



Munich Personal RePEc Archive

Budget Manipulation and Vertical Fiscal Imbalance

Meloni, Osvaldo

Universidad Nacional de Tucumán

2011

Online at <https://mpra.ub.uni-muenchen.de/50694/>
MPRA Paper No. 50694, posted 16 Oct 2013 07:16 UTC

Budget Manipulation and Vertical Fiscal Imbalance

Oswaldo Meloni*

Abstract

Evidence of Political Budget Cycles from cross-countries studies has been rationalized as coming from voter's cost to process available information and asymmetric information. This explanation was also 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 reveals that vertical fiscal imbalances in subnational districts fuel fiscal expansion and changes in expenditure composition, favoring current expenditure in detriment of investment, in election years.

Key Words: Political Budget Cycle; Vertical Fiscal Imbalance; Opportunism; Argentina

JEL Classification Codes: D72, P16.

* Universidad Nacional de Tucumán, Avenida Independencia 1900, San Miguel de Tucumán, Argentina. E-mail: omeloni@herrera.unt.edu.ar.

I thank José Bercoff, Víctor Elías, Daniel Lema, Martín Rossi, Jorge Streb and Mariano Tommasi, and participants of the Workshop at Universidad Nacional de Tucumán and Universidad de San Andrés and LACEA, Central Bank of Uruguay and AAEP meetings for comments and suggestions to an earlier version 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 26/F 408 and PICT 2008-0822. The usual disclaimer applies.

I. INTRODUCTION

Retaining political power is one of the main goals of incumbent parties. Politicians devote a lot 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 political 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. This opportunistic behavior is usually explained resorting to different degrees of voter awareness, voter's costs to process information and low transparency fiscal policy. That is, variables related to the democracy maturity hypotheses that usually stem from cross-country studies, 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 subnational districts in a federation.

This paper investigates the role of the incentive structure of fiscal federalism in electoral-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, generated by sizable transfers from the central government to the provinces. As pointed out by Saiegh and Tommasi (1999), large vertical fiscal imbalances in most sub national districts result in perverse incentives to local authorities and citizens. On 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 spent on public goods comes from the "common pool" of resources administered by the central government. So 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 at extracting resources from the central government. In a setting like this, Political Budget Cycles (PBC) may arise even if voter 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 benefits in terms of constituency support are substantially higher than costs.

The rest of the paper is organized as follows. Next section surveys the empirical literature on PBC. Section III discusses some key features of the Argentine federalism and section IV looks at 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 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. Theoretical PBC models, whether driven by adverse selection à la Rogoff and Siebert (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 chances to remain in office¹. To a large extent, the empirical evidence has been 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 augmenting public expenditures rather than lowering taxes. Moreover, his estimations back the well known hypothesis that government's favorite instrument to expand fiscal policy is capital spending (public works programs). Brender and Drazen (2005) also contribute to the empirics of PBC by examining a data set containing 106 countries over the period 1960-2001. They found that the observed fiscal deficit cycle in their sample was mainly driven by the behavior of new democracies. Actually, when new democracies were removed from the sample, PBC disappears. The authors conjecture that voters in new democracies have neither the 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 that interpret the information properly. Similar results are obtained by Shi and Svensson (2006) from a panel of 85 countries over a 21-year period. They present evidence of significantly larger and statistically more robust budget cycles in developing than in developed countries. The authors focused their analysis on budget balance concluding that, on average, fiscal deficits as percentage of GDP increases by almost 1% in election years. This empirical evidence comes to support a moral hazard model of electoral competition in which voters' inferences from fiscal policy are biased because they observe incumbent's moves with a lag. In their model, PBC are independent from incumbent's ability and depend exclusively on electoral incentives. More accurate, Alt and Lessen (2005) using a sample of 19 OECD countries in the 1990s, show that PBC is determined by the degree of transparency of fiscal policy and not by intrinsic characteristics of specific group of

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

countries. In other words, PBC also come out in developed countries showing low transparency fiscal policy.

Single country studies verify PBC too. The analysis of Gonzalez (2000) on Mexico's fiscal policy between 1957 and 1997 revealed that the federal government made systematic use of public spending in infrastructure and current transfers as 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 PBC not only for developing countries, which might be expected given cross-country evidence, but also for developed ones. As reported by Goncalves Veiga & Veiga (2007), majors of Portuguese mainland municipalities behave opportunistically in pre-electoral periods increasing total expenditures and changing their composition, favoring items that are highly visible to the electorate. Same kind of result is obtained by Lema (2008) for Argentine provinces in the period 1984-2001. He shows that deficits and public expenditures increase in election years and expenditures shift toward more visible public investment and away from current consumption goods. His evidence also suggests that governors politically aligned with the Executive receive more discretionary transfers, allowing provinces to increase spending without significant effects over the budget balance². Evidence on 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) in detriment of non-targeted outlays (purchases of supplies and services, payment to other government entities, etc.). They found that voters reward incumbents who increase investment expenditures but only to the extent that they do so without running large election year deficits.

Subnational jurisdictions of developed countries also display PBC. In their study on the fiscal policy of German *länder*, Galli and Rossi (2002) conclude that elections affect total local spending and several of its categories and also 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 systematically cut 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

² Rumi (2007) finds that Argentine central governments discriminate between governors politically affiliated with the president and those enrolled in the opposition: while allies receive cash transfers, the others get in-kind transfers

existence of electoral cycles in government activity. To reconcile the conjectures from cross-country studies that emphasize democracy maturity as key to explain PBC, to this evidence from Germany and Canada, asymmetric information on fiscal issues and voter's costs to process fiscal information has to be unevenly distributed across subnational units.

