Party, Ideology, and Deficits:

Provincial Fiscal Policy and the Cameron Thesis, 1966-2009

by

Raymond Tatalovich

(rtatalo@luc.edu)

Department of Political Science

Loyola University Chicago

A quarter century ago David Cameron (1985, 259-260) published an essay in which he argued that parties of the Left are better fiscal managers than parties of the Right. "The nations in which government was usually controlled by leftist parties in 1965-81 were *less* likely to incur large budget deficits than those in which government was controlled by centrist, Christian Democratic, or conservative parties—in spite of the fact that leftist-dominated governments were much more likely to increase government spending to high levels." Support for Cameron's thesis is found in a relatively recent study by Tavares (2004, 2464), which analyzed the policy response to "fiscal adjustments" in nineteen OECD countries over the period 1960 to 1995 and concluded that "when a left-wing cabinet cuts the deficit it tends to rely on tax increases, whereas the right tends to rely on expenditure cuts."

One serious limitation of his analysis is that Cameron drew his conclusions from simple correlations between the left-to-right composition of Cabinets and deficits as a percentage of GDP. Nonetheless, many studies of budget deficits and public debt reference the Cameron article, though most analyses (principally by economists) have become much more complex in their statistical models. For economists, moreover, party ideology is not considered the leading interpretation of why nations incur deficits, as there are at least five other rival explanations (Hahm, Kamlet, and Mowery 1995).[1] To date fewer political scientists than economists have tested Cameron's hypothesis, and there has been little effort to validate his thesis at the subnational level of government. This paper will re-test the Cameron hypothesis by studying deficits and surpluses in the ten provinces of Canada over the period 1966 to 2009, a period of forty-four years yielding an N of 440 cases.

Party Ideology Hypothesis

Although Cameron's insight spawned a noteworthy body of research, he was not the first political scientist to argue that left-wing parties were not addicted to deficits. In his review of

[1] First is the "tax-smoothing" hypothesis by economist Barro (1979; also called the "equilibrium approach" by economists Routini and Sachs [1989a]). This hypothesis holds that countries resort to deficits after a "shock" (such as war) in order to avoid raising taxes to levels beyond the peacetime norm. Second is the neo-Keynesian countercyclical hypothesis which holds that deficits are used primarily to stabilize the business cycle. Third is the "self-interest of politicians" hypothesis (or public choice theory; see Buchanan and Wagner, 1977) which holds that elected officials prefer deficits to raising taxes in order to increase expenditures on programs benefitting their constituents. Fourth is the "strength of government" (also called the "political cohesion") hypothesis which holds that deficits more likely result from coalition or minority rather than a majority governments. Fifth, and related-but unique to the United States-is the "divided government" hypothesis which holds that deficits increase when different political parties control the executive and legislative branches of government.

post-War fiscal policy, Andrew Cowart (1978: 432) hypothesized that governments would manipulate surpluses or deficits in response to macroeconomic conditions, but he raised a strong objection to the assumption that leftist governments are more tolerant of deficits than their conservative counterparts. After applying his economic model to periods of Conservative or Socialist rule and periods when both leftist and rightist parties governed, his analysis of budgeting in Germany, The Netherlands, United Kingdom, Austria, and France led Cowart (1978: 438) to conclude that governments of the left "regardless of macroeconomic conditions…have not accumulated, on the average, larger budget deficits." Consistent with Cowart (1978), political economists Hahm, Kamlet, and Mowery (1996, 64) studied nine OECD countries during the period 1958-1990 and found "no support for the proposition that left-of-center governments promote larger deficits than right-of-center governments." Cusack (1999, 483-84), based on his analysis of 14 OECD countries from 1961 to 1991, also concluded that "there is no evidence that the left has behaved in a fiscally irresponsible way by persistently and recklessly running deficits." Similarly Borrelli and Royed (1995, 243) analyzed deficit change in sixteen OECD countries over the period 1959-1990, and they found that "left governments are more likely to show improving budget balance than are centre or right governments."

Earlier work by Garrett (1991) that studied OECD countries from the late 1960s through the early 1990s determined that Left governments backed by strong labor unions tended to produce smaller deficits than governments of the Right which lack strong union backing. But later, more comprehensive analyses led Garrett (1996, 1998) to conclude that, due to the internationalization of the economy, political systems with a strong labor-left alliance generated higher levels of budgetary deficits, presumably because they tried to mitigate market dislocations that affected vulnerable population groups. In their analysis of the "political business cycle" in 14 OECD nations, the team of Alesina, Cohen and Roubini (1993, 18) found that "left wing governments have a statistically significant real fiscal deficit bias" insofar as "left wing governments have one-half a percent higher real fiscal deficits per year in office."

