for education. The magnitudes of these electoral cycle effects, moreover, are not insignificant. Indeed, these authors report that health investments increased at rates higher than public infrastructure investments prior to municipal elections. Their general argument is that politicians will privilege spending on issues that can be targeted to voters.

Based on a micro-level analysis of the Peruvian Social Fund (FONCODES) created during Alberto Fujimori’s first term in office, Schady (2000) finds that the distribution of expenditures for community projects between 1991 and 1995 increased significantly before elections to provinces where returns were expected to be large in elections for the constituent assembly (1992) and a referendum (1993) and for turncoat provinces in Fujimori’s reelection bid (1995). Based on these results, he speculates that election cycles may be greater in small-scale, targeted poverty alleviation programs as governments may have reduced abilities to employ

large-scale subsidy or universalist social programs to influence returns at the ballot box.

The inferences that can be drawn from studies on political welfare cycles in Latin America, however, are limited. There has been no region-specific cross-national study and the three country studies that have examined social spending during elections focus on three countries with varying experiences in democratization. The studies of Mexico and Peru are particularly problematic as they are plagued with the same problems that have been cited for studies of political budget cycles for the region (Barberia & Avelino, 2011). Namely, these studies are based on analysis of non-competitive elections from 1957 to 1997. Of the fourteen Mexican presidential "elections" analyzed by González, the PRI was victorious with candidates earning virtually uncontested victories. Indeed, José López Portillo earned 100 percent of the vote in the 1976 election. The three Peruvian "elections" analyzed by Schady (2000) occurred following Fujimori's shutting down of Congress in April 1992.

This study is directed at remedying the lacuna that exists on whether elections provoke increases in social spending in Latin American "third wave" presidential democracies. Using theoretically driven criteria for democratic transitions and only the sample of strictly competitive presidential elections, we test if there are differences in the propensity of governments to increase welfare expenditures during elections. We test for cycles in welfare spending at aggregate and disaggregated levels, as well as whether resource allocations differ depending if a country is in an early stage of democratization.

3. Data

Social Expenditure Data

We use annual data on social spending compiled by researchers at the United Nations Economic Commission for Latin America and the Caribbean (ECLAC/CEPAL) for 18 Latin American countries between 1980 and 2008.[3] The data is the most comprehensive and detailed data that exists on government expenditure on education, health and nutrition, social security, employment, social welfare, housing, water and sewerage system for the region. The data set is a valuable resource for research on Latin American welfare state as CEPAL has worked with governments across the region to ensure that data would be comparable across countries (Avelino, Brown, & Hunter, 2005).

We use two measures of aggregate social spending. The first measure is social spending relative to GDP (SSGDP). The second measure is social spending relative to the level of resources spent on other categories of the total government budget (SSTPS). Whereas the first measure is meant to reflect the relative importance of welfare expenditures relative to the national economy, the second measure captures the relative importance of expenditures in education, health and pensions vis-à-vis other services or goods that the government might

[3] The first data set for the 1980s was compiled by Cominetti and Ruiz (1998). The second data set for the 1990s and 2000s is published in ECLAC's online statistical database, CEPALSTAT. We include a dummy variable to code for the 1980s data in the regression models employed in the study. The 18 countries in the data set are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

choose to purchase. In a second stage, we further disaggregate social spending to separately measure the share of resources devoted to education (EDUGDP and EDTPS), health (HEALTHGDP and HEALTHTPS) and social security (SECGDP and SECTPS). The data set is unbalanced as not all countries reported data for each year. Censored observations were treated as randomly missing and no attempts were made to model this aspect of sample selection.

Democracy and Election Data

Our sample is limited to observations for democratic years between 1978 and 2008 in each country based on a dichotomous definition of democracy. The measure is based on minimalist criteria, based on electoral competition, which we will refer to as such throughout the paper.[4] The minimalist criterion for democracy dummy variable is drawn from an updated database developed by Cheibub, Gandhi and Vreeland (2010) that extends—both in terms of country and year coverage and in terms of variables—the dataset first published in Álvarez, Cheibub, Limongi and Przeworski (1996).

Under the Cheibub et al. dataset, Colombia, Costa Rica and Venezuela are considered democratic during the entire period; however, the sample is unbalanced as the other fifteen countries enter the sample in only some years.[5] For example, Mexico is only coded as a democracy after the 2000 election in which Vicente Fox assumed power after the Partido Revolucionario Institucional (PRI), which had dominated Mexican presidential elections since 1910, ceded power to the Partido Acción Nacional (PAN). Similarly, in the case of Peru, the period between the 1990 election, after which Alberto Fujimori staged a *coup d'etat* in April 1992, until his resignation in 2000 is considered autocractic by Cheibub, Gandhi and Vreeland. These observations, therefore, are not included in our analysis.