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

Another common feature of PBC empirical studies at 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 highlighting the impact of vertical fiscal imbalance on fiscal discipline (see, for example, Rodden 2002, 2006). Only recently, Jones et al. (2012) emphasize the role of vertical fiscal imbalance on argentine gubernatorial electoral results. They provide a simple framework where incumbent parties use public spending to improve their chances of reelection and voters recompense them because that spending is not financed by local taxes but from the common pool administered by federal government. Following the same line of reasoning my paper extend Jones et al. analysis focusing on the role of VFI on PBC.

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 the Argentine federalism is the discrepancy between the high degree 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) that assigns cash transfers automatically according to percentages established by the Law and the discretionary channel that allocates transfers based on political negotiations between the Federal government and each province. FTSA accounts for 62% of provincial resources while non-automatic transfers represent 7%.

Changes in the amount of automatic transfers received by provinces depend mostly on the business cycle rather than on governor's actions. Main taxes included in the FTSA, like value added and excise taxes, are procyclical, hence their collection and distribution among provinces grows sharply in good times and decreases abruptly in bad times. Conversely, the distribution of discretionary transfers is mainly related to political convenience. Rumi (2005) shows that manipulation of transfers depends on the degree of competition faced by the national government in each sub-national government and on its strategy to get maximum federal political support at a minimum cost (considering the size of each jurisdiction). Most of 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) and Spiller and Tommasi (2007) to cite the most relevant, have drawn attention to the high degree of vertical fiscal imbalance and its consequences on efficiency and misallocation. Provinces behave as if they face a soft budget constraint increasing spending and reducing local tax collection effort. 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 at obtaining resources from the central government. Profligacy is rewarded at the polls rather than punished 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 federal distribution regime. So, it is expected that the larger Vertical Fiscal Imbalance the more inclined are politicians to behave opportunistically. In other words, opportunism is cheaper the larger vertical fiscal imbalance.

Table 1 shows VFI descriptive statistics for each province over the period 1985-2007. I define VFI as local tax collection as percentage of total revenues. From a simple inspection of Table 1 it can be verified that VFI varied substantially throughout time and districts.

Table 1. **Vertical Fiscal Imbalance 1985- 2007.**

District	Average AVG	Standard Deviation STD	Coefficient of variability STD/AVG (%)	Max	Min	Range (Max-Min)
Buenos Aires	47.1	2.2	4.7	52.9	43.9	9.1
Catamarca	6.0	2.1	34.9	8.9	1.6	7.3
Chaco	10.3	1.6	15.5	14.3	7.6	6.6
Chubut	19.6	4.8	24.4	28.6	13.1	15.5
Córdoba	34.2	4.1	11.9	42.1	26.7	15.3
Corrientes	10.3	1.2	11.6	12.0	7.2	4.8
Entre Ríos	22.8	2.5	10.9	28.1	18.5	9.5
Formosa	4.5	0.6	14.3	5.6	3.4	2.2
Jujuy	8.7	0.8	8.8	9.7	6.9	2.9
La Pampa	18.4	2.5	13.8	23.4	10.6	12.8
La Rioja	4.5	0.8	17.5	5.7	3.0	2.7
Mendoza	29.1	3.3	11.3	33.8	20.5	13.3
Misiones	14.2	2.5	17.6	20.3	8.6	11.7
Neuquén	23.9	9.2	38.3	40.5	12.4	28.1
Río Negro	21.0	3.2	15.1	25.6	10.5	15.1
Salta	15.1	3.6	24.0	21.6	7.5	14.1
San Juan	11.2	2.2	19.5	14.1	5.0	9.0
San Luis	16.3	2.5	15.5	21.0	12.0	9.0
Santa Cruz	13.0	3.2	24.7	19.1	7.6	11.5
Santa Fe	34.0	2.9	8.6	38.8	28.5	10.3
Santiago del Estero	8.8	1.8	19.9	11.9	4.3	7.6
Tierra del Fuego	19.6	6.0	30.7	32.1	12.2	19.9
Tucumán	18.5	2.9	15.9	25.3	10.7	14.5
City of Buenos Aires (CABA)	82.9	3.4	4.1	87.2	74.9	12.3

Note: Vertical Fiscal Imbalance is local tax collection as percentage of total revenues.

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 carried out several non-parametric tests for the following four variables with high probability of being manipulated by incumbents in election years: *Total Expenditures per capita*, *Local Tax Collection per capita*, *Budget Balance per capita* and *the Ratio of Current Expenditures to Direct Investment*. In Argentine public accounts, expenditures are classified in two broad

categories: current and capital expenditures. The main component of the former is the *wage bill* while the latter comprises three main grouping: *Direct Investment*, including mostly investment in infrastructure and machinery; *Capital Transfers*, consisting of transfers to the private sector and other entities and *Financial Investments* containing the acquisitions 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 performed the Kruskal-Wallis test of equality of population and the two-sample Kolmogorov-Smirnov test for equality of distributions for each of the 24 jurisdictions for the period 1985-2007³. 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 elections and non-elections periods. Notice that Argentine governors have agenda power to set the dates of the gubernatorial polls which might raise endogeneity concerns. However, election dates are rarely anticipated or postponed more than six months and only extraordinarily moved from year to another. Therefore, given that I work with annual data, they can be considered exogenous.

