

Voters as Fiscal Liberals

Incentives and Accountability in Federal Systems

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4. The Model
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6. Empirical Analysis

- ***Vox populi*: increasing government spending (particularly in the proximity of elections) improves chances of reelection.**

El gasto electoral consumirá el superávit f

http://www.gacenet.com.ar/vernota

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El gasto electoral consumirá el superávit f

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El País

PROYECCIONES PRIVADAS PARA 2007

El gasto público sube 20% por las elecciones y el crecimiento económico

El Gobierno asegura que el ahorro fiscal igual se mantendrá en un nivel alto.



EN SUBA. Secretario de Hacienda, Carlos Mosse, encargado de la caja. (DyN)

Con un aumento del gasto público estimado en torno del 20% para este año, el Gobierno busca apuntalar el crecimiento de la economía, pero también pretende sumar puntos para sus candidatos en el año electoral. Aunque los analistas privados advierten que esta política se

- ***Vox populi*: increasing government spending (particularly in the proximity of elections) improves chances of reelection.**
- **Empirical evidence has not tended to support the common wisdom:**

International Evidence on the Electoral Effects of Fiscal Behavior

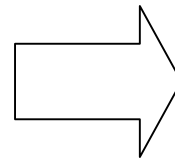
- Peltzman (1992) **U.S.:** Voters penalize federal (national) and state spending growth
 “Voters as Fiscal Conservatives”
- The finding of negative impact of manipulation of fiscal aggregates has tended to reappear in most subsequent work:
 - National level: the most comprehensive recent study (74 countries, 1960-2003), Brender and Drazen (2008):
 - No evidence that fiscal deficits help reelection in any group of countries
 - In developed countries and in old democracies, deficits reduce probability of reelection
 - State and local level (within country) studies tend to find that voters punish, rather than reward loose fiscal policy
 - US: Peltzman 1992, Matsusaka 2004 & 2008
 - Israel: Brender 2003
 - Colombia: Drazen and Eslava (2007)
 - Except for some components (public investment) → composition
 - But not in the aggregate

Most Previous Evidence

- At the national and subnational level:
 - Voters punish fiscal looseness

Recent evidence

- **Russian regions**
(Akhmedov & Zhuravskaya, 2004)
- **Brazilian municipalities**
(Sakurai, Menendez-Filho, 2008)
- **Argentine provinces**
(this paper)



