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Politics, institutions, and fiscal performance in a federal system: an analysis of the Argentine provinces

Mark P. Jones (Assistant Professor) [a,*],
Pablo Sanguinetti (Professor) [b],
Mariano Tommasi (Associate Professor, Director) [c,d,1]

[a] *Department of Political Science, Michigan State University, East Lansing, MI 48824-1032, USA*
[b] *Department of Economics, Universidad Torcuato Di Tella, Miñones 2159/77, (1428) Buenos Aires, Argentina*
[c] *Department of Economics, Universidad de San Andrés, Buenos Aires, Argentina*
[d] *Center of Studies for Institutional Development (CEDI), Vito Dumas 284, (1644) Victoria, Provincia de Buenos Aires, Argentina*

Abstract

We posit that the fiscal behavior of Argentine provinces is determined by a common pool game at two levels: within each province, and across political units. In the latter game, the national government has a greater incentive than the provincial governments to internalize the negative externality of fiscal imprudence. Given relatively strong party discipline, the president is able to induce governors from his party to internalize a portion of the externality to a greater extent than opposition governors. In Argentina ''party matters'' for fiscal behavior, but it does so for reasons different from those identified in studies of OECD countries. © 2000 Elsevier Science B.V. All rights reserved.

* Corresponding author. Fax: +1-517-432-1091.
E-mail addresses: mark.jones@ssc.msu.edu (M.P. Jones), sanguine@utdt.edu.ar (P. Sanguinetti), tommasi@udesa.edu.ar (M. Tommasi).
[1] Fax: +54-11-4725-2211.

1. Introduction

Fiscal adjustment is one of the central tenets of the reform agenda implemented by many Latin American countries during the past 10 years. While national-level fiscal reform in many instances has progressed substantially, a key problem that awaits resolution in several of these reforming countries is the lack of coordination of the fiscal reform effort between the different levels of government. This lack of coordination has led, in some countries, to a situation in which the adjustment by the national government has not been accompanied by a similar process at the provincial level. In countries such as Argentina, Brazil and Colombia, a poor design of the decentralization process has conspired against fiscal and macroeconomic stability (Inter-American Development Bank, 1994, 1997; Tanzi, 1995; Sawers, 1996). In these countries, where between 40% and 50% of all government spending occurs at the subnational level, this coordination failure jeopardizes the success of the overall fiscal reform effort.

In this paper, we study the fiscal behavior of the Argentine provinces, emphasizing the role of politics and institutions. There is a substantial literature on the political and institutional determinants of fiscal outcomes (Alesina and Perotti, 1995, 1996 are recent surveys). On the empirical side, this literature has concentrated on cross-national analysis (e.g., von Hagen, 1992 for Europe), time-series analysis of the US (Inman and Fitts, 1990), and cross-sectional analysis of the US states (Poterba, 1996 is a recent survey). Very few studies, however, have examined developing countries (Alesina et al., 1996 is a rare exception). An analysis of the Argentine provinces enriches the literature on institutions and fiscal politics by providing an alternative test-ground that enables us to verify which extant results are more general, and which are specific to implicit institutional characteristics of the cases analyzed thus far.

Following in the steps of the ''new political economy,'' we view the determination of fiscal choice as a ''common pool game'' (Inman and Fitts, 1990). The players, elected politicians, try to maximize the welfare of their (local) constituents in order to win elections. In the Argentine case, it is important to apply the ''common pool logic,'' and its implications, at two levels: within each province and across provinces. The latter is especially important for Argentina, since unlike in countries such as the US, most provincial spending is financed from taxes collected by the national government. Hence, in Argentina the interaction between many ''fiscal authorities'' (Velasco, 1996; Aizenman, 1998) is at the crux of fiscal politics.

The Argentine regime of federal transfers induces an over-spending bias across jurisdictions as each province tries to overuse the national common source of funds. In addition, within each province, the process of fiscal decisions is decentralized by the actions of various actors: the provincial legislature, various ministries, etc. Thus, a tendency to overuse the provincial common resources (local taxes and national transfers) may also develop. The presence of different

institutional and political configurations that affect the relationship between the national and provincial authorities, and between the different branches of government at the provincial level, will help to moderate or exacerbate the common pool problem's effect on fiscal policy.

We begin in Section 2 with some background on the finances of the Argentine provinces. Section 3 presents our main hypotheses. Section 4 contains information on our methodology, data and variables. Section 5 provides the empirical analysis.

2. Argentine provincial finances

Table 1 provides summary information on the share of Argentina's population and industrial production accounted for by each of the country's 23 provinces and federal capital. Differences among the provinces are noticeable. The four most populous jurisdictions contain 64.8% of the country's population and 81.3% of its

Table 1
The distribution of the population and industrial production among the Argentine provinces

Province	Percentage share of the national population (1991)	Percentage share of national industrial production (1993)
Buenos Aires	38.6	48.9
Capital Federal	9.1	15.1
Santa Fé	8.6	9.3
Córdoba	8.5	8.0
Mendoza	4.3	3.8
Tucumán	3.5	1.3
Entre Ríos	3.1	1.4
Salta	2.7	0.8
Chaco	2.6	0.5
Corrientes	2.4	1.0
Misiones	2.4	0.7
Santiago del Estero	2.1	0.2
Río Negro	1.6	0.4
Jujuy	1.6	0.5
San Juan	1.6	1.2
Formosa	1.2	0.1
Neuquén	1.2	0.5
Chubut	1.1	1.0
San Luis	0.9	3.6
Catamarca	0.8	0.5
La Pampa	0.8	0.3
La Rioja	0.7	0.8
Santa Cruz	0.5	0.2
Tierra del Fuego	0.2	0.1

industrial production. Conversely, the four least populous provinces comprise only 2.2% of the country's population and 1.4% of its industrial production.

The finances of the Argentine provinces are characterized by a considerable degree of "vertical imbalance;" a large fraction of provincial spending is financed out of national transfers. Between 1985 and 1996, the Federal Tax-Sharing Agreement (FTSA) (i.e., the Ley de Coparticipación Federal) and other transfer mechanisms financed 77% of total expenditures for the average province, with only 23% financed from provincial revenues. However, there is a high degree of variation around this 23% average. For example, during the 1985–1996 period, 11 of the 23 provinces on average financed less than 20% of their spending with their own revenues, while three provinces financed more than 45% of provincial spending with their own revenues.

The Argentine Constitution of 1853 established that the federal government would use taxes on foreign trade to finance its expenditures, while provinces would finance themselves through taxes on property, income and sales. However, over time, for both economic and political reasons, the national government increased its role in the tax collection process, and currently collects taxes on foreign trade, personal and corporate income, sales, energy production and property. The process by which these taxes are subsequently devolved to the provinces has been regulated by the FTSA.[2]

The FTSA establishes three important parameters. First, it determines which taxes integrate the common pool of resources to be shared by the national government and the provinces. Second, it sets the percentage distribution of these common resources between the national government and the provinces (i.e., the primary distribution). Finally, it provides the criteria used to establish the percentage share of the provincial portion of the primary distribution that each province is to receive (i.e., the secondary distribution). Historically, the dominant criterion for this latter distribution was provincial population. Over time additional criteria have been utilized (e.g., provincial standards of living), adding a redistributive aspect to the FTSA regime.

The first FTSA dates from 1934. Periodically, new laws have been written to regulate this distribution. The current law dates from 1988. It establishes that most national taxes integrate the common pool of resources, and that 42% of the taxes collected under the FTSA go to the national government, 57% to the provinces and 1% to a fund to finance crises in the provinces. It also sets the fixed secondary distribution coefficients, one for each province, which for the first time are not determined by any explicit formula combining provincial socio-economic indicators (e.g., population, per-capita income). The current FTSA has been supplemented by several other laws modifying the original distribution set by the 1988 law (e.g., additional regulation of the distribution and destination of some rev-

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[2] For a thoughtful analysis of Argentine fiscal federalism, see Porto (1990).

enues that previously had been earmarked for specific expenditures). A majority of the transfers that provinces receive are implemented through this FTSA scheme, which is a delegation of tax authority from the provinces to the national government. As a consequence, the manner in which the provinces utilize these funds is for the most part left to the discretion of the provincial governments.

3. The hypothesized effect of political and institutional variables: the common-property approach

We view the fiscal accounts as the outcome of a multi-player game. The key players in this game are politicians interested in providing net benefits to their constituencies. A large portion of these local or particularistic benefits are financed out of a common pool of taxes (current or future).