The body of table 2 contains the number of districts -and their names- for which the null hypothesis is accepted at the 10% level. Results are mostly in line with the PBC hypothesis. The nulls of both tests were rejected for the majority of provinces indicating that fiscal variables diverge significantly in voting years and non-voting years. In the case of the variable *Total Expenditures per capita*, the null of the equality of population test was accepted only for the province of Santa Fe, while the null of Kolmogorov-Smirnov was accepted for three provinces: Jujuy, Santa Fe and Santa Cruz. 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 Kruskal-Wallis test was accepted for Chaco, Jujuy and Río Negro, while the Kolmogorov-Smirnov test for Chaco, Misiones and Río Negro.

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

³ I also performed the Wilcoxon/Mann-Whitney test of equality of population but their results are not presented since coincide with those of Kruskal-Wallis.

The variable *Budget Balance per capita* shows the higher number of provinces for which the null is accepted in both tests. The null of Kruskal-Wallis and Kolmogorov-Smirnov tests are accepted for four and seven provinces respectively. A plausible explanation is that Budget Balance might have been endogenous in several districts and years exhibiting fiscal deficit. That is, governors run deficits or not depending on the availability of discretionary transfers to cover fiscal gaps.

Table 2. **Do fiscal variables differ in elections and non-elections years? Kruskal-Wallis and Kolmogorov-Smirnov Tests.**

Provinces for which the null Hypothesis is accepted (Number of districts in parenthesis)

Tests	Total Expenditures per capita	Local Tax Collection per capita	Budget Balance per capita	Ratio of Current Expenditures to Direct Investment
Kruskal-Wallis	Santa Fe (1)	Santa Fe, Santiago del Estero, Misiones (3)	Misiones, San Juan, San Luis, Tucumán (4)	Chaco, Jujuy, Río Negro (3)
Kolmogorov-Smirnov	Santa Fe, Jujuy, Santa Cruz (3)	Buenos Aires, Entre Ríos, Santiago del Estero (3)	Buenos Aires, Córdoba, Formosa, La Rioja, Misiones, Salta, Santa Fe (7)	Chaco, Misiones, Río Negro (3)

Note: 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

Kruskal-Wallis and Kolmogorov-Smirnov tests provide useful insights on 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 the existence of PBC and the conjectured connection between the structure of federalism and budget manipulation, I estimate a 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 Political Budget Cycles (PBC) studies. That is, key fiscal variables (F_{it}) depend on the timing of elections, 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.

$$F_{it} = \beta_0 + \beta_1 F_{it-1} + \beta_2 ELECTION\ YEAR_{it} + \beta_3 CONTROLS_{jit} + \varepsilon_{it} \quad (I)$$

Where i indexes jurisdictions and t represents time that goes from 1985 to 2007. I consider 22 of the 24 Argentine districts. I excluded 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 impeded the identification of incumbent governors for various elections⁴.

Secondly, provided that budget manipulation is confirmed for one or more fiscal variables, I introduce the variable *Vertical Fiscal Imbalance (VFI)* interacted with the election year dummy, coded **ELECTION YEAR**, to assess the importance of Argentine federal structures on PBC. That is,

$$F_{it} = \beta_0 + \beta_1 F_{it-1} + \beta_2 ELECTION\ YEAR_{it} + \beta_3 VFI_{it} * ELECTION\ YEAR_{it} + \beta_4 CONTROLS_{jit} + \varepsilon_{it} \quad (II)$$

V.1. Dependent variables

I consider four policy instruments subject to potential manipulation by incumbents: *Total Expenditures per capita*, *Local Taxes Collection per capita*, *Budget Balance per capita* and the *Ratio of Current Expenditures to Direct Investment*.

V.2. 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 tax collection. Likewise, following Eslava and Drazen (2010) 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.

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 December⁵. I consider that five months is enough time to attempt influencing local constituencies through budget manipulation so I define t as an election year if the voting ballot was carried out from June to December.

⁴ Tierra del Fuego had the status of National Territory, dependent of the Federal government, until 1991. Similarly, the City of Buenos Aires acquired the status of autonomous after the constitutional reform of 1994.

⁵ On election dates, see Table 1A in the Appendix.

Since democracy was recovered in 1983, gubernatorial elections took place regularly in most of the 24 districts every four years. My data set includes six elections from 1983 to 2007. I only excluded the 1983 election because there was no party allied with the military regime and therefore there was no incumbent in that election.

V.3. 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 belong to the same party and the direct intervention of the central government on some provinces facing political turmoil. Notice that subnational analysis allows me to control for historic and cultural variables at 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 the same date as presidential elections and 0 otherwise. Before the constitutional reform, in 1994, Presidential elections were held every six years and gubernatorial every four years which implied concurrent polls (the same year, although not necessarily the same date) every twelve years. The reform introduced a four year period for President opening the possibility of full coincidence with gubernatorial elections (same day and month) since some governors, using their agenda power could set election dates to coincide with President's election⁶. The coincidence of Presidential and Gubernatorial elections gives local incumbents a great opportunity to position themselves in the national game and enhance their power in their provinces so I anticipate these years to show higher expenditures, lower local tax collection and budget deficits.

