XIX

Volume XIX, Number 1, May 2016

Journal of Applied Economics

Osvaldo Meloni

Electoral opportunism and vertical fiscal imbalance

UCEMA

Edited by the Universidad del CEMA
Print ISSN 1514-0326
Online ISSN 1667-6726

Journal of Applied Economics. Vol XIX, No. 1 (May 2016), 145-168

ELECTORAL OPPORTUNISM AND VERTICAL FISCAL IMBALANCE

Osvaldo Meloni*
Universidad Nacional de Tucumán

Submitted September 2014; accepted July 2015

Evidence of political budget cycles from cross-country studies has been rationalized as coming from the voters' cost to process the available information and asymmetric information. This explanation has also been adopted in most cross-province studies, leaving aside variables related to the incentive structure of fiscal federalism. This paper investigates electorally induced fiscal fluctuations in Argentina for the period 1985–2007. Province-level dynamic panel data reveal that vertical fiscal imbalances in subnational districts fuel fiscal expansion and changes in expenditure composition, favoring current expenditure to the detriment of investment, in election years. Vertical fiscal imbalances make electoral opportunism cheaper and more profitable.

JEL classification codes: D72, P16
Key words: political budget cycle, vertical fiscal imbalance, opportunism, Argentina

I. Introduction

Retaining political power is one of the main goals of incumbent parties. Politicians devote a great deal of effort and rely on a wide variety of strategies, including budget manipulation, to help their parties (or themselves) to remain in office. The available evidence on politically motivated budget cycles based on subnational-level studies finds that incumbents from developing as well as from developed countries increase public outlays, change the expenditure mix, and avoid taxing their constituencies in election years (Galli and Rossi 2002; Gonçalves Veiga and Veiga 2007; Drazen and Eslava 2010). This opportunistic behavior is either

* Osvaldo Meloni: professor of economics, Universidad Nacional de Tucumán, Argentina, Avda. Independencia 1900, San Miguel de Tucumán (4000). E-mail: omeloni@herrera.unt.edu.ar. I wish to thank the Editor, two anonymous referees, José Bercoff, Víctor Elías, Daniel Lema, Martín Rossi, Mariano Tommasi, participants of the LACEA, SAAP and AAEP meetings and the Workshops at the University of Tucumán and University of San Andrés for comments and valuable suggestions to earlier versions of this paper. Álvaro Domínguez, Paola Ganum, Ana Lucía Montes and Martín Perdomo provided superb research assistance. All remaining errors are mine. I gratefully acknowledge the support of the CIUNT Grant F 510 and PICT 2012, Project 0641. The usual disclaimer applies.

reported but vaguely accounted for or explained by resorting to different degrees of voter awareness, voters' costs to process information, and low-transparency fiscal policy (Ahkmedov et al. 2004), leaving aside a more obvious candidate for subnational-level studies: the incentive from rules governing the distribution of resources and spending between the central government and the subnational districts in a federation.

This paper investigates the role of the incentive structure of fiscal federalism in electorally induced budget fluctuations for the case of Argentina. In particular, I focus on vertical fiscal imbalance (henceforth, VFI), a distinctive feature of Argentine fiscal federalism. Provinces' vertical fiscal imbalance originates from the fact that, on average, only a small fraction of their expenditures is financed by local taxes and the rest comes from sizable transfers from the central government. As pointed out by Saiegh and Tommasi (1999), large vertical fiscal imbalances in most subnational districts result in perverse incentives for local authorities and citizens. On the one hand, local politicians enjoy a large share of the political benefit of spending and pay just a fraction of the political cost of taxation. Most of the money they spend on public goods comes from the "common pool" of resources administered by the central government. Therefore, it is expected that local authorities use that additional low-cost spending power to remain in office. On the other hand, voters have incentives to reward local politicians who are effective in extracting resources from the central government. In a setting like this, political budget cycles (PBCs) may arise even if voters' awareness or ability to process information is uniformly distributed among provinces. That is, independently of the information structure of the game and its cost, local incumbents have incentives to manipulate fiscal variables because the benefits in terms of constituency support are substantially higher than the costs.

To preview my results, I find strong evidence that incumbents manipulate fiscal variables in election years. Governors increase expenditures, run budget deficits, and change the expenditure composition to remain in power. I show that this behavior is mostly driven by vertical fiscal imbalance. The results are robust to the estimation method.

The rest of the paper is organized as follows. The next section surveys the empirical literature on PBCs. Section III discusses some key features of the Argentine federalism and section IV considers the fiscal behavior of Argentine provinces in election and non-election years by means of non-parametric tests. Section V describes the two-step econometric strategy to study the importance

of VFI in Argentine political budget cycles, while section VI presents the results from the panel data estimation. Finally, section VII concludes.

II. Previous literature

The PBC literature arises basically from observations on the fiscal behavior of incumbents in the proximity of elections. The theoretical PBC models, whether driven by adverse selection *à la* Rogoff and Sibert (1988) or spurred by moral hazard considerations as in Persson and Tabellini (2000), conclude that incumbents engage in pre-election profligacy to influence voters and maximize their chances of remaining in office.[1] To a large extent, the empirical evidence is supportive of the central conclusions of the opportunistic PBC theory. For example, Schuknecht (2000), analyzing the fiscal performance of 24 developing countries for the period 1973–1992, finds out that incumbents try to influence the electorate by augmenting public expenditures rather than lowering taxes. Moreover, his estimations back the well-known hypothesis that governments' favorite instrument to expand fiscal policy is capital spending (public works programs). Brender and Drazen (2005) also contribute to the empirics of PBCs by examining a data set containing 106 countries over the period 1960–2001. They find that the observed fiscal deficit cycle in their sample is mainly driven by the behavior of new democracies. Actually, when new democracies are removed from the sample, PBC disappears. The authors conjecture that voters in new democracies have neither fiscal information nor the ability to process it correctly. Conversely, in established democracies, relevant data to evaluate economic policy are readily available to experienced voters, who can interpret the information properly. Instead of looking at the age of democracy to search for the explanation of political budget cycles, Shi and Svensson (2006) distinguish between developing and developed countries. Working with a panel of 85 countries over a 21-year period, they conclude that the size of election-induced budget cycles is greater in developing countries. This empirical evidence supports a moral hazard model of electoral competition in which voters' inferences

[1] There are also ideological reasons that could explain budget manipulation before ballots. Polarized political environments result in political budget cycles as well.

from fiscal policy are biased because they observe incumbents' moves with a lag. In their model, PBCs are independent from incumbents' ability and depend exclusively on electoral incentives. In opposition, for Alt and Lassen (2005) political budget cycles are related to budget transparency instead of the degree of development or the age of democracy. Using a sample of 19 OECD countries in the 1990s, they identify a persistent pattern of electoral cycles in low transparency countries (developing or industrialized), while no such cycles can be observed in high transparency countries. In a the same line of research, Streb et al. (2009), based on the fact that in constitutional democracies fiscal policy is carried out by the executive with the agreement of the legislature, find PBCs in developed and mature democracies where the executive faces weak checks and balances or there is low rule of law. Streb et al. (2012) have stronger evidence that confirms that same pattern, using not only yearly data but also quarterly data that allows identifying the electoral year more precisely.