As is the case with any common resource, there is an over-utilization of national wealth. Political economists know this process as ''universalism,'' while the popular term among political scientists in the US is ''pork-barrel politics.''[3] In some versions, this over-utilization generates suboptimal aggregate outcomes from the point of view of the political actors like provincial governors in a federal country (Sanguinetti, 1994; Aizenman, 1998), or legislators in the national legislature (Chari and Cole, 1993) and their constituencies. In others, the outcome is suboptimal from the point of view of citizens, due to fiscal illusion (Weingast et al., 1981) or to principal-agent problems in the relation between the people and their representatives (Tommasi, 1998).[4]

In our application of the common property approach to the case of fiscal policy in the Argentine provinces, we emphasize that this problem of universalism is present at two levels, corresponding to the federal fiscal organization of Argentina. On the one hand, every province sees the aggregate national (present and future) taxing capacity as a common resource. On the other, every local legislator sees the provincial (and national) taxing capacity as a common resource. Institutional arrangements (such as the FTSA and alternative budget procedures) and political configurations (such as presidential–gubernatorial relations and the presence of divided vs. unified government at the provincial level) act to exacerbate or mitigate the underlying problem.

In the hypotheses below, while we control for the economic determinants of local tax revenue, our focus is on the effect of political and institutional variables

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[3] The term ''universalism'' derives from Weingast (1979). The discussion in the text draws from Inman and Fitts (1990).

[4] Tommasi (1998) argues that agency slack is at the crux of the suboptimality of fiscal outcomes. Otherwise, elected representatives might be better able to reach an agreement on optimal fiscal policy. This pushes the collective action problem to the level of the citizens, in their control of elected officials.

on provincial public spending. We emphasize spending and not provincial revenue because there are two countervailing forces in terms of the impact of politics on provincial fiscal revenue. On the one hand, there is the standard ''size'' effect emphasized by Weingast et al. (1981), under the assumption of a balanced budget. This leads to the prediction that certain institutional configurations lead to higher spending and higher taxes than do other configurations. On the other hand, as we emphasize below, in the Argentine case there are negative externalities across provinces that lead provincial governments to overspend and under-tax (in the spirit of what Inman and Fitts, 1990 call ''tax expenditures''). Combining these two effects, we obtain clear-cut predictions from institutional and political variables to expenditure outcomes, while the implications for provincial revenue will depend on which effect dominates. As a first approximation, we hypothesize that the impact on provincial revenue is neutral, and focus on the implications for spending.

Within the common pool view, the less encompassing the constituency from which an individual is elected, the greater their tendency to act as a free-rider on the collective good of fiscal prudence. As stated before, we emphasize this hypothesis at two levels: in terms of the behavior of every province vis-à-vis the consolidated fiscal accounts, and in terms of the conduct of provincial politicians (and legislatures) vis-à-vis the provincial governments.

Below, we first describe the biases induced by the FTSA and other national transfers and present hypotheses derived from the application of the common pool problem to the relation across the provinces. We then discuss the intra-province political and institutional factors examined in this study, and their hypothesized effect on fiscal outcomes, applying the common pool problem within the provinces.

3.1. Hypotheses derived from the common pool problem across provinces

The FTSA is a key institution regulating the fiscal game played among the different provinces and between them and the national government. The FTSA and the other national transfers partially de-couple tax and expenditure decisions in the provinces. The FTSA tax-sharing coefficients are fixed by law, and are independent of actual actions. It is easy to see that this can lead to inefficiently large total public spending.[5] Every provincial government receives the full benefit of increased provincial spending, while paying only a fraction of the political tax cost. We hypothesize that, holding other factors constant, spending will be greater in the

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[5] It is worth noting that this result depends on assumptions about the timing of fiscal decisions. Inman and Fitts (1990) and Sanguinetti (1994) present games among multiple political units that generate this type of result. Saiegh and Tommasi (1998), in their description of the FTSA's history, conclude that the rules in the games of Sanguinetti and Inman and Fitts that lead to the over-exploitation of the common pool (in particular the lack of commitment by the central authority) are consistent with the Argentine institutional framework.

provinces that are more favored by the FTSA. As a measure of this favored status, we utilize the province's share of secondary coparticipation, normalized by population (i.e., the province's per capita coparticipation share).

Hypothesis 1. *Provinces that receive a larger percentage (normalized by population) of transfers under the FTSA, will have higher per capita spending.*

Within our common pool view, the president, who is elected by a national constituency, and who is held primarily responsible for macroeconomic outcomes, will have better incentives for fiscal conservatism than each provincial governor. The national executive branch has many instruments to try to coerce provincial governments into behaving more in line with national fiscal objectives (Jones, 1997a). We posit that when the provincial governor is from the president's political party, the president has additional coercive resources stemming from his/her role as president (de jure and/or de facto) of the national party combined with Argentina's relatively high level of party discipline.[6] We expect, ceteris paribus, lower spending in provinces where the Governor is from the same party as the President.

Hypothesis 2. *Provinces where the Governor is from the same political party as the President will have lower per capita spending than provinces where the Governor is a member of the opposition.*[7]

Hence, we predict, as do Alt and Lowry (1994) in their study of the fiscal performance of the US states, that the party affiliation of the provincial government will influence provincial fiscal performance. For Alt and Lowry (1994), the driving force is the different preferences of Democrats (high spending, high taxes) and Republicans (low spending, low taxes).[8] In their story, political configurations and institutions merely move the actual outcome closer to either one of the preferred points. In the Argentine context the principal political parties (i.e., the

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[6] This level of party discipline is, in large part, due to the strong degree of party control over the candidate nomination process, the use of closed party lists to elect legislators, the considerable value of the PJ and UCR party labels, and the ability of the national party to intervene the provincial party organizations (Jones, 1997a).

[7] Aizenman (1998) has a model in which the fiscal behavior of local authorities is determined as a game that includes "*N*" local governments, plus the central government. To mitigate the common pool problem the central government uses some strategic variables to induce cooperative play from the local governments. Aizenman's model assumes that the electoral fortunes of governors are jointly tied to aggregate fiscal performance. It would be natural to extend his model to a multi-party environment, in which the electoral fortunes of governors from the president's party are more tied to aggregate macroeconomic performance than those of opposition governors.

[8] Cross-national evidence of these "preference" or "ideological" effects is provided by Kontopoulos and Perotti (1997).

Justicialista Party [PJ], also known as the Peronist Party, and the Radical Civic Union [UCR]) are large heterogeneous catch-all parties. During the 1983–1996 period, Peronist and Radical elected officials on average did not exhibit notable ideological differences in the area of fiscal/economic policy (Manzetti, 1993; De Riz, 1995; McGuire, 1995; Coppedge, 1998).[9] To verify that this is the case, we include the following hypothesis.

Hypothesis 3. *Provinces headed by Peronist (PJ) and Radical (UCR) governors do not differ noticeably in their levels of per capita spending.*

3.2. Hypotheses derived from the application of the common pool problem at the provincial level

Other than the forces towards fiscal profligacy emerging from the vertical relation between the national government and the provincial governments (or the horizontal relation among the provinces), there are also a number of provincial political and institutional characteristics that may affect local fiscal outcomes. We first review the provincial political variables and their hypothesized effect on fiscal accounts, and then discuss the provincial budget institutions and their potential effect.

The most prominent political factor hypothesized to influence fiscal behavior is the presence or absence of divided government (McCubbins, 1991; Alt and Lowry, 1994; Poterba, 1994; Cox and McCubbins, 1997). A general conclusion of this body of scholarship is that fiscal discipline is more lax under divided than unified government, due to the greater difficulties faced by the executive in getting his/her budget through the legislature. Under unified government, the executive is more likely to be able to rely on a solid partisan contingent in the legislature approving his/her budget. This is particularly the case in systems with high levels of party discipline.

The US and European literature has tended to emphasize the role of divided government in preventing fiscal adjustment following adverse shocks (e.g., Roubini and Sachs, 1989; Alt and Lowry, 1994; Poterba, 1994). The related mechanism that we emphasize in this paper is that within each province, the governor has better incentives than the legislature for fiscal prudence, and unified government facilitates the governor's job.[10] This follows, at a different level, the same logic emphasized in Hypothesis 2.