We used both the "rule of the semester" and the "rule of the year" to create a dichotomous dummy variable to code the election year period, but restrict our discussion of the results reported in this paper for the semester rule. Under the "rule of the semester," an election held during the first semester of year "t" is coded as the year before, "t-1." An election held in the second semester is considered to be held in the same year, "t.[6]" Election data is drawn from the information reported in Nohlen (2005) and the *Political Database of the Americas* (Center for Latin American Studies at Georgetown University, 2009). Table 1 presents a summary of the elections that are part of our sample.

[4] Democracy is defined as the regime where government offices are filled through competitive elections. See Alvarez et al (1996) for more details.
[5] For a more detailed discussion on the implications of the criteria adopted by Cheibub et al for Latin American democracies and how these compare to Polity IV criteria for democracy, see Barberia and Avelino (2011).
[6] Under the "rule of the year," a value of "1" was assigned if an election occurred during the year in question, otherwise the value of "0" was assigned.

Table 1.Presidential Elections in Latin America, 1980-2008

Country	Presidential Election Dates
Argentina	10/1983, 5/1989, 5/1995, 10/1999, 4/2003, 10/2007
Bolivia	6/1980, 7/1985, 5/1989, 6/1993, 6/1997, 6/2002, 12/2005
Brazil	11/1989, 10/1994, 10/1998, 10/2002, 10/2006
Chile	12/1993, 12/1999, 12/2005
Colombia*	5/1982, 5/1986, 5/1990, 6/1994, 6/1998, 5/2002, 5/2006
Costa Rica*	2/1982, 2/1986, 2/1990, 2/1994, 2/1998, 2/2002, 2/2006
Dominican Republic	5/1982, 5/1986, 5/1990, 5/1994, 6/1996, 5/2000, 5/2004, 5/2008
Ecuador	1/1984, 1/1988, 7/1992, 7/1996, 6/1998, 10/2002, 10/2006
El Salvador	3/1984, 3/1989, 4/1994, 3/1999, 3/2004
Guatemala	11/1990, 11/1995, 11/1999, 11/2003, 9/2007
Honduras	11/1985, 11/1989, 11/1993, 11/1997, 11/2001, 11/2005
Mexico	7/2000, 7/2006
Nicaragua	11/1984, 2/1990, 10/1996, 11/2001, 11/2006
Panama	12/1989, 5/1994, 5/1999, 5/2004
Paraguay	5/1993, 5/1998, 4/2003, 4/2008
Peru	4/1985, 4/2006
Uruguay	11/1989, 11/1994, 10/1999, 10/2004
Venezuela*	12/1983, 12/1988, 12/1993, 12/1998, 7/2000, 12/2006

* No democratic transition
Source: Elaborated by the authors.

There are 91 presidential elections in the data set. All eighteen countries had at least one presidential election. On average, there are five presidential elections per country. We limit attention to the years of presidential elections. The focus on presidential elections follows the literature; studies that have included congressional elections have not found that these elections have distinct impacts on electoral cycles (Drazen, 2000).

Similar to the approach utilized to code democracy, we also test if the results suggesting that there are differences in the behavior of PBCs in young democracies. Guided by theoretical underpinnings, we created a dichotomous dummy variable that codes “one” for the period of “transitional democracy.” For this measure, the beginning of democratic transition is defined as the year of the inauguration of the first democratic regime following a period of authoritarian rule (O'Donnell & Schmitter, 1986). Huntington (1991) defends the alternation in power of opposition parties as a distinct criteria that is important for defining the consolidation of democracy. For Huntington, the onset of stable democracy can be defined as the second consecutive democratic turnover in which there is a change in the political party controlling the presidency. This two-turnover test in his opinion is an unambiguous measure of the resilience of democracy. This definition is also consistent with the definition of democracy adopted in this study following Álvarez, et al (1996) who argue that this regime is characterized by the opposition rising to power through elections.

According to the two-turnover test, the transitional democracy period is coded as the years beginning with the year of the founding election and the year of the first election in which an opposition party wins and assumes office.[7] In the case of Argentina, for example, this implies that the transitional period is between 1983 and 1989 (the year Raúl Alfonsín transfers power to Carlos Saúl Menem. The year after Menem assumes office is defined as the first year of post-transition democracy. As Table 2 summarizes, 26 elections in the sample meet this criteria.

Table 2.Summary Statistics for Democracy and Elections in Latin America, 1980–2008

	Minimalist criterion of Democracy and Transitional Democracy (Founding Election + One Turnover)
Total Democracy Years	432
Total Transitional Democracy Years	123
Percentage of Transitional Democracy Years	30.1%
Total number of elections (rule of semester)	91
Total number of elections in transitional democracy period	26
Percentage of Elections in transitional democracy period	28.6%

Source: Elaborated by the authors.