Single-country studies verify PBCs too. Gonzalez's (2002) analysis of Mexico's fiscal policy between 1957 and 1997 reveals that the Federal Government made systematic use of public spending on infrastructure and current transfers as a means to earn votes. Moreover, Gonzalez sustains that the magnitude of the election cycle was exacerbated during the country's most democratic episodes.

Subnational-level panel data also support PBCs, not only for developing countries, which might be expected given the cross-country evidence, but also for developed ones. In their study on the fiscal policy of German *Länder*, Galli and Rossi (2002) conclude that elections affect the total local spending and several of its categories as well as the fiscal deficit. Interestingly, they show an alternative empirical specification including dummy variables for post-electoral and pre-electoral years with estimated negative coefficients indicating that spending is not cut systematically in the post-election year but progressively in the following years. In a similar fashion, Petry et al. (1999), working with Canadian provinces' data, confirm the existence of electoral cycles in government activity.One way to reconcile the conjectures from cross-country studies, which emphasize democracy maturity as a key to explaining PBCs, with this evidence from Germany and Canada, is to assume that asymmetric information on fiscal issues and voters' costs to process fiscal information is unevenly distributed across subnational units.[2]

[2] As mentioned earlier, since the evidence on cross-country studies is disputed, there are also other explanations (Alt and Lassen, 2005; Streb et al., 2009).

As reported by Gonçalves Veiga and Veiga (2007), the mayors of Portuguese mainland municipalities also behave opportunistically in pre-electoral periods, increasing the total expenditures and changing their composition, favoring items that are highly visible to the electorate.

PBC at subnational level is also obtained by Lema and Streb (2013) for Argentine provinces in the period 1985–2001. Their emphasis is on the influence of the federal incumbent on provincial PBCs. They found evidence on important systematic differences between provinces in the size of the electoral manipulations, depending on the political alignment with the federal executive. In particular, governors aligned with the President get more discretionary transfers from the federal government so they can increase spending in election years without deteriorating the budget deficit.[3]

The evidence of budget manipulation also includes episodes of changes in the expenditure composition in election years. As stressed by Drazen and Eslava (2010) in their study of Colombian municipalities, governments favor targeted expenditures (mainly infrastructure) to the detriment of non-targeted outlays (purchases of supplies and services, payment to other government entities, etc.). They find that voters reward incumbents who increase investment expenditures but only to the extent that they do so without running large election-year deficits.

In general, subnational-level studies limit their scope to testing political budget cycles and finding which fiscal instruments are used by incumbents (taxes, expenditures, or expenditure composition) to enhance their re-election prospects, assuming implicitly that the variables explaining opportunistic behavior are the same as the ones causing PBCs at the cross-country level. Only Ahkmedov et al. (2004), in their research on Russia's regional elections, present evidence of how the magnitude of the budget cycle decreases as voters' rationality and awareness increase. That is, the Russian Federation electorate learns as democracy matures.

Another common feature of empirical PBC studies at the subnational level is the absence of considerations related to the incentive structure of federalism in the fiscal analysis. This is rather surprising given the prominent literature

[3] Rumi (2013) also finds that Argentine central governments discriminate between governors who are politically affiliated with the President and those who are enrolled in the opposition: while allies receive cash transfers, the others gain in-kind transfers. Nonetheless, Rumi's paper does not focus on PBCs but on intergovernmental transfers.

highlighting the impact of vertical fiscal imbalance on fiscal discipline (see, for example, Rodden 2002, 2006). Only the previously mentioned paper by Lema and Streb (2013) in their investigation on Argentina called the attention on the role of discretionary transfers from the central government to feed district's PBCs, but their emphasis is on political alignment between incumbents at national and subnational level rather than the structure of Argentine federalism.

Jones et al. (2012) emphasize the role of vertical fiscal imbalance on Argentine gubernatorial electoral results. They provide a simple framework in which the incumbent parties use public spending to improve their chances of re-election and voters recompense them because that spending is not financed by local taxes but by the common pool administered by the Federal Government. Following the same line of reasoning, my paper extends Jones et al.'s analysis, focusing on the role of VFI in PBCs.

III. Fiscal federalism in Argentina

Argentina is constitutionally organized as a federal republic. It has 23 provinces and an autonomous federal district, the city of Buenos Aires. The most prominent feature of Argentine federalism is the discrepancy between the high degree of centralization regarding tax collection, in the sense that a significant amount of tax revenues are under the control of the Federal Government, and the important decentralization on the expenditure side. On average, provinces only finance 35% of their outlays with their own taxes, given that they are largely responsible for important government functions such as education, health, justice, security, and sanitation. The remaining 65% of local expenditure is financed by federal transfers that are distributed among districts by means of two mechanisms: the Federal Tax-Sharing Agreement (FTSA), which assigns cash transfers automatically according to percentages established by the law, and the discretionary channel, which allocates transfers based on political negotiations between the Federal Government and each province. The FTSA accounts for 62% of the provincial resources, while the non-automatic transfers represent 7%.

Changes in the amount of automatic transfers received by provinces depend mostly on the business cycle rather than on governors' actions. The main taxes included in the FTSA, like value-added and excise taxes, are procyclical, hence their collection and distribution among provinces grow sharply in good times and decrease abruptly in bad times. Conversely, the distribution of discretionary transfers is mainly related to political convenience. As shown by Bonvecchi and

Lodola (2011) discretionary transfers enable the President to directly target voters bypassing opposition provincial governors, while non-discretionary transfers pay off more to co-partisan governors by guaranteeing security in the reception of transfer monies. Rumi (2013) shows that the manipulation of transfers depends on the degree of competition faced by the national government in each sub-national government and on its strategy to win the maximum federal political support at the minimum cost (considering the size of each jurisdiction). Most non-automatic transfers have specific purposes, like salaries for welfare programs (current transfers) or public works (capital transfers).