Jones, Sanguinetti and Tommasi (2000) in their study on Argentina's fiscal federalism found that provinces where the governor is affiliated to the same party as the President spent less than those led by the opposition. They conjecture that provincial governors 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, in supporting national policies aimed at controlling spending and fiscal deficit. To capture that effect, I include the dummy variable called SAME PARTY that takes the value 1 if the governor of a given province is allied with the President and 0 otherwise. The codification of this variable was not straightforward. The fracture of the two most important parties (*PJ*

⁶ This agenda power does not guarantee coincidence since governors could choose to move Gubernatorial Polls away from Presidential Elections. Another variable explaining the lack of coincidence between both elections after the constitutional reform of 1994 was federal intervention.

and *Alianza UCR/FREPASO*) resulted in some atypical alliances. In the years following the 2001/2002 crisis, there was a major break in the peronist party that 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 *Alianza UCR/FEPASO* 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 90's⁷.

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. Federal intervention is declared by the President with the agreement of the National Congress. Upon intervention, one or more branches of the provincial government are dissolved, and the federal government appoints a new authority (called *interventor*) who serves for a short term until order is reestablished. I expect the *interventor* to improve the budget balance, diminishing total expenditures, augmenting local taxes and decreasing the ratio of current to capital expenditures. The dummy variable FEDERAL INTERVENTION takes the value 1 if the President declares the intervention of a given district and 0 otherwise. In the lapse 1983-2007 there were six episodes of federal intervention, two of them on the Province of Corrientes in the years 1992-1993 and 2000-2001 and the others on the provinces of Catamarca (1991), Tucumán (1991) and Santiago del Estero (1994)⁸.

Socioeconomic conditions may also affect 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, the level of GDP per capita, infant mortality rate, Budget balance lagged one period and Vertical Fiscal Imbalance. I expect growing and richer districts to have higher levels of expenditure and revenues per capita and also a higher proportion of capital expenditures relative to current outlays than low-income districts. Likewise, provinces exhibiting high Infant mortality rate are expected to force governors to augment public outlays and lower local tax pressure. On the other hand, Budget Balance per capita lagged one period is expected to influence next year fiscal behavior. In the context of financial limitations suffered by Argentine provinces in most of the period under

⁷ In years 2003 and 2004, I coded 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 was coded 0 despite being administered by the peronist governor Rodríguez Saa. During the 1996-1999 I coded 1 the provinces of Tucumán and Tierra del Fuego to account for the alliances of *Fuerza Republicana* and *Partido Popular Fueguino* with President Menem (Peronist).

⁸ 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 was intervened from January to December 1991; Tucumán, from January to October 1991 and Santiago del Estero from December 1993 to July 1995.

study, with the exception of 1993-94 and 1996-99, high fiscal deficit in t-1 demand corrective measures like diminishing public outlays and increasing local tax collection in t.

Finally, I anticipate lower values of VFI (meaning low local tax collection) 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.

Table 3 provides summary statistics for the variables included in the econometric estimations. The coding of each variable is shown in the Appendix⁹.

Table 3. Descriptive Statistics. Period: 1985- 2007

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent Variables					
Expenditure per capita	506	2278.2	1365.4	592	12452.8
Local Revenues per capita	506	304.8	185.9	27.6	1369.3
Budget Balance	506	-133.7	314.2	-1339.0	873.3
Ratio of Current Expenditure to Direct Investment	506	8.0	8.0	1.0	118.7
Political and Socio economic controls					
Federal Intervention	506	0.02	0.13	0	1
Same Party	506	0.52	0.50	0	1
Same Date	506	0.055	0.23	0	1
GDP per capita	506	331.6	199.4	96.4	1221.8
Rate of Growth of GDP per capita	506	2.05	11.79	-30.05	46.3
Budget Balance lagged one period	506	-145.62	308.41	-1339.0	862.7
Infant Mortality Rate	506	21.7	6.8	9.3	46.6
PBC key variables					
Election Year	506	0.26	0.44	0	1
VFI	506	16.5	10.8	1.6	52.9

Note: numbers of districts: 22; numbers of periods: 23

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 regression (2), (4) (6) and (8) only contain control

⁹ See Table 2A

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, thus I estimate using the dynamic panel technique developed by Arellano and Bond with robust standard errors¹⁰.

VI.1. Do incumbents manipulate fiscal variables? If so, which are the instruments they manipulate?

My estimations show strong evidence that incumbent manipulate fiscal variables in election years. Governors increase expenditures, run budget deficits and change the expenditure composition favoring investment in infrastructure and machinery to remain in power. Comparing to non-gubernatorial election years, total expenditures rise, on average, 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 *Budget Balance per capita* deteriorates 50.3% and the *Ratio of Current Expenditures to Direct Investment* diminishes 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 ELECYEAR in the *Local Revenues per Capita* regression is not significant at usual levels indicating that incumbents do not resort to local taxes to enhance their chances to remain in office.

It is also observed in Table 4 that lagged dependent variables are statistical significant at customary levels in all equations, which support the choice of the model and confirm that inertia is very important in budgetary studies. Variables controlling for socioeconomic conditions are statistical 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 GDP per capita in regressions (2) and (4) verify the role of the business cycle in the evolution of expenditures and local tax collection. Likewise, as 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 Balance 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* is positively related to *Total Expenditures per capita* and negatively with *Budget Balance per capita*, *Local Revenues per capita* and the *Ratio of Current Expenditure to Direct Investment*. Instead, VFI has a negative impact on Budget Balance and positive on expenditure composition

¹⁰ As robustness check I also estimate equations I and II by OLS with fixed effects and robust standard errors. Results are displayed in the Appendix, Tables 3A and 4A.