One of the key challenges in the analysis of elections is the extent to which they may be endogenous, as oftentimes the end of a particular regime is not pre-determined, but coincides with economic crises (Haggard & Kaufman, 1997; Przeworski & Limongi, 1993). There are a few reasons why the endogeneity of elections does not seem to be a significant problem for the questions that will be explored in this paper. First, the problem of simultaneity bias is much more severe in PBC studies that employ economic growth, unemployment and inflation as dependent variables, as declines in the performance of these variables are precisely what tend to trigger the collapse of particular administrations. Second, unlike parliamentary democracies, elections are typically held on a fixed schedule in presidential democracies such as those found in Latin America. Of course, there are some notable exceptions. Fueled by rampant hyperinflation, Siles Suazo anticipated presidential elections one year earlier than the end of his term in 1985 in Bolivia. In Argentina, Raúl Alfonsín similarly ceded power earlier than anticipated though only a few months earlier than planned. After only two years in office, President de la Rua resigned from the Argentine presidency in 2001 in light of massive protests and a spiraling economic crisis.

[7] In order to test for more stringent criteria, we also estimated the regressions with a variable that was coded as 1 for transitional democracy for the period between the year of the founding election and the year of the second election in which an opposition party wins and assumes office. In the case of Argentina, for example, this implies that the transitional period is between 1983 and 1999 (the year Fernando de la Rua is elected to the presidency returning the Unión Cívica Radical (UCR) to power). The year after the de la Rua election is defined as the first year of post-transition democracy.

Control Variables

Given that demographic characteristics of the population are likely to influence government social spending, we include two demographic variables representing the fraction of the population 14 and under and over 65. A higher percentage of elderly and young people in the population are expected to positively increase budget allocations for social programs and social security. Unless otherwise noted, the control variables data are from the World Bank's *World Development Indicators* (2009).

To account for the heterogeneity in income and growth rates across countries in the region, we also include economic control variables. The first is the level of economic development, defined as the real gross domestic product per capita and measured in constant 2000 US$ dollars. Per capita income is included in the model to control for Wagner's Law, which holds that the level of public spending will be positively correlated with levels of economic development. Higher levels of per capita income should be correlated with higher levels of government social spending. As a control for the cyclical responsiveness of government spending to macroeconomic upturns and downturns, we also include a measure of the output gap or the proportion of growth that is unexpected in a given year. We use the log-difference between real GDP and its (country specific) trend (computed using the Hodrick-Prescott filter).

Periods of interstate and intrastate wars create interruptions in the construction of the welfare state and we thus include a dummy variable (CONFLICT) to code those years in which either type of war was in effect in a given country. The data are drawn from the Correlates of War database. Globalization has been theorized to have important repercussions for welfare states, but its effects remain a matter of significant debate. With greater integration into markets for goods and services, states may be forced to reduce social spending for national competitiveness. On the other hand, states may also be more likely to invest in social safety nets to cushion citizens from market forces. We include a measure of trade integration as a control for the degree of an economy's integration with world markets. Trade is calculated as the sum of imports and exports relative to GDP, where the denominator is calculated by converting domestic local currency to current US$ based on exchange rate conversions. We control for country specific effects by including a dummy variable for each country in the sample (Argentina is the excluded country) and for variations in time periods by including a dummy variable two of the three decades (1980s and 2000s).

4. Estimation Procedure and Model Specification

The dependent variable is social spending. As discussed in the previous section, we use two measures: (1) the share of aggregate social spending (health, education and social security combined) as a share of GDP (SSGDP); andm (2) social spending as a share of total government spending (SSTPS). In a subsequent stage, we use three additional dependent variables: the relative resources devoted to education, health and social security; each of these measured relative to GDP and total government spending.

Our main objective is to test whether there are differences in social spending prior to

presidential elections in Latin American democracies. We include a dummy variable, ELEC, for the election semester. The expected sign of this coefficient is positive and statistically significant from zero. The baseline model can be summarized by the following equation:

$$\boldsymbol{Y}_{i,t} = \alpha + \beta_1 \boldsymbol{Y}_{i,t-1} + \beta_2 \boldsymbol{Z}_{i,t} + \beta_3 \boldsymbol{ELEC}_{i,t} + \boldsymbol{c}_i + \boldsymbol{\mu}_{i,t}. \quad (1).$$

where $\boldsymbol{Z}$ is a vector of the control variables described earlier and α represents a constant term. The index *i* refers to the *N* observational units (or panels), and *t* indexes the *T* time periods. The term c_i is a dummy variable for each country intended to capture country-specific unobserved effects. The error term, μ_{it}, is an error term associated with unit *i* at time *t*.