It is well documented that the Argentine federal fiscal system provides poor incentives for provincial leaders and voters. Saiegh and Tommasi (1999), Saiegh et al. (2001), Spiller and Tommasi (2007) and Ardanaz et al. (2014), to cite the most relevant research papers, draw attention to the high degree of vertical fiscal imbalance and its consequences for efficiency and misallocation. Provinces behave as if they face a soft budget constraint, increasing their spending and reducing their local tax collection effort.[4] Thus, local politicians benefit from spending and pay only a small portion of the political cost of taxation. Precisely, a soft budget constraint is what they need in election years to remain in office. In addition, citizens have incentives to reward governors who are effective in obtaining resources from the central government. Profligacy is rewarded rather than punished at the polls because taxpayers do not pay the full price of public outlays (Jones et al. 2012). In this setting, voters' behavior does not depend on transparency or on the cost of information but on the rules of the federal distribution regime. Thus, it is expected that the larger the vertical fiscal imbalance, the more inclined politicians are to behave opportunistically. In other words, opportunism is cheaper, the larger the vertical fiscal imbalance.

Table 1 shows VFI descriptive statistics for each province over the period 1985–2007. I define VFI as total transfers from the federal government (including automatic and non-automatic transfers and oil and gas grants) as percentage of the total district revenues. From a simple inspection of Table 1, it can be verified that VFI varies substantially throughout time and districts.

[4] The term "soft budget constraint" not only includes the typical intergovernmental transfers to finance local budget disequilibria but also the assumption of local debt by national governments, rediscounts of local debt by the central bank, lack of controls on subnational borrowing autonomy, bailouts and subsidized credit to provincial state-owned firms.

Table 1. Vertical Fiscal Imbalance 1985-2007

District	Average (AVG)	Std. dev. (STD)	C. V. in % (STD/AVG)	Max	Min	Range (Max-Min)
Buenos Aires	52.94	2.21	4.18	56.13	47.08	9.06
Catamarca	94.05	2.05	2.18	98.42	91.14	7.28
Chaco	89.67	1.60	1.79	92.36	85.75	6.61
Chubut	86.47	1.62	1.87	89.04	81.96	7.07
Córdoba	65.83	4.08	6.20	73.29	57.95	15.34
Corrientes	89.76	1.17	1.30	92.81	88.07	4.74
Entre Ríos	77.50	2.49	3.21	81.63	72.11	9.52
Formosa	95.55	0.63	0.66	96.64	94.41	2.23
Jujuy	91.36	0.76	0.84	93.15	90.27	2.88
La Pampa	82.18	2.52	3.06	89.86	77.54	12.33
La Rioja	95.52	0.79	0.82	97.03	94.31	2.72
Mendoza	74.22	3.41	4.59	81.79	68.27	13.52
Misiones	85.29	3.89	4.56	91.37	74.99	16.38
Neuquén	86.57	4.40	5.08	93.98	79.59	14.39
Río Negro	81.47	3.27	4.02	90.76	77.27	13.48
Salta	85.59	3.70	4.33	93.13	79.08	14.05
San Juan	88.77	2.20	2.48	94.95	85.93	9.03
San Luis	83.71	2.53	3.03	87.98	78.99	8.99
Santa Cruz	91.28	2.46	2.69	95.44	87.39	8.05
Santa Fe	65.96	2.94	4.46	71.50	61.16	10.33
Santiago del Estero	91.16	1.76	1.93	95.68	88.09	7.59
Tierra del Fuego	85.09	4.41	5.18	93.29	76.24	17.05
Tucumán	81.52	2.93	3.60	89.27	74.74	14.52
City of Buenos Aires	17.06	3.41	19.99	25.06	12.79	12.26

Note: Vertical Fiscal Imbalance is total transfers from the federal government (automatic plus non-automatic plus oil and gas grants) as percentage of total revenues of the province. Std. dev. stands for standard deviation, C. V. for coefficient of variability.

IV. A brief look at fiscal behavior in Argentine provinces

Is there any difference in the fiscal behavior of Argentine districts in election and non-election years? To give a preliminary answer to this question, I carry out several non- parametric tests for the following four variables with a high probability of being manipulated by incumbents in election years: total expenditures per capita, local revenues per capita, budget result per capita, and the ratio of current expenditures to direct investment. Table 2 provides the coding of each variable.[5]

[5] Summary statistics for the variables included in the econometric estimations are shown in Table A2 of the Online Appendix.

Table 2. Definition of variables

Variable	Definition
Dependent	
$EXPENDITURE_{it}$	Real total expenditure per capita for province *i* in year *t*. (pesos of 2004 per inhabitant)
$REVENUES_{it}$	Real revenues from local taxes per capita for province *i* in year *t*. (pesos of 2004 per inhabitant)
$BUDGET\ RESULT_{it}$	Real budget result per capita in province *i* in year *t*. (pesos of 2004 per inhabitant) defined as real total revenues minus real total expenditures net of interest payments (primary budget result)
$EXPENDMIX_{ti}$	Ratio of current expenditures to direct investment for province *i* in year *t*. (pesos of 2004)
Independent	
$ELECTION\ YEAR_{it}$	Dummy variable that equals 1 in governor's election year and 0 otherwise.
VFI_{it}	Vertical fiscal imbalance is total transfers from the federal government (automatic plus non-automatic plus oil and gas grants) as percentage of total revenues of the province *i* in period *t*.
$ALIGNMENT_{it}$	Dummy variable that takes the value 1 if the governor of province *i* at period *t* is affiliated to the same party of the President, and 0 otherwise.
$INTERVENTION_{it}$	Dummy variable that takes the value 1 if province *i* in year *t* was intervened by the Federal Government and 0 otherwise
$DATE_{it}$	Dummy variable that takes the value 1 when gubernatorial elections are held on the same date as presidential elections and 0 otherwise
GDP_{it}	Real GDP per capita of province *i* in year *t*. (pesos of 2004 per inhabitant)
$GROWTH_{ti}$	Rate of growth of real GDP per capita of province i in year *t*.
IMR_{it}	Infant Mortality Rate in province *i* in year *t*. (per thousand live birth)

Note on data sources: Fiscal data (real total expenditures, real capital expenditures, real current expenditures, real revenues and budget result) at constant 2004 prices were drawn from Dirección Nacional de Coordinación Fiscal con las Provincias, Secretaría de Hacienda, Ministerio de Economía de la Nación. Population data and Infant Mortality rate were obtained from Argentina's bureau of statistics (Instituto Nacional de Estadística y Censos, known as INDEC). Real GDP was computed from several sources: Universidad Nacional de La Plata, Consejo Federal de Inversiones and Centro de Estudios de la Producción. Political and electoral data come from the Dirección Nacional Electoral and from the Andy Tow Electoral Atlas.