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[9] While President Carlos Menem (PJ, 1989–1999) has been more supportive of a neo-liberal policy agenda than most prominent Radical politicians, he also has been more supportive than most prominent Peronists (Gibson, 1997).

[10] This ''level'' effect also is emphasized in Alesina et al. (1996), and comes naturally out of Weingast et al. (1981).

Hypothesis 4. *Provinces where there is divided government will have higher per capita spending than provinces where there is unified government.*

Although not directly related to the common property approach to fiscal policy, we also test one of the most common political–economic models of fiscal determination. The electoral cycle has been found to have important economic influences at the national level (Tufte, 1978; Alt and Chrystal, 1983; Alesina, 1988).[11] Unlike their counterparts at the national level, provincial authorities in Argentina lack the ability to influence key macroeconomic variables such as the interest rate and money supply. Our previous qualitative research, however, suggests that during election years Argentine provincial governments employ public works projects and other expenditures in an attempt to influence the outcome of the upcoming election. It is therefore important to consider the effect of the electoral cycle for the most important provincial level office: the governorship (Jones, 1997b).

Hypothesis 5. *Provincial spending per capita will be higher in gubernatorial election years than in other years.*

Following von Hagen (1992), von Hagen and Harden (1994), Alesina et al. (1996), and Hallerberg and von Hagen (1996), we developed an index of budgetary institutions and related procedures to assess their impact on fiscal outcomes. In contrast to these other authors, whose indices are based on surveys of budget officials, our index is derived from a reading of the Argentine provincial constitutions. Below, we briefly detail the components of the index.[12]

3.2.1. Executive strength and the elaboration of the budget

The lack of internalization of the fiscal cost of expenditure decisions is a key determinant of a political bias towards fiscal profligacy. In presidential systems the degree of internalization of this common pool problem is larger for the executive than for the legislature (Tullock, 1994; Chari et al., 1997).[13] The president (national level) or governor (provincial level) is considered responsible for the

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[11] It should be noted that these electoral business cycle theories require the objectives of politicians not to be identical to those of citizens (a type of principal-agent problem).

[12] The index is a composite of six individual indicators, each with a potential value ranging from 0 to 10. Complete information on the index and its construction can be found in Sanguinetti and Tommasi (1997).

[13] Tullock (1994, pp. 28–29) notes that ''it is often pointed out that the President, being elected by all the voters is less interested in parochial issues than is the House of Representatives.'' He then adds, referring to the US, ''it would be even more true if we did not have a House of Electors and cast direct votes for the president''.

overall macroeconomic or financial health of the country or province, while each individual legislator (and hence, to some extent the legislature) is not. Connecting this idea with the results on the role of procedural rules in determining political decisions, leads to a series of hypotheses linking budgetary procedures and expected fiscal outcomes (Baron and Ferejohn, 1989; Baron, 1991; Cox and McCubbins, 1997).

We constructed an indicator of the constitutional limitations imposed on the ability of the legislature to amend the budget proposal submitted by the governor. Those provinces where amendments cannot increase the size of the budget or deficit were given 10 points. If the legislature is not allowed to increase expenditures, we gave five points. In cases where the legislature can increase spending, but not the deficit, we assigned 2.5 points. This latter low evaluation is based on intuition from the Argentine national budget, where a similar rule is in place. Finally, we assign zero points to cases with no constraints.

We also developed a variable that captures the reversion point in the event the budget is not approved by the start of the fiscal year. In the province of San Luis, if no budget is approved, the executive's original budget proposal is promulgated. In all other provinces, the previous year's budget is adopted. Obviously, the former method gives more power to the executive. As there is little variance on this dimension, we incorporated it into our construction of the indicator discussed above.

3.2.2. Provincial borrowing ability

We constructed an indicator of the limitations on provincial indebtedness. The highest score (10) was given to provinces that require extraordinary legislative majorities to approve new debt and that had restrictions on the level of indebtedness and the use of debt. We gave five points to provinces that required special majorities and placed restrictions on the use of debt. Zero points were allocated to provinces where the constitution does not mention borrowing.

3.2.3. Municipal borrowing ability

The provincial constitutions also contain information on the municipalities' borrowing abilities. We constructed an indicator of municipal borrowing ability using the same scoring rules employed for the provincial borrowing indicator.

3.2.4. Autonomy / strength of audit agency

Many provincial constitutions refer to an audit agency. We gave the lowest score of zero to those provinces where no audit agency is mentioned. Where an audit agency is mentioned, the more independent the agency (in terms of attributions, composition, recruitment, tenure), the higher the score.

3.2.5. Provincial–municipal tax sharing agreements

Given the FTSA's importance as a determinant of provincial fiscal performance, we investigated similar arrangements that regulate the relations of every
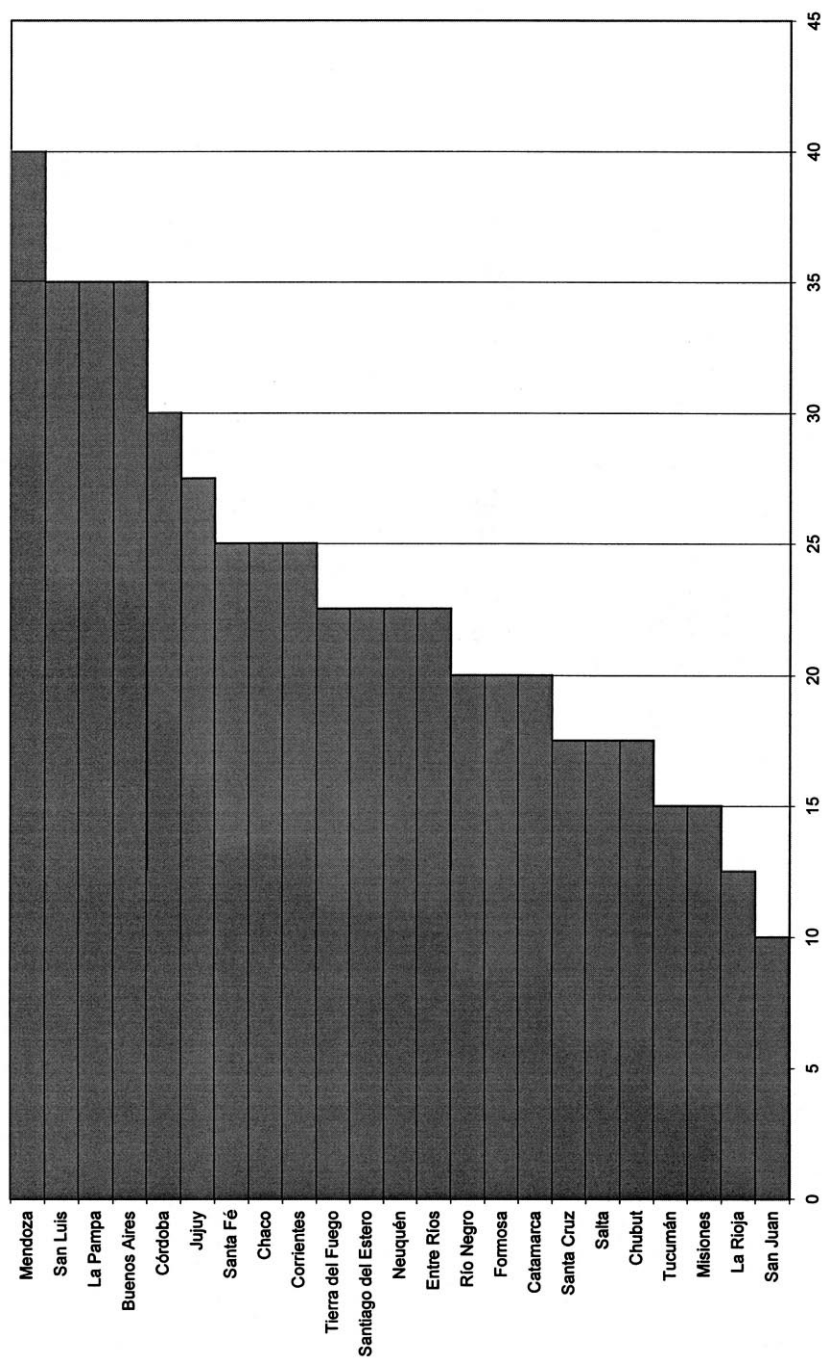
Fig. 1. Fiscal Institutionalization Index.

province with its municipalities. Provinces where there is no such legislation, and where the distribution of tax revenue is based on unilateral agreements, received a score of zero. In the other cases, we assigned scores as a function of the criteria used to distribute revenue (in terms of the extent to which these criteria generated incentives for fiscal prudence). These criteria include socio-demographic factors, the number of municipal employees and poverty indicators.