Carlsen (1997, 145) utilized pooled cross-sectional time-series analysis of 11 OECD countries over the period 1980-1992 and concluded that the "structural deficit is significantly higher under left-wing governments when unemployment is high or rising while the ideology of the government party (parties) has no significant impact on the structural deficit when unemployment is low or falling." Sakamoto (2001, 542) similarly found "that leftist governments run larger deficits than rightist governments when unemployment rates are high but smaller deficits with full employment (unemployment rate is 0%). But such findings by Carlsen (1997) and Sakamoto (2001) are not unvarnished evidence that the Left tolerates higher deficits unless warranted by adverse economic conditions.

Political Cohesion Hypothesis

The "political cohesion" or "strength of government" hypothesis usually measures whether the government is controlled by a majority party, a coalition of parties, or a minority party, though that operationalization of the variable does not capture the full complexity of this concept. Borrelli and Royed (1995) explain that the concept includes at least four different and

unrelated factors.[2] Thus, some studies (Roubini and Sachs, 1989a; Edin and Ohlsson, 1990) focus on the one obvious variable while others include some additional measures (Grilli, Masciandaro and Tabellini, 1991; De Haan and Sturm, 1994). The American version of this hypothesis is that "divided government" (where different parties control the legislative and executive branches) causes higher deficits (McCubbins, 1991) and lower revenues (Cox and McCubbins, 1991).

Economists Roubini and Sachs (1989b) studied fifteen OECD countries over the period 1960-1985 and concluded that, while deficits were largely explained by economic cycles, their size was also related to political factors. They (Roubini and Sachs, 1989b: 118) found that "countries with a higher proportion of left-of-centre governments show a larger share of government spending in GNP," although the strength of government variable was even more important. However, in another article Roubini and Sachs [1989a] did not employ party ideology as a separate variable in modeling national increases in the debt-to-GNP ratio.

In that earlier publication, Roubini and Sachs (1989a) had operationalized an index of "political cohesion" based on a 0-3 ordinal scale. Their analysis (Roubini and Sachs, 1989a: 931) showed that "[d]uring the period 1975-85, there is a clear tendency for larger deficits in weaker governments, where weakness is indicated by a short average tenure of government and by the presence of many political parties in the ruling coalition." This particular finding prompted a robust debate among economists. Edin and Ohlsson, 1990) argued that their rank-order scale for political cohesion was flawed because categorical variables should have been used. After re-analyzing the data using "dummy" variables for each category, Edin and Ohlsson (1990: 1602) concluded "that the coalition effect was entirely due to minority governments being unable to reduce budget deficits." On the other hand, Borrelli and Royed (1995) studied 16 OECD countries during the period 1959-1990 and found "that minority governments actually tend to run smaller deficits and/or larger surpluses, or lower deficits, than do other governments," thus directly contradicting Roubini and Sachs (1989a) and Edin and Ohlsson (1990).

De Haan and Sturm (1994) tested both the Roubini-Sachs and the Edin-Ohlsson formulations as predictors of the growth in debt-to-GDP ratios and government spending as a percentage of GDP in twelve European Community member nations over the period 1981-1989, finding that neither formulation mattered. They also tested Cameron's hypothesis with two measures, the share of cabinet portfolios held by leftist parties and the share of parliamentary seats held by leftist parties (which were highly correlated), and this factor was found to be a significant predictor of government spending--but not predictive of government indebtedness. Later De Haan and Sturm (1997) extended their analysis to twenty-one OECD countries over the

[2] They are (1) the number of months a non-majority government exists, (2) the number of parties in the governing coalition, (3) the number of governments during the time period, and (4) the number of elections held during the time period. Another factor implicit in the first four would be the impact of Proportional Representation voting systems (See Borrelli and Royed 1995, 249) .

period 1982-1992, and again neither measure of government "strength" was found to be statistically significant, nor was Cameron's party ideology variable. After analyzing eighteen OECD countries during the period 1961-1994, Sakamoto (2001, 550) reported finding "no empirical support for the explanation that weak/unstable governments…run larger deficits. To the contrary, the evidence shows some indication that deficits are lower under minority or coalition governments or governments with a shorter tenure of office."