The models we use to test our hypothesis are those that are appropriate for highly persistent series as the past levels of social spending influence expenditures in future years. In this paper, we report the results from an error correction model (ECM) with panel corrected standard errors with dummy variables to control for country fixed effects.[8] This model, which includes first differences (Δ) and lagged levels of the dependent and control variables, can be summarized as follows:

$$\Delta \boldsymbol{Y}_{i,t} = \alpha + \beta_1 \boldsymbol{Y}_{i,t-1} + \beta_2 \Delta \boldsymbol{Z}_{i,t} + \beta_3 \Delta \boldsymbol{Z}_{i,t-1} + \beta_4 \boldsymbol{ELEC}_{i,t} + \boldsymbol{c}_i + \boldsymbol{\mu}_{i,t}. \quad (2).$$

A series of alternative estimation strategies were also used to check for consistency and robustness of the results that will be reported in the next section of this paper. Two Generalized Methods of Moments (GMM) procedures were used: the Arellano and Bond (1991) first-differenced GMM estimator (GMM-Diff) and the Blundell and Bond (1998) system GMM estimator (GMM-System).[9] For brevity, we only present the results for these alternative specifications in the results for overall social spending (see Table 3 and 6).

In a second stage, in order to test whether the effect of elections depends on an election taking place during the "transitional democracy" period (*RECENTDEM*), we undertake a second estimation. This second ECM model, which includes first differences (Δ) and lagged levels of the dependent and control variables, can be summarized as follows:

$$\Delta \boldsymbol{Y}_{i,t} = \alpha_{i,t} + \beta_1 \boldsymbol{Y}_{i,t-1} + \beta_2 \Delta \boldsymbol{Z}_{i,t} + \beta_3 \boldsymbol{Z}_{i,t-1} + \beta_4 (\boldsymbol{ELEC})_{i,t} + \beta_5 (\boldsymbol{RECENTDEM})_{i,t} + \beta_6 (\boldsymbol{ELEC*RECENTDEM})_{i,t} + \boldsymbol{c}_i + \boldsymbol{\mu}_{i,t}. \quad (3)$$

In the equation, "*ELEC*" and "*RECENTDEM*" are dummy variables coding years considered election and transitional democracy years. The variable "*ELEC*RECENTDEM*" is an interactive variable equal to "1" if the presidential election took place during the transitional democracy period. The marginal impact of the recent democratization period on social spending is captured by $\hat{\beta}_5$. The marginal effect of an election during the democratic transition phase is captured by $\hat{\beta}_6$. The test to verify if social spending increases during elections in recent

[8] The model was estimated with the Stata XTPCSE command.

[9] The exercise and commands for GMM estimation are based on Roodman (2006) and were carried out using Stata 11.2.

democracies is carried out by examining if $\hat{\beta}_4 + \hat{\beta}_6$ (the total marginal effect of an election in a recent democracy) is significantly different from zero (Brambor, Clark, & Golder, 2006; Braumoeller, 2004).

5. Results

The multiple regression estimations yield surprising results that contrast with findings for industrialized democracies and the patterns reported previously in the country-specific literature for Latin America. Overall, democracies seem to have reduced, or at least not increased social spending during elections. However, a different picture exists once the same analysis is conducted for each component of social spending. We find that there are important increases in social security and health expenditures during elections, a pattern that suggests that governments reallocate resources towards those programs that align with the interests of middle class constituents and retirees.

Our research also shows that there are differences in the social policy response depending on whether a democracy is in transition. Whereas both transition and post-transition democracies engineer increases in social security, the allocation of greater resources to health is unique to transitional democracies. In contrast, neither transition nor post-transition administrations increased resources for education, which is arguably the most redistributive of the three types of social spending over the long run. One possible reason for this result might be that it takes time for new democracies to consolidate their power base and institute redistributive programs. In other words, the effect of transitional democracies may be cumulative versus immediate.

The coefficients on the effect of election cycles reported in the tables that follow are based on the rule of the semester. We first discuss the regression results of the effects of elections on aggregate social spending (Table 3) and spending disaggregated by the share spent on education, health, and pensions (Table 4 for SSGDP and Table 5 for SSTPS). Next, we control for transitional democracy. The results on the effects of elections in transitional and non-transitional democracies are presented for aggregate social spending (Table 6) and spending disaggregated by the share spent on education, health, and pensions (Table 7 for SSGDP and Table 8 for SSTPS) For presentation purposes, we only present the coefficient estimations for the election-related variables in all six tables.[10] In the tables, the base category is defined as all other democratic years.