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 SAME PARTY shows statistical significant and the expected sign in the *Local Revenues per capita* and *Budget Balance per capita* regressions and DATE in the expenditure mix estimation. INTERVENTION is significant in regressions 4, 6 and 8 indicating that federal control of provinces under turmoil contributes to improve local tax collection and budget balance as well as the expenditure mix, favoring investment.

[Table 4 about here]

VI.2. What is the role of VFI in the fitted PBC equations?

GMM estimations presented in Table 5 support my conjecture about the role of VFI on expenditure per capita and expenditure composition during election years. Regression (2) shows that the interaction term VFI*ELECTION YEAR is negative and statistically significant indicating that the tendency of incumbents to manipulate expenditures to remain in office is stronger in subnational districts showing large degrees of VFI. That is, the smaller the local tax collection relative to total revenues in election years, the higher expenditures per capita.

The effect of VFI on expenditure mix during election years is best captured by regression (7). The coefficient of the interaction term VFI*ELECTION YEAR is negative and statistical significant which means that provinces showing large degree of VFI (i.e. local tax collection as percentage of total revenues is small) increase current expenditures relative to 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” that incentives incumbents to rise “visible” outlays (Direct Investment) in detriment of current expenditures because constituencies want to get what they pay for. This is the Drazen and Eslava (2010) result and also my findings for Argentina reported in Table 4. Leaving aside considerations on the social rate of return of public investment, this effect can be termed as “positive” for constituencies since elections impulse incumbents to favor investment over current expenditures.

There exists also a “VFI effect” that discourages constituencies to control the allocation of resources from the “common pool” (since they pay only a portion of them) and tempt governors to spend on salaries, contracts (personnel in general) and other forms of current expenditure to get the support of selected groups. This effects can be dubbed as “negative” for the province because boosts current spending in detriment of investment.

Estimations reveal that the total impact of VFI on outlays composition (considering both the direct effect and the interaction term) is positive. Conversely, the total impact of ELECTION YEAR on the *Ratio of Current Expenditures to Direct Investment* is -1.44 signifying that the “pure opportunism effect” prevails over the “VFI effect”.

Table 5 also shows that the interaction term VFI*ELECTION YEAR fails to be significantly related to the variables *Budget Balance per capita* and *Local Revenues per capita*. 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. Regarding Local revenues, it is generally accepted that incumbents avoid upsetting their constituencies in election years with increases in tax pressure.

[Table 5 about here]

VII. CONCLUDING REMARKS

This paper calls the attention on the incentive structure of fiscal federalism to explain PBC at subnational district level in Argentina. I find that expansions in expenditures per capita and changes in expenditure composition, favoring current expenditures in detriment of investment, in election years are driven 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. Rather than punish profligacy and opportunism at the polls, voters have incentives to reward incumbents at playing the political game of extracting resources from the “common pool”

The incentive structure governing the distribution of federal resources between the central government and provinces has been an important topic in the fiscal federalism literature but 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 degree of voter’s 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 PBC 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". No. 05-03, EPRU Working Paper Series.

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.

Goncalves 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(2), 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*.

Lema, Daniel (2008). Conditional political budget cycle in argentine provinces. *Documento de trabajo N° 389. Universidad del CEMA*. December.

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(2), 273-292.

Porto, Alberto and Pablo Sanguinetti (2001). Political determinants of intergovernmental grants: Evidence from Argentina. *Economics and Politics* 13(3), 237-256.

- Rogoff, Kenneth and Ann Siebert (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 (2005) Electoral Cycles in Federal Transfers Evidence from Argentina. Paper presented at the Public Choice Society Meeting 2006.
- Rumi, Cecilia (2007). *Finanzas Públicas bajo Competencia Política. Marco Federal y Evidencia de Argentina*. Editorial Universidad Nacional de La Plata, Buenos Aires.
- Saiegh, Sebastian and Mariano Tommasi (1999) Why is Argentina's Fiscal Federalism so Inefficient? Entering the Labyrinth. *Journal of Applied Economics* II(1), 169-209.
- Saiegh, Sebastian, Pablo Sanguinetti and Tommasi (2001) Fiscal Federalism in Argentina: Policies, Politics, and Institutional Reform, *Economía (Review of the Latin American and Caribbean Economic Association)*, Primavera, 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.

Data Sources

The data set for this study was compiled from diverse sources. Fiscal variables at constant 2004 prices were drawn from the *Dirección Nacional de Coordinación Fiscal con las Provincias*, *Secretaría de Hacienda*, *Ministerio de Economía de la Nación*. Provincial GDP at constant prices originated from the Bureau of Statistics of each province and from *Universidad Nacional de La Plata* estimations, based on official figures. Population data were taken from the INDEC (the Argentinean Bureau of Statistics) and Infant Mortality rate figures from *Ministerio de Salud*. Electoral data come from *Dirección Nacional Electoral*, *Ministerio del Interior* and the Electoral Map of Andy Tow.

Table 4. Do Incumbent governors manipulate fiscal variables?