Government Turnover Hypothesis

What did matter in the first De Haan and Sturm (1994) analysis were elections, or the frequency of turnover by governments, insofar as more frequent elections increased indebtedness (but did not lead to higher government spending). Grilli, Masciandaro and Tabellini (1991, 341) analyzed 18 OECD countries over the period 1950-1989 to untangle the impact of electoral systems (PR or majoritarian), political turnover (or a change in government), and government durability (or length of its tenure) on indebtedness. Their finding that "high government turnover plays a crucial role in explaining public borrowing" comports well with a good deal of other research on this question. Previously Saunders and Klau (1985) had reported that the number of elections is significantly related to growth in the public sector because, they believed, frequent elections provided opportunities for competitive bidding by political parties with respect to fiscal policy.

Subnational Research

The existing body of scholarship was based entirely on OECD countries; there has been very little research on whether political ideology affects deficits at the subnational level. Pommerehne (1978) studied public expenditures by 110 Swiss municipalities for the years 1968-72. Where referenda existed, he anticipated that expenditures would reflect voter preferences, but absent any referenda he reasoned that policy-makers might be guided by the parties' ideological preferences. However, the empirical findings (1978, 272) did not support that hypothesis. An obvious laboratory for assessing subnational fiscal policy would be the U.S. states, but most of the empirical research on budgeting and public finance has focused on expenditures rather than deficits or debt. With respect to the former, some research shows that expenditure levels are unrelated to whether Democrats or Republicans control state governments (Dye, 1966; Garand, 1988). On the latter, the formal model devised by Alt and Lowry (1994, 820) for the period 1968-1987 did support their hypothesis "that Democrats have a higher—and Republicans a lower—'target' share of state-level income toward which they would push public spending when in office." But their models (1994, 822) showed "no long-term tendency for any party configuration, be it Democrat, Republican, or split legislatures, to run deficits per se."

Finally, the small body of empirical research on the Canadian provinces carried out by economists modeled government expenditures or variations in fiscal policy, typically to address the "political business cycle" thesis (see Frey and Schneider, 1978a, 1978b, 1979). As such, party ideology was always included in the analysis. In their test of the "electoral cycle" thesis Blais and Nadeau (1992, 397) analyzed provincial expenditures from 1951 to 1984 and found "the deficit tends to be somewhat lower (or the surplus higher) under governments of the right."

For that variable, they simply differentiated right-wing governments (Conservative, Social Credit, and Union Nationale) from other governments (Liberal, CDF/NDP, and Parti Québécois). However, since their primary concern was not to explain the size of government or indebtedness, Blais and Nadeau (1992) included no control variables for economic conditions.

Research by Abizadeh and Gray (1992) explicitly looked at the impact of party politics on the growth of provincial expenditures between 1960 and 1986. They did include economic variables (provincial GDP and estimated full-employment provincial GDP), the size of the "dependent" population (aged under 18 and over 65), and a political index. Abizadeh and Gray (1992, 527) asked 1,385 Canadian faculty to "label the government in power from 1960 to 1986 in their own province as left, centre, or right" in terms of the premier's "fiscal policy stance within the provincial government." Their political index positioned three parties on the right (Conservative, Social Credit, Unional Nationale), the Liberals as centrist, and three parties on the left (Co-operative Commonwealth Federation, New Democratic Party, Parti Québécois). In other words, an ideological score was assigned to every provincial government for each year during the 1960 to 1986 period. Rather surprisingly, Abizadeh and Gray (1992, 533) found "that the level and growth of provincial spending is not influenced by the position of the party on the political spectrum."

Another test of the "political business cycle" thesis carried out by Petry, Imbeau, Crête and Clavet (1999) examined the ratio of total provincial and local government spending to total provincial GDP for the period 1974-1995. They too utilized the same tripartite classification of parties employed by Blais and Nadeau (1992) and Abizadeh and Gray (1992), but they refined that measure by also including the tenure of the governing party. Ultimately their (Petry, Imbeau, Crête and Clavet 1999, 285) province-specific model showed that in British Columbia, Newfoundland, Nova Scotia, Ontario, and PEI "[g]overnment expenditures decrease when the strength of the right in government increases in these provinces," though the magnitude of change was very small. The most recent study by Tellier (2006) of politico-economic effects on spending by six provinces (excluding the Maritimes) during the period 1983-1995 employed dummy variables for parties of the left (NDP and Parti Québécois), center (Liberal), and the right (PC and Social Credit) but also included the popularity of each government based on opinion polls. Tellier (2006, 379) found that provincial "governments' ideology has an impact on public expenditures, the Left spending more than the Center and the Right." However the ability of governments to act ideologically was constrained by the dictates of fiscal policy.