Elections

Table 3 presented below consist of a total of six columns as the coefficients and standard errors are reported for both SSGDP and SSTPS. For each dependent variable the ECM results are presented in the first column and the estimates using GMM based on the Arellano-Bond (difference) and Blundell-Bond (system) procedures with orthogonal deviations to adjust for an unbalanced panel are reported in the second and third columns. GMM estimations were specified

[10] The complete results are available from the authors upon request.

to minimize the number of instruments following the recommendations of Roodman (2007).[11]

Based on the literature, our expectation is that social spending will be higher in the year of a presidential election in a Latin American democracy. The initial estimates for the effect of an election year on social spending, however, do not confirm this hypothesis. Instead, the dummy variable for the semester of the election is negative and not statistically significant at ten percent or less regardless of whether social spending is measure relative to GDP or relative to total government spending (see Table 3).

However, the results vary dramatically once social spending is disaggregated. There are marked rises in social security and health expenditures during elections in Latin America. The coefficient for the semester of the election is positive and statistically significant at the 5% or less level for health and for social security expenditures as a share of GDP (column 3 and 4, Table 4). While spending rises in both types of social programs, the increase in social security expenditures is predicted to nearly double of the increase in health expenditures. In comparison to overall government spending, however, the rise of expenditures in health and pensions vis-à-vis other public services or goods during elections is not confirmed at a ten percent or less level (see Table 5), although the predicted sign is positive.

Transitional Democracies

Since a significant share of Latin American countries experienced a transition to democracy after 1978, the results reported earlier in Tables 3, 4 and 5 could be driven by the failure to account for the heightened responsiveness of governments during elections in the early phases of democratization. To test this hypothesis, we estimate the effect of elections with appropriate multiplicative interaction terms to test if the increases in social spending in election years can be explained by the behavior of transitional democracies. Following the earlier outline, Table 6 presents the results when the dependent variable is aggregate social spending and Tables 7 (SSGDP) and 8 (SSTPS) when social spending is disaggregated. In all three tables, the estimated total effect of an election year on social spending for recent democracies and its standard variation are presented in the last two rows.

These regressions further elucidate earlier results. We again find a marked rise in social security expenditures relative to both GDP and total government spending during elections (Table 7 and 8). The results indicate that this pattern is present in both early and post-transition democracies, but that transitional democracies increase transfers to retirees by larger shares relative to both GDP and total government spending in the semester of an election (column 4, Table 7 and Table 8). Compared to the effect of elections in non-transitional democracies, the estimated coefficient for the effect of an election on pension expenditures as a share of GDP in a transitional democracy is more than twice in magnitude and more precisely measured with a statistical significance of five percent. The finding that there are peaks in social security expenditures during elections during democratic transitions is even more noteworthy given that

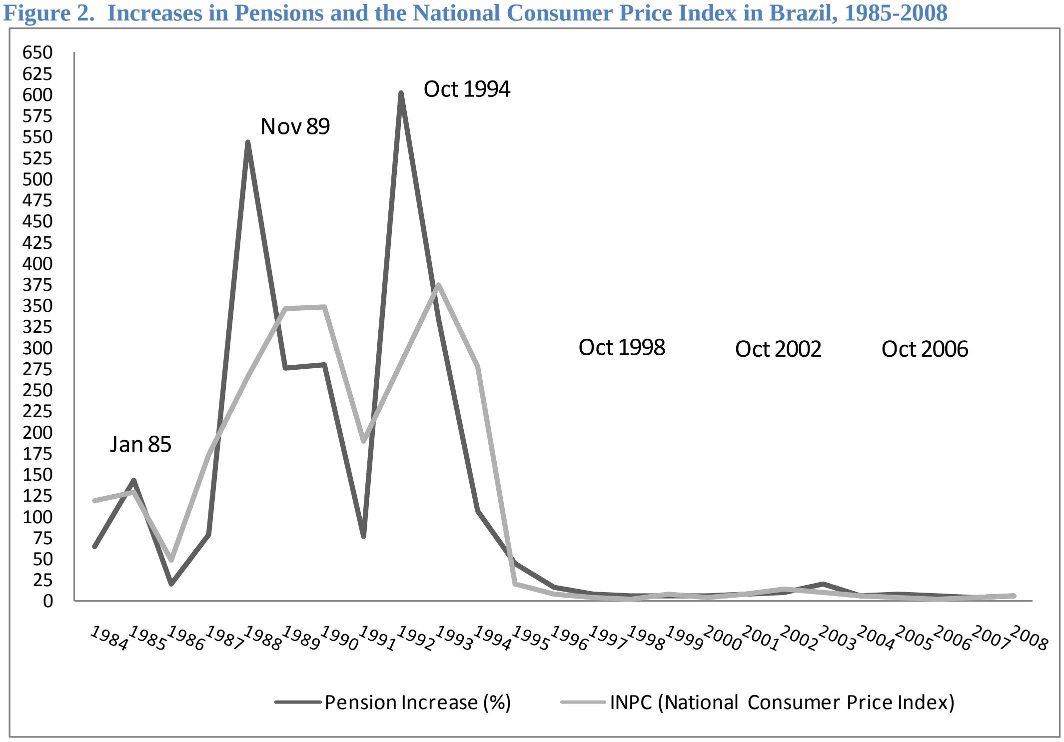
[11] Per capita GDP and the log-difference between real GDP and its (country specific) trend (computed using the Hodrick-Prescott filter) were also included as endogenous variables in the GMM estimations. For GMM estimates, standard errors are reported as t-statistics based on Windmeijer (2005) finite sample correction and corrected for serial correlation and heteroskedasticity.