**Higher spending
increases chances
of reelection**

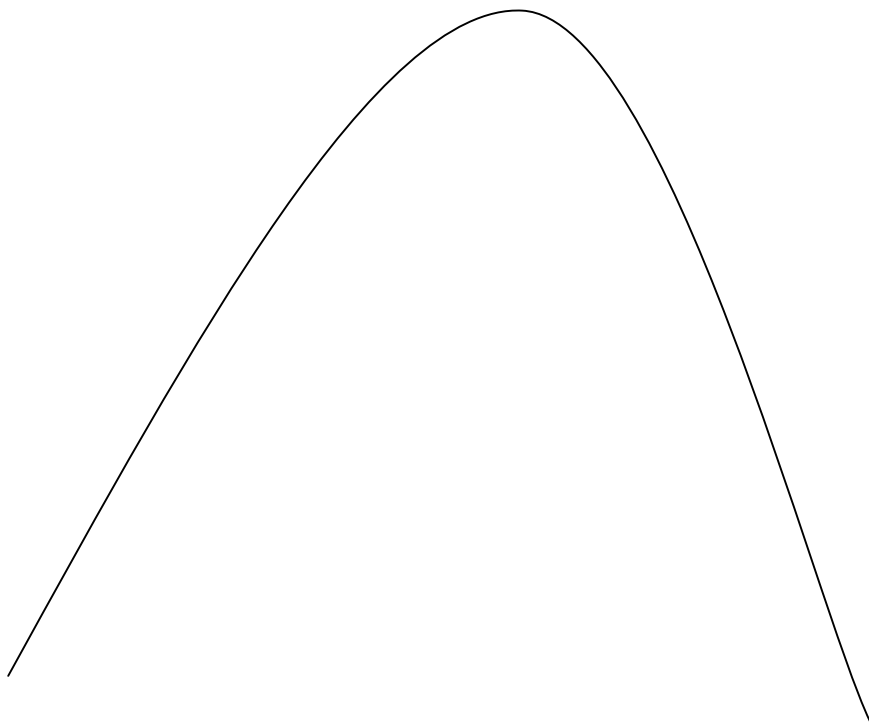
The rest of the paper

- A very simple model to interpret these findings
- And the institutional description and empirical analysis of the Argentine case.
- Before: a brief detour:
 - Discussion on possible “microfoundations” of these results
 - (Brief summary of the literature)

Discussion

(underlying factors behind ALL these results?)

1. Which is the source of empirical variation across units of observation (States, periods)?
 - For instance of the negative correlation (spending growth, votes) in Peltzman
 - Both spending and votes are endogenous variables
 - If median voter equilibrium plus random shocks, correlation should be zero
 - Why at the margin higher spending leads to less votes?
 - We need to be at an equilibrium point in which spending is supra-optimal from the point of view of “swing” voters
 - Will model in a simple way, “preferences” of politicians
 - (Identification issues?)
2. Which is the source of variation of results across cases?
 - Countries (-); Subnational units various countries (-)
 - SN units in Argentina (and Russia, and Brazil) (+)



Source of variation of results across cases?

Candidate explanations (implicit or explicit in the literature)

- (1) Voters in different countries have different *preferences*
 - Same socioeconomic structure and same institutional incentives could lead to different response of voters to increases in spending
 - Implausible. Could explain levels, but not necessarily elasticity
- (2) (A more sophisticated version of (1); implicit in Peltzman 1992): *voter heterogeneity*. Who are the “swing” voters?
 - Example “R/P”: Key voter US rich (dislike t/g), Argentina /Brazil poor (like t/g)
 - Still need to understand why would the politician in equilibrium not “follow” that preference
 - Will see in model reason for that “bias”
 - Differences across cases might be due to structural or institutional differences
 - Structural: same institutions / different income distribution (R/P)
 - Institutional: same income distribution / different institutions:
 - Example compulsory voting/enforcement (R/P)
 - Other rules that affects who are the more “elastic” voters
 - Separation of power issues
 - Discretion of executive (Streb, Lema and Torrens, 2005)
 - Common pool incentive stronger in Legislature (Matsusaka, budget institutions literature)
- (3) *The age of transparency*. (Democratic maturity and voters’ access to information) :
 - A family of explanations (implicit or explicit) relate to the capacity of voters to adequately monitor governmental behavior and to understand the connection between public spending and its eventual financing:
 - Transparency
 - Age of democracy
 - Brender and Drazen 2008 cross country, Brender 2003 within Israel, Alt, Lassen and Skilling, 2002 within U.S., Alt and Lassen 2006 OECD countries, Akhmedov & Zhuravskaya 2004 within Russia (more on PBC, as Shi and Svensson 2006)

Source of variation of results across cases? Candidate explanations (ii)

- (4) Who pays for the spending?
- Depends on the structure and political workings of Fiscal Federalism
- In countries as a whole and in subnational units in countries like US: the citizens of that polity
- For subnational units in countries like Argentina (and Brazil and Russia) not quite
 - Part comes from a common pool
 - Soft budget constraint / bail outs
 - Among the mechanisms leading to soft budget constraint: Vertical Fiscal Imbalance is a crucial one
 - Eichengreen and Von Hagen (),
 - Rodden (2002 and 2006)
 - Governors have (differential) ability to access central funding
 - Argentina and Brazil (and Russia) are depicted as the archetypical cases of soft budget constraint for subnational governments
 - Barry Weingast (2000): condition F4 of his definition of “*market-preserving*” *federalism* = subnational governments face hard budget constraints: he lists U.S. as Yes, and Argentina, Brazil and Russia as No.
 - Wibbels (2003)
 - Argentina: Cooper, Kempf and Peled 2005, Nicolini et al 2002, Dillinger and Webb 1999.
 - Brazil: it use to be a huge problem, it has improved a bit in the last several years, but still happens, specially for municipal governments. Bevilaqua 2002, Rodden 2003. Ferreira and Bugarin (2007): emphasize ability of politicians to bring national resources to the municipality
 - Russia: Gimpelson and Treisman 2002, Treisman 2007 (Argentina and Russia), Weingast and de Figueiredo 2002.
 - More on Argentina below