Explanatory Variables	Dependent Variables							
	Expenditures per capita		Local Revenues per capita		Ratio Current Expenditures to Direct Investment		Budget Balance per capita	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>EXPENDITURE</i> _{t-1}	0.7694*** (0.0605)	0.7774*** (0.0588)						
<i>REVENUES</i> _{t-1}			0.5329*** (0.0586)	0.5216*** (0.059)				
<i>RATIOCDI</i> _{t-1}					0.4844*** (0.0222)	0.5019*** (0.0199)		
<i>BUDGET BALANCE</i> _{t-1}	0.5987*** (0.1171)	0.6095*** (0.1169)	0.0383*** (0.0126)	0.0387*** (0.0126)	-0.0039*** (0.0011)	-0.0043*** (0.0012)	0.3259*** (0.0502)	0.3463*** (0.0521)
ELECTION YEAR _t	74.6783*** (25.8696)	77.6299*** (26.5516)	0.6918 (2.6422)	0.3739 (2.7154)	-1.3842*** (0.412)	-1.4657*** (0.4378)	-66.8875** (27.8586)	-67.3192*** (25.4678)
VFI _t	8.4371 (7.1398)		12.5482*** (1.5806)	12.4219*** (1.5961)	0.4413*** (0.1137)	0.4266*** (0.1081)	-12.1678* (6.6342)	-12.1719* (6.5228)
GDP per capita _t	2.2758*** (0.8281)	2.3416*** (0.8236)	0.5244*** (0.1524)	0.5287*** (0.1517)	-0.0099 (0.0072)	-0.1538*** (0.055)	0.2873 (0.3263)	4.5963*** (1.2328)
Rate of Growth of GDP per capita _t	3.9654** (1.9591)	3.4512* (2.0511)	0.7209** (0.2923)	0.7454** (0.2925)	-0.1374*** (0.0478)		3.892*** (1.1403)	
INFANT MORTALITY RATE _t	9.6745* (5.6052)	8.7273 (5.6292)	-1.7949** (0.734)	-1.8844** (0.7701)	-0.2737** (0.1171)	-0.2496** (0.1037)	-14.532*** (4.7107)	-14.4843*** (4.6281)
SAME DATE _t	100.4337 (79.6206)		-12.5467 (11.009)		-1.4513** (0.6425)	-1.6692** (0.6641)	-79.2936 (53.4604)	
SAME PARTY _t	-24.3023 (33.5354)		14.0492** (5.5852)	13.4927** (5.661)	-0.0620 (0.3207)		117.1578*** (32.9328)	114.757*** (33.726)
FEDERAL INTERVENTION _t	-100.5234 (81.1489)		23.8686*** (6.4327)	22.9679*** (6.6086)	2.8886* (1.5068)	2.9431* (1.5476)	198.2757 (55.2092)	192.909*** (55.0468)
Constant	-471.382 (394.5138)	-358.1058 (352.412)	-196.842*** (54.3787)	-191.188*** (56.6381)	6.2994 (3.3418)	2.5828** (1.2524)	277.9186 (137.8999)	370.895*** (137.0822)
Test that 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 that 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.

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

Variable	Dependent Variables							
	Expenditures per capita		Local Revenues per capita		Ratio Current Expenditures to Direct Investment		Budget Balance per capita	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>EXPENDITURE</i> _{t-1}	0.7678*** (0.0603)	0.7785*** (0.0613)						
<i>REVENUES</i> _{t-1}			0.5328*** (0.0585)	0.5216*** (0.0590)				
<i>RATIOCDI</i> _{t-1}					0.5033*** (0.0235)	0.5241*** (0.0191)		
<i>BUDGET BALANCE</i> _{t-1}	0.6020*** (0.1142)	0.6077*** (0.1138)	0.0384*** (0.0127)	0.0388*** (0.0126)	-0.0038*** (0.0011)	-0.0041*** (0.0012)	0.3233*** (0.0503)	0.3443*** (0.0524)
ELECTION YEAR _t	173.9003*** (50.3956)	164.554*** (48.9511)	3.4821 (5.7863)	3.8293 (5.6933)	0.9331 (0.7226)	1.075 (0.7135)	-106.1603** (41.7876)	-102.309*** (39.5161)
VFI _t	9.1977 (7.2046)	10.2992 (10.2921)	12.5627*** (1.5963)	12.446*** (1.6156)	0.4561*** (0.4625)	0.4462*** (-12.5094)	-12.5094* (6.8028)	-12.4954* (6.6346)
VFI _t * ELECTION YEAR _t	-5.9179*** (2.0822)	-5.3971*** (5.3971)	-0.1631 (0.3308)	-0.2016 (0.3129)	-0.138*** (-0.0688)	-0.1468*** (2.3344)	2.3344* (1.3732)	2.076 (1.3060)
GDP per capita _t	2.2813*** (0.8192)	2.2801*** (0.8211)	0.5242*** (0.1523)	0.5284*** (0.1515)	-0.0092 (0.0069)		0.2927 (0.3287)	
Rate of Growth of GDP per capita _t	3.9889** (2.0023)	3.4832* (2.0332)	0.7237** (0.2925)	0.7482** (0.2924)	-0.1368*** (0.0460)	-0.1515*** (0.0528)	3.8607*** (1.1574)	4.5846*** (1.2453)
INFANT MORTALITY RATE _t	9.6737* (5.6094)	9.896* (5.6522)	-1.7979** (0.7326)	-1.8858** (0.7689)	-0.2617** (0.1093)	-0.2317** (0.0980)	-14.6142*** (4.7135)	-14.5561*** (4.6288)
SAME DATE _t	107.9915 (79.3658)		-12.30 (11.2436)		-1.2748** (0.5739)	-1.4158** (0.5822)	-82.2219 (53.6733)	
SAME PARTY _t	-23.9622 (32.6850)		13.9964** (5.5714)	13.4497** (5.6673)	-0.0859 (0.03109)		117.437*** (33.0506)	114.932*** (33.7956)
FEDERAL INTERVENTION _t	-122.2679 (86.1419)		23.3679*** (7.0074)	22.346*** (7.0287)	2.3134 (1.4269)		205.764*** (57.5396)	199.454*** (56.8076)
Constant	-482.0211 (392.6137)	-535.341 (403.0832)	-196.904*** (50.5433)	-191.452*** (50.5433)	5.4377* (3.2092)	1.7272 (1.7236)	283.1772** (139.9138)	377.390*** (139.6356)
Test that 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	0.0009
Test that 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	0.5156

Note: standard errors in parenthesis below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10. Observations (N)= 506.