the results also confirm that overall transitional democracies spend less on social security. In terms of magnitude, these findings suggest that social security spending rises by approximately 0.3 percent of GDP and 1.12% of the total government budget in Latin American countries during democratization.

During elections, presidential democracies in Latin America behave similarly to developed democracies such as the United States. Retirement benefits represent tangible payments that target individuals. As such, it seems comprehensible that governments might channel increases toward this type of social program to coincide with elections as a means of garnering votes. In contrast to developed democracies and their welfare states, however, pensions favor smaller segments of the general population in Latin America as they tend to be directed at wealthier taxpayers who were employed in the formal economy and in particular the state (Mesa-Lago, 1994). For example, 796,000 public sector Brazilian workers received a total of 15 billion reais in pensions in 1995 (Kay, 1999). In contrast, the remaining 15.8 million workers in the main social security system received 32 billion reais.

Our finding that presidents in transitional democracies are prone to increase pensions at even higher shares relative to the overall budget and as a share of GDP during elections is unexpected. To better understand this finding, we delved deeper into the effect of the transition to democracy on social security in the countries in our sample. Figure 2 below illustrates the rises in social security benefits that were conceded by Brazilian authorities from the first election in our sample in January 1985 to 2008. As the figure confirms, the largest and well above inflation adjustments made for social security benefits took place in the early democratization stage.

Figure 2. Increases in Pensions and the National Consumer Price Index in Brazil, 1985-2008



Source: Data compiled by the authors based on data published by the Ministerio de Previdencia Social.

Transitional democracies also spend more on public health programs as compared to non-transitional democracies. In both Tables 7 and 8 (column 3), the coefficient for the dummy variable controlling for the level of spending if a country was in transition is negative and statistically significant at the five percent level. But, the total effect of an election in a democracy in transition on health expenditures is positive and statistically significant at the one percent level in both the case of HEALTHGDP and HEALTHTPS (Tables 7 and 8, column 3). In magnitude terms, these results suggest that the average increase in election semester spending on health was 0.2% of GDP and 0.76% of the total government budget.

Thus, the presidential democracies in Latin America that were most apt to channel increases in social spending to coincide with elections were those in the transition stage of democratization, but only for particular types of social spending, namely social security and public health programs. The notable increases in resource allocations for these specific programs during elections in countries that have recently democratized are particularly remarkable as overall these regimes spend less on social programs.

Our results show that governments also increase public health expenditures during elections in the transition towards democracy. This finding adds an important hue to our understanding of social spending election cycles in Latin America. At this time, it is difficult to infer the effect of these expenditures on redistribution. On the one hand, governments in elections during the transition to democracy may be targeting the support of voters in lower income deciles by trying to increase health expenditures. On the other hand, these expenditure increases might be directed at garnering the votes of well-organized interest groups such as public health workers and medical associations. Overall, however, the evidence that there may be greater levels of redistributive spending toward programs that benefit the poor during elections in the early stages of democratization is weak.

Conclusion

This paper has undertaken a more theoretically grounded exploration of political cycles in fiscal policy performance during the most profound and widespread period of democratization in Latin America by examining what happens to social spending during elections, a category notable for its “visibility” to voters. It has attempted to address several gaps in past empirical research by considering what happens to performance measures during multi-party competitive elections and in the early stages of democratization across the region and not only in specific individual countries.

We hope this paper has strengthened understanding of why disaggregating the broad category of "social spending" is a fruitful and important line of research for studies on how politics shape the welfare state in Latin America. When regressions are performed on aggregate social spending, democracies seem to have reduced, or at least not increased social spending during elections. Examination of the interaction between elections and different components of social spending, however, reveals a different picture. There are important increases in social security and health expenditures during elections, a pattern that suggests that governments reallocate resources towards those programs that align with the interests of middle class constituents and retirees.

Our research also shows that there are differences in the social policy response to electoral competition depending on whether a democracy is in transition. Whereas both transition and post-transition democracies engineer increases in social security during elections, the allocation of greater resources to health is unique to transitional democracies. In contrast, neither transition nor post-transition administrations increase expenditures for education, which is arguably the most redistributive of the three types of social spending over the long run. One possible reason for this result might be that it takes time for recent democracies to consolidate their power base and institute redistributive programs. In other words, the effect of transitional democracies may be cumulative versus immediate.