3.2.6. Promotional subsidies in the Constitution

Several provincial constitutions explicitly promote specific activities through the use of subsidies, inexpensive credit and other incentives. These types of statements give a bargaining advantage to politicians interested in fostering some forms of spending, and are likely to affect fiscal outcomes.[14] We assigned zero points when these statements were present and 10 points when they were absent.

To create our Fiscal Institutionalization Index, for every province the values for these six indicators were summed. The index has a potential range from zero (least fiscally disciplined) to 60 (most fiscally disciplined). As Fig. 1 indicates, its actual range is from 10 (San Juan) to 40 (Mendoza).

Hypothesis 6. *Per capita spending will be lower in provinces with higher values on the Fiscal Institutionalization Index.*

4. Methodology, data and variables

4.1. Methodology and data

We employ a system of simultaneous equations, linear three-stage least squares (3SLS), to analyze the determinants of provincial revenue and expenditure in the Argentine provinces. As noted in the presentation of the hypotheses above the focus of our analysis is on the determinants of per capita provincial expenditure, but due to the endogenous nature of the relationship between revenue and expenditure a three-stage model is utilized.

We conduct this analysis employing a pooled cross-section of the 23 Argentine provinces from 1985 to 1996.[15] Out of the potential population of 276 provincial

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[14] Written targets and legal procedures are not (especially in a moderately institutionalized country like Argentina) binding constraints. As Calvert (1995), Weingast (1997) and others have emphasized, institutions matter only if they are enforceable. Written procedural constraints (and even more so, written declarations) are going to be of greatest relevance when a powerful political actor has an incentive to appeal to the letter of the law.

[15] Argentina returned to democracy on December 10, 1983, following nearly 7 years of military rule. Data from 1984 are not included due to problems related to the mechanisms governing national–provincial transfers.

years (23×12), 37 years are excluded, leaving a final analysis population of 239 provincial years.[16]

The analysis begins with an examination of Hypotheses 2–5 using 3SLS and the panel data set. We then utilize the results from the 3SLS analysis to test Hypotheses 1 and 6 by regressing the time in-variant Fiscal Institutionalization Index on the 23 provincial fixed effects variables drawn from the 3SLS analysis.

4.2. Variables

In the 3SLS analysis, our two dependent variables are (1) annual per capita revenue in the province (REVENUE PER CAPITA), and (2) annual per capita public sector spending in the province, excluding interest payments, (EXPENDITURE PER CAPITA).[17] As is the case with all of our monetary variables, the values are expressed in constant April 1991 Argentine pesos (one April 1991 peso is equal to April 1991 US$1.00). The range for the REVENUE PER CAPITA variable is 25 to 710, with a mean of 157 and a standard deviation of 104.[18] The range for the EXPENDITURE PER CAPITA variable is 280 to 3004, with a mean and standard deviation of 899 and 525, respectively.

The basic economic model used to analyze the determinants of provincial public sector expenditures per capita employs the following control variables: PROVINCIAL REVENUE PER CAPITA, NATIONAL TRANSFERS and UNEMPLOYMENT. The basic economic model for the revenue portion of the equation includes provincial revenue per capita lagged one period (REVENUE PER CAPITA AT $(T-1)$) and ENERGY CONSUMPTION as independent variables.[19]

PROVINCIAL REVENUE PER CAPITA measures the expected level of provincial revenue per capita, and under the 3SLS framework is derived from the REVENUE PER CAPITA equation. The high correlation between the expected

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[16] Twenty-two provincial years are excluded because of difficulties surrounding the coding of one of our influential variables for the year of 1989 (for more information, see note 21). Six provincial years are excluded because during those years the province was under federal intervention. Two provincial years are excluded due to the lack of unemployment data. Seven years from the province of Tierra del Fuego are excluded, as it was a national territory under direct federal government control until December 1991. Capital Federal, Argentina's 24th district, was under direct federal government control between 1983 and 1996 and, therefore, is excluded from the analysis.

[17] Our specification focuses on those revenues that are under direct provincial control. On average, these revenues account for one-quarter of provincial spending, with the remaining three-quarters financed by transfers from the national government. Therefore, our dependent variable in the revenue equation is provincial own revenues.

[18] For more information on the sources of the data used here, see Sanguinetti and Tommasi (1997).

[19] PROVINCIAL REVENUE PER CAPITA AT $(T-1)$ ranges in value from 24 to 710, with a mean of 150 and a standard deviation of 101.

level of provincial revenue per capita and the actual level of provincial revenue per capita (0.94) indicates that the former is a very good instrument for the latter.

NATIONAL TRANSFERS measures the amount of transfers per capita received by the province from the national government during the year. The values for this variable range from 99 to 2566, with a mean of 640 and a standard deviation of 427.

UNEMPLOYMENT is the percentage of the work force that was unemployed in the province's capital city during the year.[20] It is included to control for the existence of an active counter-cyclical fiscal policy. The level of unemployment in the population ranges from 2.40 to 20.90, with a mean of 8.22 and a standard deviation of 3.89.

We expect that provincial own revenue will be positively related to the value of the provincial tax base which in general terms will be associated with the province's Gross Domestic Product (GDP). ENERGY CONSUMPTION is our proxy for provincial GDP, for which reliable annual data are unavailable. The variable is measured as the number of megawatts per capita consumed in the province during the year. It ranges from 0.31 to 10.07, with a mean of 1.44 and a standard deviation of 1.80.

Finally, also included in the analysis for purposes of control are cross-sectional (i.e., provincial; 23 total) and temporal (i.e., year; 10 total) fixed effects variables. For reasons of space, the estimated coefficients and standard errors for these variables are not included in the tables where the panel data results are presented.

To test Hypotheses 2–5, we examine the effect of five political variables on the level of per capita provincial public sector spending. PRESIDENT'S PARTY measures the partisanship of the governor in relation to that of the president. All years during which the governorship of a province was held by a member of the president's party are coded one, while all other years are coded zero. For the period 1985–1988, all provinces governed by the UCR are coded one while all others are coded zero. For the period 1990–1996, all provinces governed by the PJ are coded one while all others are coded zero. In the analysis population of 239, 123 of the provincial years (51.5%) are coded one. Of these 123 years, 100 come from the PJ administration of President Carlos Menem (1989–) while the remaining 23 come from the UCR administration of President Raúl Alfonsín (1983–1989).[21]

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[20] Two exceptions are the provinces of Buenos Aires and Santa Fé where more than one city was surveyed.

[21] On July 8, 1989 President Menem assumed office, 5 months prior to the date (December 10) on which the official transfer of power from President Alfonsín was constitutionally scheduled to take place. This early transfer occurred due to the severe economic, political and social crisis facing the country. This year is excluded from the analysis as it is not possible to adequately code it for the PRESIDENT'S PARTY variable.

The second and third variables measure the partisan affiliation of the governor. For the variable UCR GOVERNOR, a one is assigned if the province was governed by a member of the UCR during the year being coded. For the variable PROVINCIAL PARTY GOVERNOR, a one is assigned if the province was governed by a provincial party.[22] Both of these variables are measured as differences from the years in provinces that were governed by the PJ. Of the 239 provincial years included in the analysis, 152 (63.6%) were under a PJ governor, 47 (19.7%) under a UCR governor, and 40 (16.7%) under a provincial party governor.

The fourth variable is DIVIDED GOVERNMENT. Divided government is defined as a situation in which the governor's party lacks a majority of the seats in the single house in the unicameral systems and in both houses in the bicameral systems.[23] We classify as unified government all other cases.[24] Years where divided government existed are coded one while years where there was unified government are coded zero. Of the 239 provincial years, divided government was present in 48 (20.1%), with unified government in the remaining 191.

The fifth political variable is GOVERNOR ELECTION YEAR. Years in which a gubernatorial election occurred are coded one, while all other years are coded zero.[25] A gubernatorial election was held in 64 (26.8%) of the 239 provincial years examined here.

5. Analysis

Table 2 provides the results of our analysis of the determinants of per capita public sector revenue and expenditure in the Argentine provinces between 1985

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[22] The provincial parties effectively compete in only one province where they tend to occupy the center-right portion of the political spectrum (although not always in terms of fiscal policy). Seven provincial parties controlled the governorship in their respective province at some point between 1985 and 1996.