One study of fiscal policy during the period 1962-1998 combined federal and provincial budgets in their analysis (Kneebone and McKenzie, 1999). They included a party variable, with "left-wing" governments being Liberal, NDP, and Parti Quebecois and "right-wing" governments being PC, Social Credit, and Union Nationale. Kneebone and McKenzie (1999, 94) found that party ideology mainly affected the "expenditure impulse" (meaning the level of discretionary spending after controlling for economic conditions) but not the "revenue impulse" (tax levels after controlling for economic conditions) or the "fiscal impulse" (the net effect of both expenditure and revenue impulses). They concluded from their evidence that leftist governments do account for higher levels of discretionary expenditures as well as deficits. As Kneebone and McKenzie 1999, 109) explain, "governments we have identified with a 'left wing'

fiscal ideology tended to engage in looser fiscal policy than so-called 'right wing' governments. Indeed, while the latter have tended to initiate fiscal policies that on average were associated with discretionary decrease in the primary deficit/GDP ratio, the former have initiated fiscal policies that on average were associated with no change in the primary deficit/GDP ratio." In sum, contrary to the Cameron thesis, four studies of provincial spending patterns found greater fiscal frugality by parties of the right [Blais and Nadeau (1992), Petry, Imbeau, Crête and Clavet (1999), Kneebone and Mckenzie (1999), and Tellier (2006)], whereas one study conducted by Abizadeh and Gray (1992) reported that no ideological effects were present.

The Canada Variables

The Canadian provinces provide a perfect test case for Cameron's thesis. Over the 1966-2009 period 151 (34%) of provincial 440 budgets showed surpluses and 289 showed deficits of varying sizes, thereby providing substantial variance in the dependent variable. Of course the measure of deficits must be standardized given the wide variance between the budgetary outlays of Prince Edward Island (with 140,772 people in 2009) versus those of the largest province of Ontario (with 13,047,550 in 2009), so the appropriate metric to use is the deficit or surplus as a percentage of total expenditures.[3] It is commonplace to use deficits (or debt) as a percentage of Gross Domestic Product, but we plan to utilize GDP as an independent "control" variable to explain indebtedness. Since there are serious methodological issues when the same metric is employed on the left and right sides of an equation, we follow the recommendation of Borrelli and Royed (1995, 228) to use "a measure of budget balance that is not *automatically* affected by changes in one of the independent variables." Accordingly, our dependent variable (DEFICITS) is the deficit or surplus as a percentage of total expenditures.

Political Variables

Since the Canadian provinces are parliamentary systems where executive-legislative powers over budgeting are fused, the important institutional features are largely constants, allowing us to focus on a few salient political variables. As our primary concern is with the impact of political parties on deficits, our first independent variable (PARTY) measures party ideology. Unlike the federal government of Canada, where only the Liberals or the Progressive

[3] Statistics Canada supplied the authors with Table 385-0001 (revenue, expenditure, and deficit/surplus data by province since 1989) and generated those data for the earlier fiscal years 65/66 to 91/92. The two series are not entirely comparable due to some relatively minor accounting changes, but they are sufficient for purposes of this analysis. Our study does not compare deficits across the forty-four years, but rather takes each year as the "unit of analysis" based upon the deficit/surplus as a percentage of total expenditures for each fiscal year. Moreover, a comparison of revenue, expenditures, and deficit/surplus for the overlapping years of 1989-1992 shows that the different accounting rules yielded only minor differences in those budget totals.

Conservatives (now the Conservatives) wholly governed during the period 1966-2009, those two parties governed the provinces for only 319 (73%) of the 440 years; the other 121 years were shared by the leftist New Democratic Party or NDP (66 years) and the rightist Social Credit Party (32 years), as well as some parties unique to specific provinces. In Quebec Province the Union Nationale Party governed for 4 years, as did the Parti Quebecois for 17 years; and the Saskatchewan Party governed Saskatchewan Province for a period of two years.

We want to know if left-of-center parties are or are not better fiscal stewards than right-of-center parties. With the "first-past-the-post" electoral system in Canada, which almost always guarantees that one political party will have the majority of legislative seats and thus become the Government of the Day, we will simply rely upon published studies of how experts have classified the major Canadian political parties ideologically. Two specific studies serve our purposes particularly well, as in combination they rank all but two (minor) parties that governed the provinces during 1966-2009, and both studies utilize a 10-point scale (0 being ultra-left and 10 being ultra-right). Here are the scale positions of various Canadian political parties as determined by Castles and Mair (1984) and by Huber and Inglehart (1995). Since both studies scored three similar parties, the average will become the "scored position" for purposes of analysis in this paper.