Building on these studies that have argued that the pattern of political budget cycles in a large cross-section of countries is driven by the experience of ‘‘new democracies,” Barberia and Avelino (2011) seek to verify if these patterns are robust in a panel of eighteen Latin American democracies from 1973 to 2008. The authors show that fiscal deficits worsen in the year of election in Latin American democracies, but that this pattern is not contingent on a country being in the early phase of its democratic transition. Rather, political budget cycles appear to be linked to reductions in the efforts of governments to collect taxes. As a possible hypothesis to explain these findings, the authors posit that this pattern may be explained by governments who are eager to appease those interests that are most threatening to their destabilization, namely the upper classes and military elites.

Thus far, there has been limited exploration of models that study political welfare cycles in developing democracies. The findings in this study further stress the need for further research on the patterns driving the experiences of democracies in developing countries and those in Latin America in particular. There are a number of important questions that are not answered by this study that represent important lines for future research. The results in this paper could be further explored to test whether the driving force of social policy responsiveness due to democratic turnovers is greater after elections as Franzese (2002) has argued to be so for industrialized democracies.

This study has relied on data reported for total government expenditures in each country in Latin America. To the extent possible, the data report on spending at the federal/national/central, provincial/state and municipal levels. In more recent years in particular, there have been important changes in social spending due to decentralization and privatization. We recognize that further research is needed to reconcile the social spending data used in this study with these phenomena. In the case of Mexico, for example, CEPAL notes that its data on social spending is significantly underestimated because local level expenditures are not included. We have attempted to ensure the robustness of our results by excluding each of the eighteen countries and re-estimating our results. However, beyond the testing of our results to ensure they are not driven by one specific country, we do not attempt to account for the impact of decentralization and privatization on the responsiveness of the welfare state in Latin America.

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Table 3. Social Spending during Elections in Latin America, 1980-2008

Dependent Variable	*Social Spending/GDP*			*Social Spending/Total Government Spending*		
	(1)	(2)	(3)	(1)	(2)	(3)
	Error Correction Model[a]	GMM One-Step First Diff[b]	GMM One-Step System[b]	Error Correction Model[a]	GMM One-Step First Diff[b]	GMM One-Step System[b]
Election Semester$_t$	-0.030	-0.002	-0.027	-0.521	-0.526	-0.476
	(0.100)	(0.178)	(0.179)	(0.400)	(0.530)	(0.544)
Observations	405	387	405	411	393	411
Avg. time series length	22.50	21.50	22.50	22.83	21.83	22.83
R-squared	0.202			0.188		
RMSE	1.200			4.547		
Number of Instruments		11	19		11	19
Arellano-Bond test for AR(2) [c] *(p value)*		0.902	0.729		0.434	0.423
Hansen test for joint validity of instruments *(p value)*		0.871	0.350		0.287	0.309
Diff. Sargan tests for all system instruments *(p value)*			0.349			0.279

Standard errors in parentheses and significance levels are as follows: * significant at 10%; ** significant at 5%; *** significant at 1%.

Notes: For presentation purposes, the results are only presented for the estimated coefficient for the semester of the election. The other covariates that were included in the model are a one period lag for the dependent variable, the log of per-capita GDP, the ratio of international trade (sum of merchandise exports and imports) to GDP, the fraction of the population over age 65, the fraction of the population under14, the log-difference between real GDP and its (country specific) trend, estimated using a Hodrick-Prescott filter and a dummy variable for those Semesters in which a country was involved in either an interstate or intrastate conflict.

[a] The model includes country dummy variables and all coefficients were estimated with panel corrected standard errors that correct for groupwise heteroskedasticity and contemporaneous correlations of the errors.

[b] The two specifications present GMM estimates using the Arellano-Bond (difference) and Blundell-Bond (system) procedures with orthogonal deviations to adjust for an unbalanced panel and collapsed to minimize the number of instruments following the recommendations of Roodman (2007). Per capita GDP and growth were also included as endogenous variables in the GMM estimations. For GMM estimates standard errors are reported as t-statistics based on Windmeijer (2005) finite sample correction and corrected for serial correlation and heteroskedasticity.

[c] The Arellano-Bond tests for first-order and second-order serial correlation are on the first-differenced residuals. The p-values are the probability of rejecting the null hypothesis of no autocorrelation.