Appendix

Table 1 A. The timing of elections from 1985 to 2007. Number of gubernatorial elections carried out in a given month.

Month	Number of Elections	Percentage
January	0	0.0
February	0	0.0
March	1	0.9
April	2	1.7
May	19	16.2
June	7	6.0
July	1	0.9
August	8	6.8
September	52	44.4
October	21	17.9
November	3	2.6
December	3	2.6
Total number of elections	117	100.0

Note: Two-thirds (67.5%) of the gubernatorial elections (24 districts) took place in the last four months of the year.

Table 2A. Definition of Variables

Type of variable	Variable	Definition
Dependent	<i>EXPENDITURE_{it}</i>	Real Total Expenditure per capita for province <i>i</i> in year <i>t</i> . (pesos of 2004 per inhabitant)
	<i>REVENUES_{it}</i>	Real Revenues from local taxes per capita for province <i>i</i> in year <i>t</i> . (pesos of 2004 per inhabitant)
	<i>BUDGET BALANCE_{it}</i>	Real Budget Balance per capita in province <i>i</i> in year <i>t</i> . (pesos of 2004 per inhabitant)
	<i>RATIOCDI_{it}</i>	Ratio of Current Expenditures to Direct Investment for province <i>i</i> in year <i>t</i> . (pesos of 2004)
Key independent variable	<i>ELECTION YEAR_{it}</i>	Dummy variable that equals 1 in governor's election year and 0 otherwise.
	<i>VFI_{it}</i>	Vertical Fiscal Imbalance: Local tax collection as percentage of total revenues in province <i>i</i> in period <i>t</i> .
	<i>SAME PARTY_{it}</i>	Dummy variable that takes the value 1 if the governor of province <i>i</i> at period <i>t</i> is affiliated to the same party of the President, and 0 otherwise.
	<i>INTERVENTION_{it}</i>	Dummy variable that takes the value 1 if province <i>i</i> in year <i>t</i> was intervened by the Federal Government and 0 otherwise
	<i>GDP_{it}</i>	Real GDP per capita of province <i>i</i> in year <i>t</i> . (pesos of 2004 per inhabitant)
	<i>Growth GDP_{it}</i>	Rate of Growth of Real GDP per capita of province <i>i</i> in year <i>t</i> .
	<i>IMR_{it}</i>	Infant Mortality Rate in province <i>i</i> in year <i>t</i> . (per thousand live birth)
	<i>BUDGET BALANCE_{it-1}</i>	Real Budget Balance per capita of province <i>i</i> in year <i>t-1</i> . (pesos of 2004 per inhabitant)

Table 3 A. Do Incumbent governors manipulate fiscal variables? Robustness Check. Estimation Method: OLS with fixed-effects. Robust Standard Errors

Variable	Dependent Variables							
	Expenditures per capita		Local Revenues per capita		Ratio Current Expenditures to Direct Investment		Budget Balance per capita	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>EXPENDITURE</i> _{t-1}	0.7864*** (0.0750)	0.7762*** (0.0756)						
<i>REVENUES</i> _{t-1}			0.6083*** (0.0575)	0.6242*** (0.0549)				
<i>RATIOCDI</i> _{t-1}					0.5683*** (0.0197)	0.5702*** (0.0193)		
<i>BUDGET BALANCE</i> _{t-1}	0.5304*** (0.1568)	0.5022*** (0.1587)	0.0357** (0.0143)	0.0385*** (0.0134)	-0.0033*** (0.0010)	-0.0034*** (0.0011)	0.3833*** (0.0697)	0.3963*** (0.0699)
ELECTION YEAR _t	82.0353*** (25.1871)	85.0249*** (26.3591)	0.5410 (2.8626)	-0.0174 (3.0187)	-1.3196*** (0.4459)	-1.3722*** (0.4810)	-69.6061** (28.2911)	-71.0631** (26.5334)
VFI _t	10.6113 (6.5474)		9.9953*** (1.5749)	9.9950*** (1.5854)	0.1842*** (0.0507)	0.1693*** (0.0432)	-8.6410* (4.4632)	-8.8790* (4.4538)
GDP per capita _{t-1}	1.7837** (0.6867)	1.8927** (0.7013)	0.4195*** (0.1333)	0.4064*** (0.1356)	-0.0009 (0.0024)		0.2177 (0.2879)	
Rate of Growth of GDP per capita _t	4.7071*** (1.3030)	3.7544*** (1.3186)	1.0700*** (0.2422)	1.1552*** (0.2414)	-0.1222** (0.0475)	-0.1211** (0.0486)	3.2601*** (1.0470)	3.8338*** (1.1142)
INFANT MORTALITY RATE _{t-1}	4.9363 (3.7559)		-0.7017 (0.5285)		-0.1917*** (0.0689)	-0.1862*** (0.0639)	-7.6667*** (2.3614)	-7.6667*** (2.3226)
SAME DATE _t	107.613 (81.0086)		-9.6818 (11.3724)		-0.9934 (0.5838)		-87.4674 (58.3390)	
SAME PARTY _t	-27.2876 (23.6505)		10.9507** (4.7207)	12.0725** (4.8271)	-0.1091 (0.2794)		95.0620*** (24.8022)	93.2446*** (25.6394)
FEDERAL INTERVENTION _t	-34.0097 (42.2334)		19.6454*** (5.5525)	17.0337*** (5.8134)	2.7151** (1.0495)	2.6203** (1.0750)	154.1719*** (42.2783)	144.7131*** (43.3356)
Constant	-298.398 (418.544)	-39.2482 (308.1851)	-164.617*** (49.3998)	-180.596*** (42.8683)	5.0834** (2.0133)	4.7992*** (1.4588)	124.8768** (155.364)	198.6117* (113.0647)
R ² within	0.6433	0.6359	0.8552	0.8540	0.4395	0.4384	0.3061	0.3003
R ² between	0.9244	0.9440	0.8959	0.8940	0.8785	0.8716	0.0880	0.0948
R ² overall	0.8789	0.8940	0.8509	0.8501	0.5522	0.5502	0.2509	0.2577