[23] Like Alt and Lowry (1994), we consider 50% a majority. In all of the bicameral systems the two houses possess roughly equal constitutional powers. In the terminology employed by Lijphart (1984), bicameralism in the Argentine provinces is ''symmetric''.

[24] It would be possible to produce a finer classification. For instance, the case in which the governor faces opposition in both chambers may be a stronger form of divided government than the case in which he/she has a majority in one of the chambers (''split government'' vs. ''split legislature'' in the terminology of Alt and Lowry (1994)). We have however only eight instances of a split legislature in our population of 239.

[25] With two minor exceptions, all of the gubernatorial elections were held in 1983, 1987, 1991 and 1995. The election year, as opposed to the year prior to the election, is coded one because of the late occurrence of the gubernatorial elections in 1987 and 1991 (when they took place late in the third quarter and early in the fourth quarter) as well as to a lesser extent in 1995 when they were held between the second month of the second quarter and the first month of the fourth quarter.

Table 2
A 3SLS analysis of the institutional determinants of provincial per capita revenue and expenditure
The number of observations is 239. White-type standard errors are below the estimated coefficients in parentheses.

Dependent variables	Independent variables	R1	R2	R3	R4	R5	R6	R7
Revenue per Capita	Revenue per Capita at $(T-1)$	0.933***	0.486***	0.479***	0.478***	0.478***	0.475***	0.460***
		(0.028)	(0.056)	(0.056)	(0.056)	(0.056)	(0.056)	(0.059)
	Energy Consumption	1.268	8.786	12.636	13.088	13.132	14.983	9.497
		(1.549)	(11.284)	(11.384)	(11.393)	(11.594)	(11.664)	(11.862)
	Cross-Sectional Fixed Effects	NO	YES	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO	NO	YES
	Adjusted R^2	0.821	0.862	0.862	0.862	0.862	0.862	0.882
Expenditure per capita	Provincial Revenue per Capita	1.027***	1.741***	1.750***	1.726***	1.677***	1.628***	0.918***
		(0.085)	(0.315)	(0.309)	(0.313)	(0.299)	(0.293)	(0.304)
	National Transfers	1.093***	0.834***	0.818***	0.819***	0.810***	0.802***	0.813***
		(0.019)	(0.044)	(0.044)	(0.044)	(0.043)	(0.043)	(0.046)
	Unemployment	2.485	−0.285	0.081	−0.405	−0.161	0.301	−2.899
		(1.848)	(2.115)	(2.075)	(2.113)	(2.111)	(2.077)	(2.753)
	President's Party			−42.280**	−48.270***	−49.701***	−60.023***	−58.253***
				(14.275)	(15.160)	(14.975)	(15.099)	(16.446)
	Divided Government				−19.748	−17.079	−15.043	−20.605
					(18.472)	(18.278)	(18.215)	(17.437)
	Governor Election Year					32.976**	33.225**	
						(13.236)	(12.986)	
	UCR Governor						30.294	33.658
							(23.118)	(22.991)
	Provincial party Governor						−82.135**	−88.541**
							(30.957)	(29.040)
	Cross-Sectional Fixed Effects	NO	YES	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO	NO	YES
	Adjusted R^2	0.955	0.959	0.960	0.960	0.962	0.963	0.973

*Significant at the 0.05 level for a one-tailed test.
**Significant at the 0.01 level for a one-tailed test.
***Significant at the 0.001 level for a one-tailed test.

and 1996. Our focus is on the information provided in the second (Expenditure) section of the table.

Equation R1 includes the three economic variables without any cross-sectional or temporal controls.[26] Equation R2 is identical to R1 with the exception that 23 cross-sectional fixed effects variables are included. R3 retains the variables in R2, and adds the PRESIDENT'S PARTY variable, while R4 goes on to add the DIVIDED GOVERNMENT variable, and R5 adds the GOVERNOR ELECTION YEAR variable. Equation R6 incorporates the UCR GOVERNOR and PROVIN-CIAL PARTY GOVERNOR variables. Equation R7 is identical to R6, with the exception that the GOVERNOR ELECTION YEAR variable is removed and the 10 temporal effects variables are added (the excluded year is 1985).[27]

The results in Table 2 provide strong support for Hypothesis 2. In all five equations where it is present, PRESIDENT'S PARTY has a strong and significant inverse effect on the level of per capita provincial spending. On average provinces where the governor is a member of the president's political party spend significantly less (between 42 and 60 pesos per capita less) than those provinces that are governed by a member of the opposition. It is important to note the robustness of the findings for PRESIDENT'S PARTY throughout Table 2. The PRESIDENT'S PARTY estimated coefficients range from -42.280 in Equation R3 to -60.023 in Equation R6. The difference between these two extreme coefficients (17.743) is only slightly greater than the smallest standard error for the PRESIDENT'S PARTY variable in the five equations (14.275 in Equation R3).

This finding supports our view, based on the common pool theory, that governors who are copartisans of the president spend less than other governors. It also highlights the value of the common pool theory, especially when analyzing units within a context where there is a severe vertical fiscal imbalance.

The findings displayed in Table 2 also support Hypothesis 3. In neither Equations R6 nor R7 does the UCR Governor variable have a significant effect on provincial government per capita spending.[28]

Alt and Lowry demonstrate that ''party matters'' in the US states due to partisan differences in taxing and spending preferences while Kontopoulos and Perotti (1997) show that ''party matters'' in a group of 20 industrialized countries due to ideological differences among the parties (see also Alt and Chrystal, 1983). Like these authors, we conclude that ''party matters'' in Argentina. However, we

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[26] The constant is suppressed in Equations R2 through R7. It is present in Equation R1, but is not included in the table.

[27] The inclusion of these temporal effects variables helps to control for any potential autocorrelation. The substantive similarity of the results in Equations R6 and R7 (see Table 2) as well as several other diagnostic tests we conducted suggests that the analysis does not suffer from any autocorrelation related problems.

[28] Provinces run by provincial party governors spend significantly less than provinces governed by Peronists (on average 86 pesos per capita less). We plan to investigate this finding in future work.

believe that ''party matters'' due not to ideological differences, but rather due to the interaction between two important factors: (1) the existence of the common pool problem, which is internalized by the president, and (2) the president's status as the leader (de jure and/or de facto) of a relatively disciplined political party and his/her ensuing additional influence over governors who are copartisans. Conversely, party does not matter in Argentina due to ideological differences, as is demonstrated in Table 2.

The results in Table 2 provide no support for Hypothesis 4. Not only does the presence of divided government fail to lead to a significant increase in per capita spending, but the negative estimated coefficients indicate that the presence of divided government actually reduces spending, albeit not at a significant level.

A possible explanation for the weak effect of the presence or absence of divided government on spending could be that whereas previous studies of this topic have analyzed governments with relatively closed fiscal environments (e.g., countries or the US States), the Argentine provinces exist within an environment where there is a severe fiscal imbalance between the national and provincial governments. This fiscal imbalance in turn shifts the key determinant of provincial spending from intra-provincial factors to inter-provincial factors, since the lion's share of potential revenues are located at the national level. Within this environment intra-provincial politics (e.g., divided government) is much less relevant for provincial fiscal behavior than is the inter-provincial game between the provinces (as unitary actors) and the federal government.[29]

The estimated coefficients for GOVERNOR ELECTION YEAR in Equations R5 and R6 suggest that a provincial electoral spending cycle is present in Argentina. Levels of provincial per capita spending in gubernatorial election years are significantly greater than in non-gubernatorial election years. During gubernatorial election years provinces spend on average 33 pesos per capita more than during non-election years. This finding provides the first empirical support for the conventional wisdom in Argentina that governing parties at the provincial level increase spending during gubernatorial election years (generally via public works and salary bonuses for provincial public sector employees) with the goal of enhancing their chances of electoral victory.

The results displayed in Table 2 provide strong support for Hypotheses 2, 3, and 5, while failing to support Hypothesis 4. Due however to the presence of two prominent potential challenges to the robustness of our findings, in the pages below we conduct two distinct diagnostic tests.[30] These tests provide confirmation of the strength of the original findings.

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[29] Future studies should explore the prediction that divided government at the subnational level will be a significant determinant of fiscal behavior only when vertical fiscal imbalances are small. See von Hagen and Eichengreen (1996) and Stein et al. (1997) for further speculation on the interaction of vertical fiscal imbalances with fiscal politics more generally.