In the Argentine public accounts, expenditures are classified into two broad categories: current and capital expenditures. The main component of the former is the wage bill, while the latter comprises three main groupings: direct investment, mostly including investment in infrastructure and machinery; capital transfers, consisting of transfers to the private sector and other entities; and financial investments, containing the acquisition of financial assets. To study manipulation in the composition of spending, I concentrate my analysis on the ratio of current expenditures to direct investment.

I perform the Kruskal–Wallis analysis to test whether fiscal variables in non-election years and in election years originate from the same distribution and the

two-sample Kolmogorov–Smirnov test for equality of distributions for each of the 24 jurisdictions for the period 1985–2007.[6] Non-parametric tests provide useful information on the behavior of individual districts regarding policy variables. The null hypothesis in both tests is that the selected policy variables do not differ significantly during election and non-election periods. Notice that Argentine governors have the agenda power to set the dates of the gubernatorial polls, which might raise endogeneity concerns. However, election dates are rarely anticipated or postponed for more than six months and only extraordinarily moved from one year to another. Therefore, given that I work with annual data, they can be considered exogenous.

The body of Table 3 contains the number of districts – and their names – for which the null hypothesis is accepted at the 10% level. The results are mostly in line with the PBC hypothesis. The nulls of both tests are rejected for the majority of provinces, indicating that the fiscal variables diverge significantly in voting and non-voting years. In the case of *EXPENDITURE (*total expenditures per capita), the null of the equality of population test is accepted only for the province of Santa Fe, while the null of Kolmogorov–Smirnov is accepted for three provinces: Jujuy, Santa Fe, and Santa Cruz. *EXPENDMIX* (the ratio of current expenditures to direct investment) also shows significant differences in election and non-election years for most of the jurisdictions. The null of the Kruskal–Wallis test is accepted for Chaco, Jujuy, and Río Negro, and the Kolmogorov–Smirnov test for Chaco, Misiones, and Río Negro.

Similar outcomes are obtained for *REVENUES* (local revenues per capita), indicating that election years are different from non-election periods. The nulls of both tests of equality of population are accepted for Misiones, Santa Fe, and Santiago del Estero and the null of the equality of distribution test is accepted for Buenos Aires, Entre Ríos, and Santiago del Estero. This is rather unexpected since the overwhelming empirical evidence shows that incumbents do not manipulate local taxes in election years.

BUDGET RESULT (budget result per capita) shows the highest number of provinces for which the null is accepted in both tests. The null of the Kruskal–Wallis and Kolmogorov–Smirnov tests are accepted for four and seven provinces,

[6] I also perform the Wilcoxon/Mann–Whitney test of equality of population but the results are not presented since they coincide with those of Kruskal–Wallis.

respectively. A plausible explanation is that the budget result might have been endogenous in several districts and years, exhibiting a fiscal deficit. That is, governors run deficits or not depending on the availability of discretionary transfers to cover fiscal gaps.

Table 3. Provinces for which fiscal variables do not differ in election and non-election years

Tests	Total expenditures per capita	Local revenues per capita	Budget result per capita	Ratio of current expenditures to direct investment
Kruskal-Wallis	Santa Fe	Santa Fe, Santiago del Estero, Misiones	Misiones, San Juan, San Luis, Tucuman	Chaco, Jujuy, Rio Negro
	(1)	(3)	(4)	(3)
Kolmogorov-Smirnov	Santa Fe, Jujuy, Santa Cruz	Buenos Aires, Entre Rios, Santiago del Estero	Buenos Aires, Cordoba, Formosa, La Rioja, Misiones, Salta, Santa Fe	Chaco, Misiones, Rio Negro
	(3)	(3)	(7)	(3)

Note: Provinces for which the null hypothesis H0 is accepted for Kruskal-Wallis and Kolmorov-Smirnov tests (number of districts in parenthesis). H0: fiscal variables do not differ in election and non-election years. Null hypothesis accepted at 10% level. Total number of districts: 24

V. Econometric analysis

The Kruskal–Wallis and Kolmogorov–Smirnov tests provide useful insights into the behavior of fiscal variables in election and non-elections years, but they have obvious limitations. To begin with, they have asymptotic properties, which impose prudence when dealing with relatively small samples. Moreover, non-parametric tests are intrinsically univariate, which calls for a more sophisticated analysis. To test for the existence of PBCs and the conjectured connection between the structure of federalism and budget manipulation, I estimate panel data following a simple two-step strategy. Firstly, I test for budget manipulation in Argentina by means of the usual baseline equation estimated in PBC studies. That is, the key fiscal variables (F_{it}) depend on the timing of elections, coded *ELECTION YEAR*, the lagged value of fiscal variables (F_{it-1}), and several socioeconomic and political controls to account for variability in the data due to factors other than elections.

$$F_{it} = \beta_0 + \beta_1 F_{it-1} + \beta_2\, ELECTION\ YEAR_{it} + \beta_{3j}\, CONTROLS_{jit} + \varepsilon_{it}, \quad (1)$$

where *j* stands for control variable, *i* indexes jurisdictions and *t* represents time, from 1985 to 2007. I consider 22 of the 24 Argentine districts. I exclude the province of Tierra del Fuego and the Federal District from my analysis because their governors were appointed by the President of the Nation until 1991 and 1996, respectively, which impedes the identification of incumbent governors for various elections.[7]

Secondly, provided that budget manipulation is confirmed for one or more fiscal variables, I introduce the variable *VFI* (vertical fiscal imbalance) interacted with the election year dummy to assess the importance of Argentine federal structures for PBCs. That is,

$$F_{it} = \beta_0 + \beta_1 F_{it-1} + \beta_2\, ELECTION\ YEAR_{it} + \beta_3\, VFI_{it} * ELECTION\ YEAR_{it} + \beta_{4j}\, CONTROLS_{jit} + \varepsilon_{it}. \quad (2)$$

A. Dependent variables

I consider four policy instruments subject to potential manipulation by incumbents: total expenditures per capita, local revenues per capita, budget result per capita, and the ratio of current expenditures to direct investment.