Note: standard errors in parenthesis below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10. Observations (N)= 506.

Table 4 A. What is the source of PBC in Argentina? The role of VFI. Robustness Check. Estimation Method: OLS with fixed-effects. Robust Standard Errors

Variable	Dependent Variables							
	Expenditures per capita		Local Revenues per capita		Ratio Current Expenditures to Direct Investment		Budget Balance per capita	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>EXPENDITURE</i> _{t-1}	0.7854*** (0.0748)	0.7758*** (0.0768)						
<i>REVENUES</i> _{t-1}			0.6083*** (0.0576)	0.6243*** (0.0550)				
<i>BUDGET BALANCE</i> _{t-1}	0.5331*** (0.1551)	0.4965*** (0.1571)	0.0358** (0.0144)	0.0386*** (0.0135)	0.3892*** (0.0701)	0.3953*** (0.0702)	-0.0032*** (0.0010)	-0.0033*** (0.0011)
<i>RATIOCDI</i> _{t-1}							0.5864*** (0.0240)	0.5871*** (0.0237)
ELECTION YEAR _t	184.9163*** (55.3440)	174.5845*** (58.1755)	2.6898 (5.8804)	2.3825 (5.6818)	-105.408** (42.0257)	-102.8334** (41.1590)	1.1921 (0.8192)	1.1849 (0.8319)
VFI _t	11.7413* (6.6836)	9.8893* (5.6491)	10.0191*** (1.5897)	10.0218*** (1.6001)	-9.0476* (4.6172)	-9.2571* (4.5583)	0.2084*** (0.0506)	0.1972*** (0.0433)
VFI _t * ELECTION YEAR _t	-6.1416** (2.3499)	-5.5195** (2.3226)	-0.1283 (0.3322)	-0.1430 (0.3065)	2.1375 (1.3744)	1.8920 (1.3426)	-0.1508*** (0.0498)	-0.1532*** (0.0513)
GDP per capita _{t-1}	1.7866** (0.6822)	1.8226** (0.7058)	0.4194*** (1.3334)	0.4064*** (0.1356)	0.2181 (0.2897)	3.8112*** (1.1216)	-0.0006 (0.0023)	
Rate of Growth of GDP per capita _t	4.7896*** (1.3289)	3.8116*** (1.2701)	1.0721*** (0.2445)	1.1569*** (0.2430)	3.2263*** (1.0601)	3.8112*** (1.1216)	-0.1209** (0.0455)	-0.1199** (0.0467)
INFANT MORTALITY RATE _{t-1}	4.9359 (3.6914)		-0.7012 (0.5282)		-7.6740*** (2.3641)	-7.6787*** (2.3210)	-0.1845*** (0.0641)	-0.1793*** (0.0600)
SAME DATE _t	115.5006 (80.9864)		-9.5217 (11.6381)		-90.1418 (58.9362)		-0.7974 (0.4967)	
SAME PARTY _t	-28.8751 (23.5434)		10.9199** (4.6901)	12.0422 (4.8094)	95.5766*** (24.8747)	93.6374*** (25.7076)	-0.1462 (0.2593)	
FEDERAL INTERVENTION _t	-51.3090 (45.3482)		19.2835*** (5.6734)	16.6465*** (5.7664)	160.2012*** (43.9084)	149.8272*** (44.3640)	2.2293** (0.9748)	2.1456** (1.0078)
Constant	-314.9568 (418.9032)	-178.7619 (344.858)	-164.9943*** (49.7247)	-186.019*** (43.1535)	131.1692 (156.2672)	204.545* (114.765)	4.3332** (1.8417)	4.0756*** (1.3278)
R ² within	0.6460	0.6398	0.8553	0.8541	0.3073	0.3012	0.4498	0.4490
R ² between	0.9257	0.9246	0.8960	0.8941	0.0940	0.1006	0.8886	0.8853
R ² overall	0.8804	0.8783	0.8511	0.8502	0.2543	0.2605	0.5629	0.5618

Note: standard errors in parenthesis below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10. Observations (N)= 506.