[30] We are indebted to two anonymous referees for suggesting these diagnostic exercises.

First, national transfers on average account for 77% of provincial spending. The results in Table 2 indicate that NATIONAL TRANSFERS exercises a profound effect on the level of per capita provincial spending (e.g., in the fixed effect analysis a one peso per capita increase in transfers translates into an approximately 80 cent increase in per capita spending). To insure that this strong relationship between NATIONAL TRANSFERS and EXPENDITURE PER CAPITA is not biasing our results, we conducted the analysis contained in Table 3. This analysis is identical to that in Table 2 with two exceptions. First, the dependent variable in the Expenditure portion of the equation is no longer EXPENDITURE PER CAPITA, but is instead EXPENDITURE PER CAPITA − NATIONAL TRANS-FERS, the product of which we label as EXPENDITURE PER CAPITA II.[31] Second, NATIONAL TRANSFERS is no longer included in the Expenditure portion of the equation as an independent variable.

The results in Table 3 are extremely similar to those in Table 2. For the four variables examined in Hypotheses 2–5, there is no noteworthy difference between the results displayed in Tables 2 and 3. Thus the original findings presented in Table 2 also hold when a distinct measure of provincial expenditure is employed.

The dramatic economic changes that took place in Argentina between 1985 and 1996 are a second concern for our analysis. During this period Argentina profoundly modified its macroeconomic policies as well as dramatically reduced its historically high levels of inflation. Central to both changes was the implementation, throughout 1991, of the well-known Convertibility Plan. A key element of the plan was the establishment of a currency board that required any monetary expansion to be backed in full by foreign reserves, thereby drastically reducing the possibility of financing budget deficits through seignorage. As a consequence of the Convertibility Plan, inflation was reduced to 84% in 1991, to 17.5% in 1992, and to an average of 4.5% during the 1993–1996 period.[32] By comparison, between 1986 and 1988, Argentina had an average rate of inflation of 214%, which was then followed by hyperinflationary rates in 1989 (4924%) and 1990 (1349%).

Until mid-1991, the federal government was able to accommodate the expansion in provincial expenditures through inflationary taxation. We, therefore, might expect that following the implementation of the Convertibility Plan the federal government could credibly commit not to use inflationary taxation to finance the fiscal imbalances of the subnational governments. This credible commitment would in turn reduce the incentives of provincial governments to behave opportunistically, thereby hardening provincial budget constraints. Given this possibil-

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[31] The values for EXPENDITURE PER CAPITA II range from 28 to 1047, with a mean of 259 and a standard deviation of 161.

[32] Price stability was achieved relatively quickly throughout 1991. The inflation rate was 52% in the first quarter, 12% in the second, 6% in the third, and 2% in the fourth.

Table 3
A 3SLS analysis of the institutional determinants of provincial revenue per capita and expenditure per capita II
The dependent variable is calculated by subtracting National Transfers from Expenditure per Capita. The number of observations is 239. White-type standard errors are below the estimated coefficients in parentheses.

Dependent variables	Independent variables	R8	R9	R10	R11	R12	R13
Revenue per Capita	Revenue Per Capita at $(T-1)$	0.489***	0.484***	0.484***	0.484***	0.475***	0.460***
		(0.056)	(0.056)	(0.056)	(0.056)	(0.056)	(0.059)
	Energy Consumption	6.195	8.778	9.238	9.484	10.388	9.491
		(11.565)	(11.665)	(11.678)	(11.860)	(11.803)	(11.908)
	Cross-Sectional Fixed Effects	YES	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO	YES
	Adjusted R^2	0.862	0.862	0.862	0.862	0.862	0.882
Expenditure per capita II	Provincial Revenue Per Capita	1.596***	1.597***	1.566***	1.517***	1.583***	0.816*
		(0.318)	(0.312)	(0.316)	(0.303)	(0.300)	(0.323)
	Unemployment	1.310	1.735	2.091	1.664	1.943	−1.858
		(2.142)	(2.114)	(2.151)	(2.150)	(2.130)	(2.845)
	President's Party		−35.135**	−41.801**	−42.896**	−51.857***	−63.876***
			(14.617)	(15.547)	(15.413)	(15.616)	(16.966)
	Divided Government			−21.840	−19.616	−16.475	−27.058
				(19.078)	(18.941)	(18.984)	(18.206)
	Governor Election Year				27.905*	27.842*	
					(13.636)	(13.460)	
	UCR Governor					22.701	43.806
						(24.059)	(23.627)
	Provincial Party Governor					−76.398**	−88.848**
						(32.270)	(30.083)
	Cross-Sectional Fixed Effects	YES	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO	YES
	Adjusted R^2	0.566	0.577	0.578	0.593	0.593	0.695

* Significant at the 0.05 level for a one-tailed test.
** Significant at the 0.01 level for a one-tailed test.
*** Significant at the 0.001 level for a one-tailed test.

ity, it is important to verify whether our previous findings still hold once we control for the presence/absence of the Convertibility Plan.

To examine the potential influence of the Convertibility Plan on our original results, we ran an analysis identical to that in Table 2, with the exception that we added a new independent variable, CONVERTIBILITY, in both the revenue and expenditure portions of the equation. CONVERTIBILITY is a binary variable, with all years prior to the full implementation of the Convertibility Plan coded zero (1985–1991), and all years following the full implementation of the Convertibility Plan coded one. Of the 239 provincial years included in the study, 110 (46.0%) are coded one for this variable.

Table 4 contains equations similar to Equations R2–R6 in Table 2 (with the exception of the addition of CONVERTIBILITY).[33] The results for our five influential variables are very similar to those contained in Table 2. This indicates that the prominent change in the principal source of financing for government expenditures (i.e., from inflationary taxation to regular taxes) which occurred at the federal level of government did not notably influence the nature of the fiscal game played between provinces and the federal authorities.

We do, however, find that CONVERTIBILITY has a strong positive effect on the level of provincial revenue per capita. This positive effect can be interpreted as a consequence of a change in the incentives for local authorities (i.e., the implementation of the Convertibility Plan motivated them to engage in more aggressive revenue collection efforts). The significant positive influence of CON-VERTIBILITY also stems from the elimination of the ''Tanzi effect'' (i.e., the erosion of real tax revenues due to inflation).

On the expenditure side, we also find some evidence that the Convertibility Plan led to a reduction in provincial expenditures. Nevertheless, in this case the effect is much more modest. While the initial estimated coefficient for CON-VERTIBILITY in R14 has a significant negative influence on expenditures, this influence dissipates noticeably as additional variables are added to the equation.

Finally, it is important to observe that the PRESIDENT'S PARTY estimated coefficients remain very stable and quite robust in all five equations in Table 4, and furthermore, are extremely similar to the variable's respective estimated coefficients in Table 2. We can therefore conclude that although the Convertibility Plan had a notable effect on some aspects of provincial fiscal behavior, this effect is distinguishable from the political fiscal game played within and across the provinces.

In sum, the initial findings presented in Table 2 held up quite well in these two diagnostic exercises. Neither the way in which we controlled for the influence of national transfers nor the potentially confounding historical factor of the Convert-

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[33] Due to collinearity problems between CONVERTIBILITY and the temporal fixed effects variables an equation similar to R7 could not be included here.

Table 4
A 3SLS analysis of the institutional determinants of provincial per capita revenue and expenditure: the influence of the convertibility plan
The number of observations is 239. White-type standard errors are below the estimated coefficients in parentheses.