	Castles/Mair	Huber/Inglehart	Scored Position
New Democratic Party	3.2	2.9	3.1
Bloc Quebecois		3.5	3.5
Liberal Party	5.3	5.1	5.2
Progressive Conservative Party	6.5	7.3	6.9
Social Credit Party	7.8		7.8
Reform Party		9.0	9.0

The Reform Party never governed any province during our timeframe. Although two purely regional parties were not scored by either study, we consulted with Canadian party experts who offered assessments of the Union Nationale Party which governed Quebec (4 years) and the Saskatchewan Party which governed that province (2 years).[4] Thus we assigned scores of .70 to the Union Nationale Party and .55 to the Saskatchewan Party in this analysis.

One potential problem to be addressed concerns laws enacted prohibiting deficit spending. For example, the analysis conducted by Alt and Lowry (1994, 817) of U.S. state deficits was complicated by the fact that 26 states prohibited deficits from being carried over into the next fiscal year or biennium. Alt and Lowry noted, however, that it was unclear whether those laws were obeyed or evaded as their "attempts to measure the enforcement of these laws directly has so far proved unavailing" (also see Poterba 1995, 1996). More recent research by

[4] We thank Professor Lawrence LeDuc, R. Kenneth Carty, Mildred A. Schwartz and John Courtney for their valuable insights.

economists Mahdavi and Westerlund (2011, 966) evaluated state balanced budget requirements (BBRs) enacted during the period 1961-2006 and found "that the presence of some BBRs, especially those in the form of controls on re-budgeting and no-deficit-carryover, may help the sustainability of narrower balances." However, they issued the caution that "[w]ithout a *political will* to engage in fiscally sustainable policy there is virtually no rule which can induce an unwilling government to do so." For Canada, no province enacted such laws until the mid-1990s. Even then, as in the United States, those laws with fiscal restraints have not imposed very rigid requirements on provincial budgetary authorities (see Simpson and Wesley, 2012; Philipps, 1997; Geist, 1997). To assess whether the enactment of balanced budget laws imposed psychological constraints on the budgeting process, another dummy variable is employed (BUDGETLAW). Every year beginning with the year of enactment is coded "1" and all previous years are coded as "0" in the analysis reported here. All years are coded "0" for Nova Scotia, Prince Edward Island, Newfoundland and Labrador since they enacted no such legislation, whereas the other provinces enacted balanced budget laws in 1995 (Alberta, Saskatchewan, Manitoba, and New Brunswick), 1999 (Ontario), 2000 (British Columbia), and 2002 (Quebec). In total, our analysis includes 351 fiscal years (or 80%) that are unencumbered by any balanced budget law.

One problem faced by previous researchers who studied OEDC countries was that so few were majoritarian systems. In his study of 18 OEDC countries, Sakamoto (2001, 538) took note that his conclusions about the impact of PR systems on deficits were "tentative" due to the "limited number of majoritarian counties in this study"—United States, United Kingdom, France, Canada, and Australia. Since the Canadian provinces do not employ proportional representation but rather rely upon single-member districts where plurality elects (so-called "first-past-the-post"), the fact that two-thirds of the 440 provincial budgets showed deficits is *prima facie* evidence that majoritarian systems do not always show fiscal restraint. In fact, only 21 of those 440 budgets were brought down by "minority" governments in which the ruling party was usually Progressive Conservative (11) rather than NDP (6) or Liberal (4). And those "minority" governments held office only in half the provinces, namely Nova Scotia (6), Ontario (6), Manitoba (5), Saskatchewan (3), and Quebec (1). This group of 21 "minority" governments brought down budgets with 8 surpluses (38%) and 13 deficits, which is only slightly better than the number of surpluses (34%) for majority governments. Since the vast majority of budgets (419) were brought down by "majority" governments, they are coded "1" whereas the twenty-one budgets brought down by "minority" governments are coded "0" for the dummy variable (MAJMINGOVT) included in our analysis.

The hypothesis that elections drive deficits is predicated on the assumption that frequent elections would force competitive parties to bid for votes by promising increased public expenditures. The "political business cycle" theory also hypothesizes that governments have electoral incentives to increase spending and run up deficits prior to an election, as was suggested in the findings reported by Alesina, Cohen and Roubini (1993, 18) based on their study of fourteen OECD countries. For Canada, during the period 1966-2009 there were a total of 116 provincial elections. A dummy variable (ELECTIONS) was included to test the impact of

elections, with the fiscal year during which an election occurred coded as "1" and all other fiscal years coded as "0" in our regression analysis.