B. Election-year variable

A key variable in my analysis is the election year dummy. According to the PBC theory, voting years are associated with fiscal deficit, increasing outlays, and decreasing local revenues. Likewise, following Drazen and Eslava (2010), the election year should be negatively correlated with the ratio of current expenditures to direct investment. Their argument is that spending shifts towards goods attractive to voters, like infrastructure, in the attempt to convince voters that the incumbent shares their spending priorities.

[7] Tierra del Fuego had the status of National Territory, dependent on the Federal Government, until 1991. Similarly, the City of Buenos Aires acquired the status of autonomy after the constitutional reform of 1994. As will become clear later, the exclusion of these districts is also recommended because most of the explanatory variables do not vary during the lapses when the federal government appointed the administrator of Tierra del Fuego and City of Buenos Aires. As a robustness check I run regressions including all 24 districts and the main results are sustained.

The usual problem in PBC studies, caused by the lack of coincidence between the *fiscal year* and the *election year*, is ameliorated in the case of Argentina since 62.4% of the elections in our data set were carried out in September and October and 81% from June to December.[8] I consider that five months is enough time to attempt to influence local constituencies through budget manipulation, so I define ***t*** as an election year if the voting ballot was carried out from June to December.

Since democracy was recovered in 1983, gubernatorial elections have taken place regularly every four years in most of the twenty-four districts. My data set includes 6 elections from 1983 to 2007. I only exclude the 1983 election because there was no party allied with the military regime and therefore there was no incumbent in that election.

C. Controlling for political and socioeconomic influences

My empirical study controls for three sources of political influences on fiscal policy variables: the coincidence of presidential and gubernatorial elections, the influence of party obedience when the governor and the President are aligned, and the direct intervention of the central government in some provinces facing political turmoil. Notice that subnational analysis allows me to control for historic and cultural variables at the country level that may affect my explanatory variables.

I construct a dummy variable coded *DATE* that takes the value 1 when gubernatorial elections are held on the same date as presidential elections and 0 otherwise. Before the constitutional reform, in 1994, presidential elections were held every 6 years and gubernatorial elections every 4 years, which implied concurrent polls (the same year, although not necessarily the same date) every 12 years. The reform introduced a 4-year period for presidents, opening the possibility of full coincidence with gubernatorial elections (the same day and month) since some governors, using their agenda power, could set election dates to coincide with the President's election.[9] The coincidence of presidential and gubernatorial elections gives local incumbents a great opportunity to position themselves in the

[8] For election dates, see Table A1 in the Online Appendix.

[9] This agenda power does not guarantee coincidence since governors could choose to move the gubernatorial polls away from the presidential elections. Another variable explaining the lack of coincidence between the two elections after the constitutional reform of 1994 is federal intervention.

national game and enhance their power in their provinces, so I anticipate that these years will show higher expenditures, lower local revenues, and budget deficits.

Jones et al. (2000), in their study on Argentina's fiscal federalism, found that provinces where the governor is affiliated to the same party as the President spend less than those led by the opposition. They conjecture that provincial governors who are politically allied with the President are more likely to internalize the effect of spending an additional unit of national resources due to internal party discipline. Even in a scenario of weak party obedience, allied governors may take advantage, in terms of electoral results, of supporting national policies aimed at controlling spending and the fiscal deficit. However, same party affiliation between President and governors may imply additional resources for governors, as reported for Lema and Streb (2013), or different (better) kind of resources for allies as noted by Rumi (2013). To capture the effect of alignment between incumbents at national and subnational level, I include the dummy variable *ALIGNMENT*, which takes the value 1 if the governor of a given province is allied with the President and 0 otherwise. The codification of this variable is not straightforward. The fracture of the two most important parties (PJ and the UCR/FREPASO *Alianza*) resulted in some atypical alliances. In the years following the 2001/2002 crisis, there was a major break in the Peronist party, which ruled the country in the periods 1989–1999 and 2002–2007. One of the factions, led by the Governor of the small San Luis province, Adolfo Rodríguez Saa, became the opposition of President Kirchner, head of the winning faction. The other main party, the UCR/FREPASO *Alianza*, also shattered and one of the groups joined Kirchner. I also account for the agreements between some provincial parties and the incumbent President during the 1990s.[10]

The so-called "federal intervention" is another source of influence on policy variables. The Argentine Constitution allows the Federal Government to take control of a province in certain extreme cases of social commotion.[11] Upon intervention, one or more branches of the provincial government are dissolved,

[10] For the years 2003, 2004, and 2007, I code as 1 the provinces of Mendoza, Río Negro, and Catamarca, administered by UCR governors allied with the Peronist President Kirchner (called "Radicales K"). In contrast, the province of San Luis is coded 0 despite being administered by the Peronist governor Rodríguez Saa. For the period 1996–1999, I code as 1 the provinces of Tucumán and Tierra del Fuego to account for the alliances of Fuerza Republicana and Movimiento Popular Fueguino with President Menem (Peronist).

[11] According to the Constitution, the general rule is that only the Congress can declare the intervention of all or one of the powers of a province or the city of Buenos Aires (art. 75 inc. 31). When Congress is in recess, the Executive can declare the intervention of a district but is obliged to call simultaneously the Congress to treat the subject matter (art. 99 inc. 20).

and the Federal Government appoints a new authority (called *interventor*) who serves for a short term until order is re-established. I expect the *interventor* to improve the budget result, diminishing the total expenditures, augmenting the local taxes, and decreasing the ratio of current to capital expenditures. The dummy variable *INTERVENTION* takes the value 1 if the President declares intervention in a given district and 0 otherwise. During the period 1983–2007, there were six episodes of federal intervention, two of them in the Province of Corrientes in the years 1992–1993 and 2000–2001 and the others in the provinces of Catamarca (1991), Tucumán (1991), and Santiago del Estero (1994).[12]

Socioeconomic conditions may also affect the subnational fiscal performance; thus, I include five control variables in several specifications of the proposed baseline equation: the rate of growth of GDP per capita (*GROWTH*), the level of GDP per capita (*GDP*), the infant mortality rate (*IMR*), the budget result lagged one period, and vertical fiscal imbalance (*VFI*). I expect growing and richer districts to have higher levels of expenditure and revenues per capita as well as a higher proportion of capital expenditures relative to the current outlays than low-income districts. Likewise, provinces exhibiting high infant mortality rates are expected to force governors to augment public outlays and lower the local tax pressure. On the other hand, the budget result per capita lagged one period is expected to influence the next year's fiscal behavior. In the context of the financial limitations suffered by Argentine provinces in most of the period under study, with the exception of 1993–94 and 1996–99, a high fiscal deficit in t-1 demands corrective measures like diminishing public outlays and increasing local revenues in t.