Dependent variables	Independent variables	R14	R15	R16	R17	R18
Revenue per Capita	Revenue Per Capita at ($T-1$)	0.428***	0.424***	0.423***	0.424***	0.421***
		(0.056)	(0.056)	(0.056)	(0.056)	(0.056)
	Energy Consumption	1.688	5.052	5.385	5.028	6.810
		(10.839)	(11.019)	(11.018)	(11.285)	(11.419)
	Convertibility	19.099***	18.847***	18.827***	18.853***	18.728***
		(5.019)	(5.020)	(5.021)	(5.025)	(5.027)
	Cross-Sectional Fixed Effects	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO
	Adjusted R^2	0.869	0.869	0.869	0.869	0.869
Expenditure per capita	Provincial Revenue Per Capita	2.058***	1.999***	1.965***	1.847***	1.741***
		(0.372)	(0.362)	(0.380)	(0.361)	(0.355)
	National Transfers	0.830***	0.818***	0.819***	0.813***	0.805***
		(0.044)	(0.044)	(0.438)	(0.043)	(0.043)
	Unemployment	1.658	1.297	1.302	0.104	-0.034
		(2.335)	(2.306)	(2.310)	(2.343)	(2.299)
	Convertibility	-51.775**	-40.894*	-37.471	-25.085	-15.194
		(19.784)	(19.613)	(20.931)	(20.410)	(20.303)
	President's Party		-38.266**	43.785**	-47.983**	-61.028***
			(14.485)	(16.071)	(15.921)	(16.313)
	Divided Government			-16.008	-15.973	-16.023
				(20.043)	(19.705)	(19.573)
	Governor Election Year				32.593**	34.543**
					(13.444)	(13.200)
	UCR Governor					29.945
						(23.190)
	Provincial Party Governor					-83.418**
						(31.568)
	Cross-Sectional Fixed Effects	YES	YES	YES	YES	YES
	Temporal Fixed Effects	NO	NO	NO	NO	NO
	Adjusted R^2	0.955	0.957	0.957	0.960	0.962

* Significant at the 0.05 level for a one-tailed test.
** Significant at the 0.01 level for a one-tailed test.
*** Significant at the 0.001 level for a one-tailed test.

ibility Plan affect the substantive conclusions we reached based on the results contained in Table 2.

There has been no variation in the fixed FTSA shares (i.e., the secondary distribution) received by the provinces since 1988 and virtually no variance in the provinces' budgetary institutions between 1985 and 1996. It thus was not possible to include in our previous models a variable measuring either the provinces' normalized FTSA shares or their fiscal institutions.

Therefore, to examine Hypotheses 1 and 6, we regress the invariant normalized FTSA shares and Fiscal Institutionalization Index values on the estimated coefficients for the provincial fixed effects variables displayed in Table 5, which are drawn from the Expenditure section of Equation R6 in Table 2. These provincial fixed effects variables were initially included due both to our belief that there are province-specific characteristics that are correlated with the other independent variables as well as to the related belief that the constant varies from province to province due to factors that are not accounted for by our other independent variables. In this bivariate analysis our goal is to examine the extent to which a province's normalized FTSA share and fiscal institutions account for these

Table 5
Provincial fixed effects from R6 in Table 2

Province	Estimated coefficient	Standard error
Buenos Aires	−14.75	56.93
Catamarca	271.69	55.11
Córdoba	−24.26	61.80
Corrientes	187.63	52.66
Chaco	158.42	45.62
Chubut	189.39	61.23
Entre Ríos	166.92	58.75
Formosa	329.16	50.52
Jujuy	173.40	54.28
La Pampa	24.13	97.44
La Rioja	423.06	65.74
Mendoza	51.00	59.43
Misiones	117.88	43.13
Neuquén	216.00	105.79
Río Negro	167.61	67.00
Salta	140.69	54.42
San Juan	219.06	52.95
San Luis	41.02	61.18
Santa Cruz	402.41	117.55
Santa Fe	−1.67	64.27
Santiago del Estero	119.61	42.14
Tierra del Fuego	330.93	185.67
Tucumán	109.54	48.83

Table 6
FTSA share, fiscal institutionalization, and the fixed effects variables' estimated coefficients
The values for the dependent variable are the estimated coefficients located in Table 5. Due to the change in Tierra del Fuego's territorial status in 1990, it is excluded from analysis involving the FTSA share. The standard errors are under the estimated coefficients in parentheses.

Independent variables	R19	R20	R21
FTSA Share	117.680***		92.302***
	(25.899)		(21.366)
Fiscal Institutionalization		− 10.294***	− 7.347***
Index		(2.724)	(2.006)
Constant	− 56.247	403.490***	162.265*
	(50.723)	(66.387)	(71.027)
Adjusted R^2	0.483	0.376	0.684
Number of observations	22	23	22

  *Significant at the 0.05 level for a one-tailed test.
 **Significant at the 0.01 level for a one-tailed test.
***Significant at the 0.001 level for a one-tailed test.

province-specific characteristics that were not explicitly included in the main analysis located in Table 2.[34]

The results of this analysis (see Table 6) are in line with the prediction made in Hypothesis 1.[35] Clearly the larger the normalized FTSA share received by the average province, the higher its level of per capita spending. It is interesting that we find the FTSA implies this over-expenditure bias even after controlling for several other determinants of provincial expenditures, in particular the effect of national transfers (which include those transfers carried out under the FTSA regime).

The results of a similar bivariate analysis bolster our confidence in Hypothesis 6. The Fiscal Institutionalization Index has a significant inverse effect. This indicates that the greater the level of fiscal institutionalization in a province, the lower its level of per capita spending is likely to be.

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[34] A potential critique of this method stems from some assumptions we make related to our use of provincial fixed effects variables. In Equation R6, we assume that the non-fixed effect variables (i.e., our important regressors) included are correlated with something that is present in the error term. We, therefore, include the provincial fixed effects variables to correct for this. We are thus assuming that at least some of the independent variables are correlated with these provincial fixed effects variables. No assumption is however made that our important regressors are either correlated with or causally related to the estimated coefficients of these provincial fixed effects variables which we utilize as the dependent variable in our analysis here.

[35] Due to the small size of the population in the analysis contained in Table 6, diagnostic tests using Cook's D were conducted to determine if any of the cases significantly influenced the results (Bollen and Jackman, 1990). One influential case (the province of La Rioja) was detected in Equations R19 and R21. Subsequent analysis excluding La Rioja resulted in substantively similar findings in both instances.

Thus, we obtain results similar to those of authors examining the influence of fiscal institutions in the US (e.g., Poterba, 1996), Western Europe (e.g., von Hagen, 1992) and Latin America (e.g., Alesina et al., 1996). Nevertheless, it is important to note that here we find such a relationship using expenditure as our dependent variable (most other studies examined deficits) and that our measure of spending corresponds to the fixed effect calculated from a multiple equation model where we already control for several economic and political determinants of provincial fiscal decisions.

6. Conclusion

This paper contributes to the growing literature that is striving to better understand the political and institutional factors that underlie fiscal outcomes. Following in the steps of the ''new political economy,'' we view the determination of fiscal choice as a ''common pool game.''

We apply this theoretical view to study the fiscal performance of the Argentine provinces. Argentina has the attractive feature of being a federal country in which most provincial spending is financed out of taxes collected by the national government. Given the high economic (and political) inter-dependence across levels of government, we postulate that the fiscal behavior of Argentine provinces is determined by a common pool game that takes place at two levels: within each province, and across provinces.[36] In the latter game, it is the national government that has the greater incentive to internalize the negative externality of fiscal imprudence.

The fact that the national taxing capacity constitutes a common resource from the point of view of individual politicians leads to over-exploitation. The particular regime that regulates the transfer of tax revenues to the provinces (i.e., the FTSA) induces a bias to overspend, especially in provinces that are more favored by the regime. Given Argentina's relatively strong party discipline however, the president's party is able to induce its governors to internalize part of the negative externality to a greater extent than opposition party governors.

The empirical results support the idea that the system of inter-governmental grants has implied an expansionary bias in provincial expenditures by de-coupling tax and spending decisions. Within this general tendency, party discipline has played a positive and significant role in checking the expansion of provincial expenditures. Provinces where the governor belongs to the same party as the president tend, other things being equal, to spend less than the other provinces.

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[36] In some cases, the collective action problem interacts with agency slack between the people and their elected representatives, such as when we look for an electoral cycle in fiscal policy or include some indicators of ''transparency'' when measuring the strength of provincial fiscal institutions.

Although ''party matters'' for fiscal behavior in Argentina, it does so for a very different reason than the one emphasized in studies of OECD countries, where ''party matters'' due to partisan differences in taxing and spending preferences. In Argentina, ''party matters'' due to a combination of vertical fiscal imbalance and relatively high levels of party discipline.

Interestingly, the inter-provincial fiscal game swamps the importance of some intra-provincial political factors, to the point that divided government does not appear as a significant predictor of provincial fiscal outcomes. This finding is contrary to the conclusions of a portion of the previous empirical work examining OECD countries and the US states.