Economic Variables

In his analysis Cameron (1985) utilized simple correlation coefficients to answer a straightforward question: do left-of-center governments incur higher deficits than right-of-center governments? He said they do, but the economists who followed Cameron were trying to answer a more complicated question—namely, what factors cause increasing government spending, deficits, or indebtedness? As such, the economists engaged in this line of inquiry were primarily concerned with macroeconomic conditions and only secondarily with political and institutional features of those countries. More importantly, Cameron (1985) imposed no controls on his bivariate correlations, which prevented him from knowing whether party ideology was more important than macroeconomic conditions as a cause for the deficits he was tracking. Thus, since the economy is the primary driver of government spending, revenues, and indebtedness, the validity of our findings with respect to party ideology would be strengthened if they persist after "controls" are imposed for macroeconomic conditions. In evaluating six explanations for rising deficits, Hahm, Kamlet, and Mowery (1995, 188) argue that "macroeconomic conditions do influence the deficits of industrialized democracies," although "substantial variation across countries and within countries over time remains unexplained. Nonetheless, any analysis of deficits must incorporate the influence of the state of the economy." Consequently, our analysis will be more inclusive than that of Cameron (1985) but not nearly as exhaustive as most of the economic studies that we have discussed.

It is standard practice in this area of research to include the unemployment rate and the rate of economic growth or decline in analytical models (Tavares 2004; Roubini and Sachs 1989a, 1989b; Roubini, Sachs, Honkapohja and Cohen 1989; Alesina, Cohen and Roubini 1992, 1993; Cusack 1999; Sakamoto 2001; Borrelli and Royed 1995; Haan and Sturm 1994; Hahm, Kamlet and Mowery 1996;). A higher jobless rate increases government spending and puts upward pressure on deficits while growth in Gross Domestic Product (GDP) presumably would generate more revenue, reduce public outlays for welfare programs, and reduce deficits. Most analysts do not include the inflation rate in studies of indebtedness, though some have employed real GDP to control for inflation (Hahm, Kamlet and Mowery 1996; Borrelli and Royed 1995). But inflation does become a relevant variable when the objective is to evaluate fiscal policy generally (Cowart 1978) or to test for the political manipulation of fiscal policy for electoral gain (that is the "political business cycle" hypothesis; see Alesina, Cohen and Roubini 1993; Alesina 1989). For GDP, the yearly change in nominal or real Gross National Product is the appropriate metric which virtually every study utilizes, and we similarly include the change in nominal GDP (GNPCHANGE) in our analysis. For example, FY86 begins on April 1, 1985, so we would

calculate the year-to-year change in GDP from 1984 to 1985, which would correspond with the first nine months of FY86.[5]

We also include the unemployment rate (UNEMPLOYMENT) for the calendar year that corresponds with the first nine months of each fiscal year.[6] For example, since FY86 began on April 1, 1985 and ended on March 31, 1986, nine months occurred in the previous calendar year, which allows us to assess the impact of the current jobless rate on the current budget. Some analysts utilize the "change" in the unemployment rate from the previous year(s) to the current year (Tavares 2004; Haan and Sturm 1997; Hahm, Kamlet and Mowery 1996; Edin and Ohlsson 1990; Cowart 1978) while others employ the actual unemployment rate (Sakamoto 2001). We chose the latter on the premise that the "change" may not be as indicative as the "level" of joblessness in affecting government spending. Consider a yearly change in 1979-1980 from 3% to 4% versus a yearly change in 1989-1990 from 8% to 9%; the former would be a 33% increase while the latter would be a 12.5% increase. Even though the former "change" is much larger, the political significance of a 9% unemployment rate would dwarf a 4% unemployment rate and, more importantly, a 9% jobless rate would have a huge impact on government spending for welfare and jobless benefits as compared to only 4% (which is virtually the "full employment" standard for unemployment). Or more commonly, if this metric is calculated as simply the change in unemployment as U_t minus U_{t-1} (Tavares 2004; Cowart 1978), in both our examples the change in unemployment would be +1% but that result also masks the more important political fact that the level of unemployment in 1990 was more than twice the rate in 1980.

Most of the previous studies did not include population in their models, though Sakamoto (2001, 539) tested (but dismissed) the 65+ age group on the assumption that the size of the older population puts upward pressure on budgets. We will employ total population (POPULATION) not only because budget size reflects population but also because the variation in population among the ten Canadian provinces is great. The yearly population estimates for each province were obtained from Statistics Canada, so we include the population of each province during the

[5] Statistics Canada supplied the authors with nominal values for provincial Gross Domestic Product for 1961-1980 in Table 384-0015 (now terminated) and the revised GDP series for 1981-2009 inTable 384-0002.