Finally, I anticipate higher values of VFI to be associated with fiscal expansion and high ratios of current outlays to direct investment. Nonetheless, this effect may be offset by the fact that most capital transfers from the Federal Government to the provinces are earmarked.

[12] The Federal Government took control of the Province of Corrientes twice, from February 1992 to December 1993 and from December 1999 to December 2001. Catamarca experienced intervention from January to December 1991; Tucumán, from January to October 1991; and Santiago del Estero from December 1993 to July 1995.

VI. Results

Table 4 presents estimations of the typical PBC equation for the selected fiscal instruments. Regressions (1), (3), (5), and (7) display the estimations of the full model for each independent fiscal variable, while regressions (2), (4), (6), and (8) only contain the control variables that pass the .10 level of significance, so they are the ones upon which I base my conclusions. As already remarked, all the models include lagged dependent variables to capture the rigidity of the budget from one year to another, so I estimate using the dynamic panel technique developed by Arellano and Bond with robust standard errors.[13]

A. Do incumbents manipulate fiscal variables? If so, which instruments do they manipulate?

My estimations show that budget result worsens, public expenditure increases and changes its composition favoring investment in infrastructure and machinery in election years. Comparing with non-gubernatorial election years, expenditures rise, on average, by 78 pesos per capita in election years, which means an increment of 3.4% with respect to the average expenditure per capita of the sample. I also find that the budget result per capita deteriorates by 50.3% and the ratio of current expenditures to direct investment diminishes by 18.3% in election years relative to their respective sample averages. As in most of the PBC empirical studies, I find that the coefficient of *ELECTION YEAR* in the local revenues per capita regression is not significant at the usual levels, indicating that incumbents do not resort to local taxes to enhance their chances of remaining in office.

It is also observed in Table 4 that the lagged dependent variables are statistically significant at the customary levels in all the equations, supporting the choice of the model and confirming that inertia is very important in budgetary studies. The variables controlling for socioeconomic conditions are statistically significant too and present the anticipated sign in most of the regressions. The positive and significant coefficients of the rate of growth of GDP per capita and the level of

[13] As a robustness check, I also estimate equations 1 and 2 by OLS with fixed effects and robust standard errors. The results are displayed in the Online Appendix, Tables A3 and A4.

GDP per capita in regressions (2) and (4) verify the role of the business cycle in the evolution of expenditures and local revenues. Likewise, as the GDP per capita augments, the ratio of current expenditure to direct investment diminishes, indicating that public investment is typically stimulated in expansions and adjusted downwards in recessions. Unsurprisingly, the estimated coefficient of budget result per capita lagged one period is always in the hypothesized direction and significant at the .01 level. Similarly, the estimated coefficients for infant mortality rate are positively related to the total expenditures per capita and negatively related to the budget result per capita, local revenues per capita, and ratio of current expenditure to direct investment. Instead, VFI has a negative impact on the budget result and a positive impact on expenditure composition and local revenues per capita, but fails to detect any noteworthy relationship with expenditures per capita.

The performance of the variables representing political controls is rather mixed. On one hand, none of them reach the .10 significance threshold in the regression explaining expenditures per capita, but on the other hand, *ALIGNMENT* shows statistical significance and the expected sign in the local revenues per capita and budget result per capita regressions and *DATE* in the expenditure mix estimation. *INTERVENTION* is significant in regressions 4, 6, and 8, indicating that the federal control of provinces under turmoil contributes to improving the local revenues and budget result as well as the expenditure mix, favoring investment.

B. What is the role of VFI in the fitted PBC equations?

The GMM estimations presented in Table 5 support my conjecture about the role of VFI in expenditure per capita and expenditure composition during election years. Regression (2) shows that the interaction term *VFI*ELECTION YEAR* is positive and statistically significant, indicating that the propensity of incumbents to manipulate expenditures to remain in office in election years is stronger in subnational districts showing large degrees of VFI. That is, the larger the transfers from the federal government in election years, the higher the expenditures per capita. This is consistent with the prevailing idea that discretionary transfers to provinces augment in election years.[14]

[14] The link between a narrow definition of vertical fiscal imbalance (discretionary transfers as percentage of total district revenues) and elections is explored in the Online Appendix, Table A5.

Table 4. Do Incumbent governors manipulate fiscal variables?

	EXPENDITURE		*REVENUES*		*EXPENDMIX*		*BUDGET RESULT*	
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$EXPENDITURE_{t-1}$	0.7694***	0.7774***						
	(0.0605)	(0.0588)						
$REVENUES_{t-1}$			0.5329***	0.5216***				
			(0.0586)	(0.059)				
$EXPENDMIX_{t-1}$					0.4844***	0.5019***		
					(0.0222)	(0.0199)		
$BUDGET\ RESULT_{t-1}$	0.5987***	0.6095***	0.0383***	0.0387***	-0.0039***	-0.0043***	0.3259***	0.3463***
	(0.1171)	(0.1169)	(0.0126)	(0.0126)	(0.0011)	(0.0012)	(0.0502)	(0.0521)
$ELECTION\ YEAR_t$	74.6783***	77.6299***	0.6918	0.3739	-1.3842***	-1.4657***	-66.8875**	-67.3192***
	(25.8696)	(26.5516)	(2.6422)	(2.7154)	(0.412)	(0.4378)	(27.8586)	(25.4678)
VFI_t	8.4371		12.5482***	12.4219***	0.4413***	0.4266***	-12.1678*	-12.1719*
	(7.1398)		(1.5806)	(1.5961)	(0.1137)	(0.1081)	(6.6342)	(6.5228)
GDP_t	2.2758***	2.3416***	0.5244***	0.5287***	-0.0099	-0.1538***	0.2873	4.5963***
	(0.8281)	(0.8236)	(0.1524)	(0.1517)	(0.0072)	(0.055)	(0.3263)	(1.2328)
$GROWTH_t$	3.9654**	3.4512*	0.7209**	0.7454**	-0.1374***		3.892***	
	(1.9591)	(2.0511)	(0.2923)	(0.2925)	(0.0478)		(1.1403)	
IMR_t	9.6745*	8.7273	-1.7949**	-1.8844**	-0.2737**	-0.2496**	-14.532***	-14.4843***
	(5.6052)	(5.6292)	(0.734)	(0.7701)	(0.1171)	(0.1037)	(4.7107)	(4.6281)
$DATE_t$	100.4337		-12.5467		-1.4513**	-1.6692**	-79.2936	
	(79.6206)		(11.009)		(0.6425)	(0.6641)	(53.4604)	
$ALIGNMENT_t$	-24.3023		14.0492**	13.4927**	-0.0620		117.1578***	114.757***
	(33.5354)		(5.5852)	(5.661)	(0.3207)		(32.9328)	(33.726)
$INTERVENTION_t$	-100.5234		23.8686***	22.9679***	2.8886*	2.9431*	198.2757	192.909***
	(81.1489)		(6.4327)	(6.6086)	(1.5068)	(1.5476)	(55.2092)	(55.0468)
Constant	-471.382	-358.1058	-196.842***	-191.188***	6.2994	2.5828**	277.9186	370.895***
	(394.5138)	(352.412)	(54.3787)	(56.6381)	(3.3418)	(1.2524)	(137.8999)	(137.0822)
Test: average autocovariance in residuals of order 1 is 0. Pr > z =	0.0030	0.0033	0.0046	0.0041	0.0306	0.0308	0.0008	0.0009
Test: average autocovariance in residuals of order 2 is 0. Pr> z =	0.3296	0.2578	0.5287	0.5121	0.3627	0.3635	0.7227	0.4959