In addition to the strong and salient link detected between the partisanship of the governor, vis-à-vis that of the president, and per capita provincial expenditure, other institutional factors were found to have a significant effect on spending. First, a provincial level electoral spending cycle was detected, with provincial expenditures noticeably higher in gubernatorial election years than in other years. Second, a province's normalized FTSA share was found to be highly correlated with its level of spending; province's with larger shares spent more than those with smaller shares. Finally, a strong link was uncovered between the provincial fiscal institutions and spending, with better (i.e., more fiscally conservative) fiscal institutions significantly correlated with lower levels of provincial expenditure.

Acknowledgements

References

Aizenman, J., 1998. Fiscal discipline in a union. In: Sturzenegger, F., Tommasi, M. (Eds.), The Political Economy of Economic Reforms. MIT Press, Cambridge, MA.

Alesina, A., 1988. Macroeconomics and politics. In: National Bureau of Economic Research Macroeconomic Annual. pp. 11–55.

Alesina, A., Hausmann, R., Hommes, R., Stein, E., 1996. Budget Institutions and Fiscal Performance in Latin America. National Bureau of Economic Research Working Paper 5586.

Alesina, A., Perotti, R., 1995. The political economy of budget deficits. IMF Staff Papers, 1–31, (March).

Alesina, A., Perotti, R., 1996. Budget Deficits and Budget Institutions. Unpublished manuscript, Harvard University.

Alt, J.E., Chrystal, K.A., 1983. Political Economics. Univ. of California Press, Berkeley.

Alt, J.E., Lowry, R.C., 1994. Divided government, fiscal institutions, and budget deficits: evidence from the states. American Political Science Review 88, 811–828.

Baron, D.P., 1991. Majoritarian incentives, pork barrel programs and procedural control. American Journal of Political Science 35, 57–90.

Baron, D.P., Ferejohn, J.A., 1989. Bargaining in legislatures. American Political Science Review 83, 1181–1206.

Bollen, K.A., Jackman, R.W., 1990. Regression diagnostics: an expository treatment of outliers and influential cases. In: Fox, J., Long, J.S. (Eds.), Modern Methods of Data Analysis. Sage, Newbury Park.

Calvert, R., 1995. The rational choice theory of social institutions: cooperation, coordination and communication. In: Banks, J.S., Hanushek, E.A. (Eds.), Modern Political Economy: Old Topics, New Directions. Cambridge Univ. Press, New York.

Chari, V.V., Cole, H., 1993. A Contribution to the Theory of Pork Barrel Spending. Federal Reserve Bank of Minneapolis, Research Department, Staff Report 156.

Chari, V.V., Jones, L.E., Marimon, R., 1997. The economics of split-ticket voting in representative democracies. American Economic Review 87, 957–976.

Coppedge, M., 1998. Latin American Parties: Political Darwinism in the Lost Decade. Unpublished manuscript, University of Notre Dame.

Cox, G.W., McCubbins, M.D., 1997. Political structure and economic policy: the institutional determinants of policy outcomes. University of California, San Diego, Unpublished manuscript.

De Riz, L., 1995. Argentina: democracy in turmoil. In: Domínguez, J.I., Lowenthal, A.F. (Eds.), Constructing Democratic Governance: South America in the 1990s. Johns Hopkins Univ. Press, Baltimore.

Gibson, E.L., 1997. The populist road to market reform: policy and electoral coalitions in Mexico and Argentina. World Politics 49, 339–370.

Hallerberg, M., von Hagen, J., 1996. In: Electoral Institutions, Cabinet Negotiations, and Budget Deficits Within the European Union. Paper presented at the 1996 Meeting of the American Political Science Association, San Francisco.

Inman, R.P., Fitts, M.A., 1990. Political institutions and fiscal policy: evidence from the US historical record. Journal of Law Economics, and Organization 6, 79–132.

Inter-American Development Bank, 1994. Fiscal decentralization: the search for equity and efficiency. In: Economic and Social Progress in Latin America, 1994 Report. Johns Hopkins Univ. Press for the Inter-American Development Bank, Washington, DC.

Inter-American Development Bank, 1997. Fiscal decision-making in decentralized democracies. In: Economic and Social Progress in Latin America, 1997 Report. Johns Hopkins Univ. Press for the Inter-American Development Bank, Washington, DC.

Jones, M.P., 1997a. Evaluating Argentina's presidential democracy: 1983–1995. In: Mainwaring, S., Shugart, M.S. (Eds.), Presidentialism and Democracy in Latin America. Cambridge Univ. Press, New York.

Jones, M.P., 1997b. Federalism and the number of parties in Argentine congressional elections. Journal of Politics 59, 538–549.

Jones, M.P., Sanguinetti, P., Tommasi, M., 1999. Politics, institutions, and public-sector spending in the Argentine provinces. In: Poterba, J.M., von Hagen, J. (Eds.), Fiscal Institutions and Fiscal Performance. Univ. of Chicago Press, Chicago.

Kontopoulos, Y., Perotti, R., 1997. Fragmented Fiscal Policy. Unpublished manuscript, Columbia University.

Lijphart, A., 1984. Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries. Yale Univ. Press, New Haven.

Manzetti, L., 1993. Institutions, Parties, and Coalitions in Argentine Politics. Univ. of Pittsburgh Press, Pittsburgh.

McCubbins, M.D., 1991. Party governance and US budgets: divided government and fiscal stalemate. In: Alesina, A., Carliner, G. (Eds.), Politics and Economics in the Eighties. Univ. of Chicago Press, Chicago.

McGuire, J.W., 1995. Political parties and democracy in Argentina. In: Mainwaring, S., Scully, T.R. (Eds.), Building Democratic Institutions: Party Systems in Latin America. Stanford Univ. Press, Stanford, CA.

Porto, A., 1990. Federalismo Fiscal: El Caso Argentino. Buenos Aires: Editorial Thesis.

Poterba, J.M., 1994. State responses to fiscal crises: the effects of budgetary institutions and politics. Journal of Political Economy 102, 799–821.

Poterba, J.M., 1996. Budget institutions and fiscal policy in the US States. American Economic Review 86, 395–400.

Roubini, N., Sachs, J., 1989. Government spending and budget deficits in the industrialized countries. Economic Policy 8, 99–132.

Saiegh, S., Tommasi, M., 1998. Argentina's Federal Fiscal Institutions. Working Paper 3, Center of Studies for Institutional Development (CEDI), Buenos Aires, Argentina.

Sanguinetti, P.J., 1994. Intergovernmental transfers and public sector expenditures: a game-theoretic approach. Estudios de Economía 21, 179–212.

Sanguinetti, P., Tommasi, M., 1997. The Economic and Institutional Determinants of Provincial Budget Outcomes: Argentina 1983–1996. Unpublished manuscript, Inter-American Development Bank.

Sawers, L., 1996. The Other Argentina: The Interior and National Development. Westview Press, Boulder, CO.

Stein, E., Talvi, E., Grisanti, A., 1997. Institutional Arrangements and Fiscal Performance: The Latin American Experience. Paper presented at the Universität Bonn and National Bureau of Economic Research conference. Fiscal Institutions and Fiscal Performance: Perspectives for EMU, Bonn, Germany.

Tanzi, V., 1995. Fiscal Federalism and Decentralization: A Review of Some Efficiency and Macroeconomic Aspects. Paper presented at the World Bank Annual Conference on Development Economics, Washington, DC.

Tommasi, M., 1998. Instituciones y Resultados Fiscales. Desarrollo Económico 38, 409–438.

Tufte, E.R., 1978. The Political Control of the Economy. Princeton Univ. Press, Princeton.

Tullock, G., 1994. Thoughts about representative government. European Journal of Political Economy 10, 27–39.

Velasco, A., 1996. A Model of Fiscal Deficits and Delayed Fiscal Reforms. Unpublished manuscript, New York University.

von Hagen, J., 1992. Budgeting Procedures and Fiscal Performance in the European Communities. European Commission, Economic Paper, 26.

von Hagen, J., Eichengreen, B., 1996. Federalism, fiscal restraints and European monetary union. American Economic Review 86, 134–138.

von Hagen, J., Harden, I.J., 1994. National budget process and commitment to fiscal discipline. European Economic Review 39, 771–779.

Weingast, B.R., 1979. A rational choice perspective on congressional norms. American Journal of Political Science 23, 245–262.

Weingast, B.R., 1997. The political foundations of democracy and the rule of law. American Political Science Review 91, 245–263.

Weingast, B.R., Shepsle, K., Johnsen, C., 1981. The political economy of benefits and costs: a neoclassical approach to distributive politics. Journal of Political Economy 89, 642–664.