[6] Statistics Canada supplied the authors with Table 282-0086 (provincial unemployment rates from 1976 to the present) and retrieved those data for the earlier period 1965-1975 for British Columbia, Ontario, and Quebec but only "regional" unemployment rates for Atlantic Canada and the Prairie Provinces. For purposes of this analysis, the yearly regional unemployment rate for the Prairie Provinces was assigned to Alberta, Saskatchewan, and Manitoba and the yearly regional unemployment rate for Atlantic Canada was assigned to Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and New Brunswick.

calendar year (nine months) that begins each fiscal year.[7] Thus, for FY86, the population estimate for 1985 would be included.

Finally, given that future deficits are fueled by past deficits, it is highly unlikely that a deficit (especially a large deficit) can be converted into a surplus within the space of one fiscal year. For that reason, many studies test a "lagged" deficit or debt measure to explain future government spending or deficits (Haan and Sturm 1997; Hahm, Kamlet and Mowery 1996; Haan and Sturm 1994; Sakamoto 2001; Roubini, Sachs, Honkapohja and Cohen 1989). We include such a variable (DEFICITLAG) to reflect the deficit (or surplus) as a percentage of total expenditures for the previous fiscal year (say FY85) as a predictor of deficits in the current fiscal year (FY86 in this example).

Analysis and Findings

Although some researchers limit their analysis to only political variables (Grilli, Masciandaro, Tabellini, Malinvaud and Pagano 1991), the conventional approach is to include political variables alongside economic variables. As noted, the primary motivation of economists has been to explain government spending and deficits rather than focus solely on the question of whether party ideology matters. Since the impact of party ideology is most relevant here, our approach will be to utilize one regression model that includes political and economic variables, plus the deficit "lagged" from the previous fiscal year. By this method we can assess if party ideology matters, and whether party ideology persists as an explanatory factor even after controls for unemployment and economic growth are introduced.

We employ a Prais-Winsten estimation using STATA. Time series data often violate the assumption that errors in estimation are independent of one another. In time series data, it is very likely that a measurement occurring at time *t* is a function of measurement occurring at time *t-1*. This problem is known as serial autocorrelation. In most time series models, *stationarity* can be achieved through modeling of the impact of time on estimates; in other words, modeling the function that is occurring within errors in estimation. For example, one way of achieving stationarity uses a simple differencing of data: $Y_{i} = X_{i} - X_{i-1}$. The data in our dataset are provincial level statistics for all Canadian provinces for the period 1966-2009. We wish to build a model which achieves stationarity for each province as the data for each province have slightly different trend characteristics. A Prais-Winsten estimation clustering by province allows us to correctly control for serial autocorrelation (AR1). Prais-Winsten is similar to Cochrane-Orcutt, but it does not result in the loss of the first case during the estimating procedure due to the latter approach first regressing the untransformed data to obtain residuals needed to calculate the estimate ρ based on the regression of ε on ε_{t-1}. Prais-Winsten, therefore, proves to be a more efficient method of estimating the model. The transformed model reports a Durbin-Watson statistics of 2.03, which means that there is virtually no autocorrelation impacting model estimates. As noted in Table 1, three variables were log-transformed: GDP, Population, and

[7] Statistics Canada supplied the authors with Table 051-0005 featuring annual population estimates for each province from 1965 to the present.

Unemployment. In distribution analysis, it was noted that these variables were slightly skewed. Log-transformation is a method of overcoming skewness so that the variables conform to the basic assumptions of normal data distribution that is required in regression analysis.

Party ideology as a predictor of deficit spending is positive and highly significant in the regression model. The positive coefficient indicates that provincial governments with majority conservative political party control are significantly more likely to run surpluses and avoid deficit spending than are provinces with more liberal party majority control. The evidence based on Canada provincial governments is counter to what Cameron found in his correlative analysis. Not surprising, balanced budget laws did not seem to have the psychological effect of reducing budget deficits their advocates claim. Controlling for other political and economic variables in the model, the balanced budget law variable is statistically insignificant. That finding is consistent with the most rigorous empirical analysis of these laws available (Simpson and Wesley 2012, 291), which found "no discernible effect in restraining expenditure growth relative to revenue growth in most provinces" of Canada. Also the lagged deficit variable and the majority-minority government variable were both statistically insignificant. Thus, Party and Election are the only two political variables rising to the level of statistical significance. Election years are more likely to witness deficit spending, which is consistent with earlier findings. Finally, both economic variables operate as hypothesized. High unemployment is associated with deficit spending, a reflection of government responding to economic stress, while provinces with higher GDP were more likely to run budget surpluses.