Note: Standard errors in parenthesis below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10. Observations *N* = 506. Variable z refers to standard normal distribution.

The influence of VFI on the expenditure mix during election years is best captured by regression (6). The coefficient of the interaction term *VFI*ELECTION YEAR* is positive and statistically significant, which means that provinces showing a large degree of VFI increase their current expenditures relative to their direct investment in election years. This result suggests that there are two opposite forces at work during election years. There is a "pure effect of opportunism", captured by the coefficient of *ELECTION YEAR*, that provides an incentive to incumbents to raise the "visible" outlays (direct investment) to the detriment of current expenditures because constituencies want to receive what they pay for. This is Drazen and Eslava's (2010) result. Leaving aside considerations of the social rate of return of public investment, this effect can be termed "positive" for constituencies since elections motivate incumbents to favor investment over current expenditures.

A "VFI effect" also exists, which discourages constituencies from controlling the allocation of resources from the "common pool" (since they pay only a portion of them) and tempts governors to spend on salaries, contracts (personnel in general), and other forms of current expenditure to obtain the support of selected groups. This effect can be dubbed "negative" for the province because it boosts current spending to the detriment of investment.

The estimations reveal that the total impact of *VFI* on outlay composition (considering both the direct effect and the interaction term) is negative (-0.30). Conversely, the total impact of *ELECTION YEAR* on the ratio of current expenditures to direct investment is -1.35, signifying that the "pure opportunism effect" prevails over the "VFI effect."

Table 5 also shows that the interaction term *VFI*ELECTION YEAR* is negative and statistically significant at 10% for the regression having budget result per capita as a dependent variable suggesting that budget result worsens in election years as VFI increases. However, as already mentioned, the budget result can be considered endogenous in several districts and years due to previously agreed discretionary transfers to cover fiscal gaps. Finally, the interaction term fails to be significantly related to the variable local revenues per capita which is an expected result: it is generally accepted that incumbents avoid upsetting their constituencies in election years with increases in tax pressure.

Table 5. What is the source of PBC in Argentine provinces? The role of VFI

	EXPENDITURE		*REVENUES*		*EXPENDMIX*		*BUDGET RESULT*	
Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$EXPENDITURE_{t-1}$	0.7678***	0.7785***						
	(0.0603)	(0.0613)						
$REVENUES_{t-1}$			0.5328***	0.5216***				
			(0.0585)	(0.0590)				
$EXPENDMIX_{t-1}$					0.5033***	0.5241***		
					(0.0235)	(0.0191)		
$BUDGET\ RESULT_{t-1}$	0.6020***	0.6077***	0.0384***	0.0388***	-0.0038***	-0.0041***	0.3233***	0.3443***
	(0.1142)	(0.1138)	(0.0127)	(0.0126)	(0.0011)	(0.0012)	(0.0503)	(0.0524)
$ELECTION\ YEAR_t$	-417.8898**	-375.1545**	-12.8242	-16.3309	-12.8713***	-13.6091***	127.2782	124.041
	(164.1066)	(147.713)	(27.9845)	(26.4498)	(3.7872)	(3.7734)	(106.916)	(104.722)
VFI_t	-9.1977	-10.2992	-12.5627***	-12.446***	-0.4561***	-0.4462***	12.5094*	11.7078*
	(7.2046)	(7.2115)	(1.5963)	(1.6134)	(0.1159)	(0.1102)	(6.8028)	(6.5036)
VFI_t* $ELECTION\ YEAR_t$	5.9179***	5.3971***	0.1631	0.2016	0.1380***	0.1468***	-2.3344*	-2.2675*
	(2.0822)	(1.9011)	(0.3308)	(0.3129)	(0.0438)	(0.0435)	(1.3732)	(1.3277)
GDP_t	2.2813***	2.2801***	0.5242***	0.5284***	-0.0092		0.2927	
	(0.8192)	(0.8211)	(0.1523)	(0.1515)	(0.0069)		(0.3287)	
$GROWTH_t$	3.9889**	3.4832*	0.7237**	0.7482**	-0.1368***	-0.1515***	3.8607***	4.2840***
	(2.0023)	2.0332)	(0.2925)	(0.2924)	(0.0460)	(0.0528)	(1.1574)	(1.2366)
IMR_t	9.6737*	9.896*	-1.7979**	-1.8858**	-0.2617**	-0.2317**	-14.6142***	-14. 62961***
	(5.6094)	(5.6522)	(0.7326)	(0.7689)	(0.1093)	(0.0980)	(4.7135)	(4.6193)
$DATE_t$	107.9915		-12.30		-1.2748**	-1.4158**	-82.2219	-75.9600
	(79.3658)		(11.2436)		(0.5739)	0.5822)	(53.6733)	(57.1822)
$ALIGNMENT_t$	-23.9622		13.9964**	13.4497**	-0.0859		117.437***	117.5354***
	(32.6850)		(5.5714)	(5.6673)	(0.03109)		(33.0506)	(33.0748)
$INTERVENTION_t$	-122.2679		23.3679***	22.346***	2.3134		205.764***	204.2024***
	(86.1419)		(7.0074)	(7.0287)	(1.4269)		(57.5396)	(57.9794)
Constant	-482.0211	-535.341	-196.904***	-191.452***	5.4377*	1.7272	283.1772**	802.1843
	(392.6137)	(408.4632)	(54.6433)	(56.9021)	(3.2092)	(1.2136)	(139.9138)	(544.913)
Test: average autocovariance in residuals of order 1 is 0. Pr > z =	0.0032	0.0034	0.0048	0.0043	0.0283	0.0272	0.0008	0.0010
Test: average autocovariance in residuals of order 2 is 0. Pr> z =	0.3402	0.2699	0.5433	0.5368	0.3588	0.3736	0.7629	0.6464

Note: Standard errors in parenthesis below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10. Observations N = 506. Variable z refers to standard normal distribution.