Table 4. Disaggregated Social Spending during Elections in Latin America, 1980-2008

	Social Spending as a share of GDP			
Error Correction Model with panel corrected standard errors	(1) Social Spending	(2) Education	(3) Health	(4) Social Security
Election Semester$_t$	-0.030	0.047	0.085**	0.170***
	(0.100)	(0.047)	(0.038)	(0.064)
Observations	405	401	393	376
R-squared	0.202	0.206	0.355	0.203
RMSE	1.200	0.450	0.384	0.671
Avg. time series length	22.50	22.28	21.83	20.89

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes. The differences in the number of observations is due to the fact that there is missing data. Health expenditures were not reported for Bolivia (19882-89). Social security spending was not available for Bolivia (1982-1989), Dominican Republic (1980-1989), or Nicaragua (1984-1989). However, total social spending as a share of gdp for these three countries was reported. If the observations for these periods are excluded from the regression, the coefficient estimates on social spending reported above are maintained.

Table 5. Disaggregated Social Spending during Elections in Latin America, 1980-2008

	Social Spending as a share of Total Government Spending			
	(1)	(2)	(3)	(4)
Error Correction Model with panel corrected standard errors	Social Spending	Education	Health	Social Security
Election Semester$_t$	-0.521	0.0132	0.0642	0.319
	(0.400)	(0.163)	(0.133)	(0.276)
Observations	411	411	402	380
R-squared	0.188	0.217	0.237	0.175
RMSE	4.547	2.091	1.569	2.884
Avg. time series length	22.83	22.83	22.33	21.11

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes. The difference in the number of observations is due to the fact that there is missing data. Health expenditures were not reported for Bolivia (19882-89). Social security spending was not available for Bolivia (1982-1989), Dominican Republic (1980-1989), or Nicaragua (1984-1989). However, total social spending as a share of total government spending for these three countries was reported. If the observations for these periods are excluded from the regression, the coefficient estimates on social spending reported above are maintained.

Table 7. Disaggregated Social Spending and Transitional Democracy during Elections in Latin America, 1980-2008

	Social Spending as a share of GDP			
Error Correction Model with panel corrected standard errors	(1) Social Spending	(2) Education	(3) Health	(4) Social Security
Election Semester$_t$	0.147	0.0742	0.0441	0.126*
	(0.113)	(0.0598)	(0.0487)	(0.0712)
Transitional Democracy (Founding+ One Turnover) Semester$_t$	-0.232	-0.0300	-0.134**	-0.209**
	(0.148)	(0.0815)	(0.0654)	(0.0843)
Transitional Democracy (Founding+ One Turnover) * Election Semester$_t$	-0.546**	-0.0840	0.161*	0.185
	(0.271)	(0.129)	(0.0831)	(0.153)
Observations	405	401	393	376
R-squared	0.214	0.208	0.363	0.209
RMSE	1.193	0.451	0.382	0.670
Avg. time series length	22.50	22.28	21.83	20.89
Total "Transitional Democracy Election Year" (β4+ β6)	-0.399*	-0.009	0.204***	0.310**
	(0.233)	(0.104)	(0.062)	(0.137)

Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Notes. The difference in the number of observations is due to the fact that there is missing data. Health expenditures were not reported for Bolivia (19882-89). Social security spending was not available for Bolivia (1982-1989), Dominican Republic (1980-1989), or Nicaragua (1984-1989). However, total social spending as a share of total government spending for these three countries was reported. If the observations for these periods are excluded from the regression, the coefficient estimates on social spending reported above are maintained.

Table 8. Disaggregated Social Spending and Transitional Democracy during Elections in Latin America, 1980-2008

	Social Spending as a share of Total Government Spending			
	(1)	(2)	(3)	(4)
Error Correction Model with panel corrected standard errors	Social Spending	Education	Health	Social Security
Election Semester$_t$	-0.249	0.126	-0.185	0.0182
	(0.486)	(0.236)	(0.174)	(0.329)
Transitional Democracy <u>(Founding+ One Turnover)</u> Semester$_t$	-0.953**	-0.122	-0.563**	-0.375
	(0.473)	(0.242)	(0.222)	(0.399)
Transitional Democracy <u>(Founding+ One Turnover)</u> * Election Semester$_t$	-0.743	-0.356	0.945***	1.104*
	(0.972)	(0.481)	(0.326)	(0.593)
Observations	411	411	402	380
R-squared	0.193	0.219	0.250	0.180
RMSE	4.545	2.095	1.559	2.885
Avg. time series length	22.83	22.83	22.33	21.11
Total "Transitional Democracy Election Year"(β4+ β6)	-0.991	-0.230	0.759***	1.122**
	(0.800)	(0.347)	(0.246)	(0.515)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes. The difference in the number of observations is due to the fact that there is missing data. Health expenditures were not reported for Bolivia (19882-89). Social security spending was not available for Bolivia (1982-1989), Dominican Republic (1980-1989), or Nicaragua (1984-1989). However, total social spending as a share of total government spending for these three countries was reported. If the observations for these periods are excluded from the regression, the coefficient estimates on social spending reported above are maintained.