In sum, our analysis offers the strongest evidence to date that party ideology affects public indebtedness at the subnational level of government. And although our finding of greater fiscal frugality by rightist parties is contrary to the Cameron hypothesis, it is consistent with the findings of other Canadian researchers who have analyzed expenditure or deficit patterns among the provinces (Tellier 2006; Kneebone and Mckenzie 1999; Petry, Imbeau, Crête and Clavet 1999; Blais and Nadeau 1992). But the fact that party ideology affects Canadian provinces differently than countries of the European Community begs the question of whether there is a partisan-fiscal dynamic that is unique to Canada, or is instead applicable to subnational governments in general. The answer to this question will require more research on deficits and debts by subnational governments, though some clues are suggested by the existing literature.

Economists Kneebone and McKenzie (1999, 93) believe "that the fiscal policy choices of national governments have been prevalent in this literature because most country's subnational governments do not have sufficient budget flexibility to enable them to manipulate their budgets in response to political considerations." A related fact is that in the United States and other federations, subnational governments may be constrained by balanced budget legislation (unlike the case in the provinces during the period studied by Kneebone and McKenzie, 1999). Even more important are bond ratings as a source of fiscal discipline on the provinces, and what Kneebone (1994, 162) observed about Canada may also have wider application to other federal regimes. "Financial markets have not imposed the same standards of fiscal behavior on the federal government as they have on provincial governments because financial markets judge that the federal fiscal authorities faces a 'softer' budget constraint than the provinces." A similar verdict was rendered by economists Richard Bird and Almos Tassonyi (2003, 117). Looking at

the Canadian experience, although "there are essentially no administrative or formal political constraints on budgetary behavior at the provincial level," nonetheless "history plus democracy plus markets seems on the whole to have kept Canada's subnational governments, different though their paths may have been, more clearly on the path of fiscal prudence than the federal government."

Thus, it can be hypothesized that subnational governments have different fiscal impacts based on limited evidence from other federal regimes. One likely impact is that, unlike the counter-cyclical fiscal policies adopted by national governments, subnational governmental fiscal policy has pro-cyclical effects. This was the conclusion reached by Rodden and Wibbels (2010) based on their analysis of seven federal regimes—namely, Argentina, Australia, Brazil, Canada, Germany, India, and the United States. They speculated that the pro-cyclical effects resulted from the various balanced budget requirements, though admittedly many of them could be avoided or evaded with little consequence.

If the bond markets, and elections, coupled with hard or soft balanced budget laws impose some degree of restraint on subnational fiscal policy that are weaker, if not entirely absent, at the national level, those factors may account for the greater fiscal frugality of subnational governments. And if the combined effects of all three factors are indicative of a "conservative" political culture, then perhaps the electorate would show a preference for rightist parties who try to embrace fiscal restraint since neither they, nor leftist parties, are responsible for exerting counter-cyclical fiscal policies during periods of economic stress. Sørensen, Wu and Yosha (2001,1305) studied fiscal policy among the U.S. state and local governments during 1978-1994 and tested whether a "conservative" political culture had any effect. Their empirical analysis indicated "that the fiscal policy of conservative governments exhibits less procyclical budget surpluses. This is consistent with our interpretation that less surplus procyclicality in states with stringent balanced budget rules may reflect a general conservative attitude." All this is speculation, of course, pending future research on the impact of party ideology on deficits and indebtedness by subnational authorities not only in Canada but in federal regimes across the globe.

Table 1: Prais-Winsten Estimation (AR1): Canadian Provincial Budgets (1966-2009)

Dependent Variable: Percentage of either the deficit or surplus in relation to variable total expenditures (Negative=Deficit; Positive=Surplus)

	B	s.e.	t	P>|t|	95% Confidence Intervals
Party	0.00082	0.00024	3.29	0.009	[0.00026, 0.00139]
BudgetLaw	0.00381	0.01176	0.32	0.753	[-0.02280, 0.03043]
MajMinGov	-0.00134	0.01108	-0.12	0.906	[-0.02641, 0.02374]
Election	-0.01428	0.00436	-3.28	0.010	[-0.02413, -0.00442]
Logged GDP[a]	0.05542	0.01668	3.32	0.009	[0.01768, 0.09315]
Logged Population[a]	-0.08280	0.02266	-3.65	0.005	[-0.13408, -0.03153]
Logged Unemp.[a]	-0.10231	0.02027	-5.05	0.001	[-0.14817, -0.05645]
DeficitLag	-5.30e-06	2.51e-06	-2.11	0.064	[-0.00001, 3.71e-0.7]
Constant	0.77136	0.20619	3.74	0.005	[0.30493, 1.23779]

Rho 0.70

N=430

F (8, 9)= 12.34 ($p<0.001$)

R^2=0.13

Root MSE= 0.06091

Durbin Watson (original) = 0.841
Durbin Watson (transformed)= 2.02

[a] These variables were logged because data distributions were skewed.

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