Notice that my results coincide with Lema and Streb (2013) in a key aspect: the existence of PBC in Argentine provinces. Their evidence also agrees with my mine regarding the variable feeding the PBC at subnational level: discretionary transfers from the federal government. However, the approaches are different. While Lema and Streb emphasize political alignments between national and subnational incumbents, I focus on the incentive structure governing the distribution of federal resources and thus I find that vertical fiscal imbalance, regardless of governor's party alignment, fuels PBC.

VII. Concluding remarks

This paper extends the Jones et al. (2012) analysis on the importance of vertical fiscal imbalance in Argentine gubernatorial elections. They show that voters have incentives to reward profligacy at the polls as long as incumbents finance it from the "common pool" of national resources. This paper also deals with the role of the incentive structure of fiscal federalism but the emphasis is on PBCs at the subnational level. I find that expansions in expenditures per capita and changes in expenditure composition, favoring current expenditures to the detriment of investment, are driven in election years by vertical fiscal imbalance. Local incumbents take advantage of resources collected by the central government, for which they pay just a fraction of the political cost of taxation.

The incentive structure governing the distribution of federal resources between the central government and the provinces has been an important topic in the fiscal federalism literature but has been largely ignored by PBC empirical studies dealing with cross-province data. They explain budget fluctuations in election years by relying on arguments resulting from cross-country studies, like the dispersion of the costs of processing fiscal information and/or the different degrees of voters' awareness across units of observation, to explain budget fluctuations in election years. Though these explanations are also plausible for subnational studies, I demonstrate that they are not unique. Thus, by making evident the role of vertical fiscal imbalance in elucidating Argentinean PBCs, this paper builds a bridge between these apparently unconnected literatures.

References

Akhmedov, Akhmed, and Ekaterina Zhuravskaya (2004). Opportunistic political cycles: test in a young democracy setting. *Quarterly Journal of Economics* 119: 1301-38.

Alt, James, and David Lassen (2005). The political budget cycle is where you can't see it: transparency and fiscal manipulation. Working Paper 05-03, EPRU.

Ardanaz, Martín, Marcelo Leiras, and Mariano Tommasi (2014). The politics of federalism in Argentina: implications for governance and accountability. *World Development* 53: 26-45.

Bonvecchi, Alejandro, and Germán Lodola (2011). The dual logic of intergovernmental transfers: presidents, governors, and the politics of coalition-building in Argentina. *Publius: The Journal of Federalism* 41: 1-28.

Brender, Adi, and Allan Drazen (2005). Political budget cycles in new versus established democracies. *Journal of Monetary Economics* 52: 1271-1295.

Drazen, Allan, and Marcela Eslava (2010). Electoral manipulation via expenditure composition: theory and evidence. *Journal of Development Economics* 92: 39-52.

Galli, Emma, and Stefania Rossi (2002). Political budget cycles: the case of the Western German Länder. *Public Choice* 110: 282-303.

Gonçalves Veiga, Linda, and José Veiga (2007). Political business cycles at municipal level. *Public Choice* 131: 45-64.

Gonzalez, María (2002). Do changes in democracy affect the political budget cycle? Evidence from Mexico. *Review of Development Economics* 6: 204-224.

Jones, Mark, Pablo Sanguinetti, and Mariano Tommasi (2000). Politics, institutions, and fiscal performance in a federal system: an analysis of the Argentine Provinces. *Journal of Development Economics* 61(2): 305-333.

Jones, Mark, Osvaldo Meloni, and Mariano Tommasi (2012). Voters as fiscal liberals. Incentives and accountability in federal systems. *Economics and Politics* 24(2):135-156.

Lema, Daniel, and Jorge Streb (2013). Party alignment and political budget cycles: the Argentine provinces. Documento de trabajo 520. Universidad del CEMA.

Persson, Torsteen, and Guido Tabellini (2000). *Political economics: Explaining economic policy*. MIT Press, Cambridge, MA.

Petry, François, Louis Imbeau, Jean Crête, and Michel Clavet (1999). Electoral and partisan cycles in the Canadian Provinces. *Canadian Journal of Political Science / Revue Canadienne de Science Politique* 32: 273-292.

Rogoff, Kenneth, and Ann Sibert (1988). Elections and macroeconomic policy cycles. *Review of Economic Studies* 55: 1-16.

Rodden, Jonathan (2002). Beyond the fiction of federalism. Macroeconomic management in multitiered Systems. *World Politics* 54: 494-531.

Rodden, Jonathan (2006). *Hamilton's paradox. The promise and peril of fiscal federalism*. Cambridge University Press, New York.

Rumi, Cecilia (2013). National electoral cycles in transfers to subnational jurisdictions. Evidence from Argentina. *Journal of Applied Economics* 17: 161-178.

Saiegh, Sebastián, and Mariano Tommasi (1999). Why is Argentina's fiscal federalism so inefficient? Entering the labyrinth. *Journal of Applied Economics* 2: 169-209.

Saiegh, Sebastián, Pablo Sanguinetti, and Tommasi (2001). Fiscal federalism in Argentina: Policies, politics, and institutional reform. *Economia. Journal of the Latin American and Caribbean Economic Association* 2: 157-200.

Schuknecht, Ludger (2000). Fiscal policy cycles and public expenditures in developing countries. *Public Choice* 102: 115-130.

Shi, Min, and Jakob Svensson (2006). Political budget cycles: do they differ across countries and why? *Journal of Public Economics* 90: 1367-1389.

Spiller, Pablo, and Mariano Tommasi (2007). *The institutional foundations of public policy in Argentina. A transactions cost approach*. Cambridge University Press.

Streb, Jorge, Daniel Lema, and Gustavo Torrens (2009). Checks and balances and political budget cycles: Cross-country evidence. *Kyklos* 62:425-446

Streb, Jorge, Daniel Lema, and Pablo Garofalo (2012). Temporal aggregation in political budget cycles. *Economía. Journal of the Latin American and Caribbean Economic Association* 13: 39-78.