A simple model

- First a microfoundation for the Peltzman result (-)
- Then an institutional comparative statics leading to our result (+)

3.1. A simple microfoundation for the correlation between spending and reelection probability

- Very simple version of rational retrospective voting model (Ferejohn, 1986)
 - There is a pool of (ex ante identical) alternative candidates from where a “challenger” is randomly selected
- One incumbent governor and one citizen
 - Reduced form of richer political microfoundations
- Gov. decides
 - Public good b
 - “Rent” r (special interests, own preferences for some spending, corruption)
 - Tax t

- Gov budget constraint (g : public spending)

$$t = g \equiv r + b$$

- Utility function of citizen

$$U(b, t) = u(b) - t + \alpha$$

- α – unobserved by gov, how much citizen prefers the incumbent (probabilistic voting)
- uniformly distributed in $[0,1]$

- Citizen reelects incumbent if
$$u(b) - t + \alpha \geq \bar{U}$$

(reservation utility exogenous in simplified model)

- Utility of the incumbent is:
$$W() = \gamma \cdot w(r) + p \cdot E$$

where E are “ego rents” and p is probability of winning the election

$$p = P(u(b) - t + \alpha \geq \bar{U})$$

- The problem of the gov is then

$$\text{Max} \quad \gamma \cdot w(r) + p \cdot E$$

$$\text{s.t.} \quad p = P(u(b) - t + \alpha \geq \bar{U})$$

$$t = r + b$$

with $r, t, b \geq 0$ and $p \in [0,1]$

- For brevity we work with the case $u(b) = \ln(b)$ and $w(r) = \ln(r)$

- In that case

$$b^* = 1 \quad r^* = \frac{\gamma}{E} \quad g^* = t^* = 1 + \frac{\gamma}{E} \quad p^* = -\bar{U} - \frac{\gamma}{E}$$

- So that a higher γ implies a higher g and smaller p

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- And in a cross section of observation units with different γ we will observe

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**A NEGATIVE CORRELATION
BETWEEN SPENDING AND VOTES**

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**A NEGATIVE CORRELATION
BETWEEN SPENDING AND VOTES**

VOTERS AS FISCAL CONSERVATIVES

3.2. Electoral accountability in a funny Federation

- Same model as before, but with a different budget constraint
- Reduced form of various models of fiscal federalism in federations such as Argentina
 - Sanguinetti and Tommasi (2004)
 - Cooper, Kempf and Peled (2005)
 - Treisman (2007)

$$t = (1 - m)(b + r)$$

- ***m*** is the fraction of provincial spending that is paid (“bailed out”) by the national common pool.
 - Various channels (see next section)
 - It is related to the ability of this particular governor to obtain funds in the common pool game
 - ***m*** varies across units of observations (governors of differential ability to play the F F game “in Buenos Aires”)

- Now the same problem has as solution:

$$b^* = \frac{1}{(1-m)} \quad r^* = \frac{\gamma}{E \cdot (1-m)} \quad g^* = t^* = 1 + \frac{\gamma}{E} \quad p^* = \ln\left(\frac{1}{1-m}\right) - \bar{U} - \frac{\gamma}{E}$$

- A higher m implies both a higher g and a higher p

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**A POSITIVE CORRELATION
BETWEEN SPENDING AND VOTES**

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- And in a cross section of observation units with different m we will observe

**A POSITIVE CORRELATION
BETWEEN SPENDING AND VOTES**

VOTERS AS FISCAL LIBERALS

Putting both comparative statics together:

$+\gamma$	Medium Spending (+)(-)	High Spending (+)(+)
	Prob reelection low (-)(-)	Prob reelection medium (-) (+)
$-\gamma$	Low Spending (-)(-)	Medium Spending (-) (+)
	Prob reelection medium (+)(-)	Prob reelection high (+)(+)
	$-m$	$+m$

U.S. States ($m \approx 0$)

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$$\rho(g, p) < 0$$

$+\gamma$	Medium Spending (+)(-) Prob reelection low (-)(-)	High Spending (+)(+) Prob reelection medium (-) (+)
$-\gamma$	Low Spending (-)(-) Prob reelection medium (+)(-)	Medium Spending (-) (+) Prob reelection high (+)(+)
	$-m$	$+m$

Argentina: (γ high in all provinces – reasons to be explained in next section)

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$-\gamma$	Low Spending (-)(-)	Medium Spending (-) (+)
	Prob reelection medium (+)(-)	Prob reelection high (+)(+)
	$-m$	$+m$

$$\rho(g, p) > 0$$

It is not preferences, but institutions (incentives)

- “Preference theory”
 - Voters more “conservative” (dislike g) $\rightarrow \rho < 0$
 - Voters more “liberal” (like g) $\rightarrow \rho < 0$
- It is not what happens. Voters’ preferences might influence the level of spending, but not the elasticity of votes to changes in spending.
- We can (even) twist our model to get:
 - Voters more “liberal” (like g) & $\rho < 0$
 - Take first model ($m=0$)
 - Modify utility function to make them like g more.
 - In equilibrium we will have high g and high t (due to these preferences)
 - But still marginal response to increases in g , will be lower p

Fiscal and Political Environment in the Argentine Federation

Fiscal and Political Environment in the Argentine Federation

Fiscal and Political Environment in the Argentine Federation

- Argentine provinces
 - Large fraction of spending
 - Politically sexy
 - Small fraction of taxation
 - Federal Tax Sharing Agreement (and other gimmicks)
 - Large vertical fiscal imbalance

Vertical Imbalance

Revenues from taxes + Non taxes + Assets sales + Capital revenues as % of Total Revenues

District	AVG 1983-2003
Formosa	6.2
La Rioja	7.7
Catamarca	9.7
Santiago del Estero	10.8
Corrientes	12.4
Santa Cruz	12.5
Chaco	12.9
San Juan	14.6
Misiones	16.1
Chubut	16.7
Jujuy	17.5
San Luis	17.8
Tierra del Fuego	20.0
Salta	20.6
Tucumán	21.6
Neuquén	21.9
Río Negro	23.9
La Pampa	28.2
Entre Ríos	28.9
Mendoza	31.4
Total	38.1
Córdoba	39.7
Santa Fe	40.9
Buenos Aires	53.5
CABA	89.4

- FTSA sounds “fixed”
 - At the margin it is not
 - Various channels
- Wibbels (2004):
 - Soft budget constraints have historically taken on a number of forms in various national contexts, including rediscounts of local debt by central banks, intergovernmental transfers that reward local budgetary disequilibria, the assumption of local debt by national governments, lack of controls on subnational borrowing autonomy, and even the issuance of script by some provincial governments.”
 - He is talking about Argentina
- Moreover, over time
 - 80s: inflation-financed provincial banks
 - 90s: debt
 - 2001 crisis: provincial bonds
 - 2000s: cash
 - se van cerrando/abriendo distintas canillas, but the game is always the same
 - (one of the reasons why deficits is not a good metric)

Politics in the Country and in the Provinces

(Ardanaz, Leiras and Tommasi, 2008)

- Province important space in national politics
 - Spiller and Tommasi 2003 and 2007, Jones and Hwang 2005, De Luca, Tula and Jones 2002
- Governors dominant figure in province
 - Institutional factors
 - Institutional reforms
 - Clientelistic politics with “money from the center”
 - Aside: various mechanisms by which high γ governors
 - Gervasoni 2006
 - Ferreira and Bugarin 2007
- Those 2 factors reinforce each other
- To be successful in this two-level game, is important to be able to “get stuff from Buenos Aires”
 - For that, you need to get “close” to the national executive



ABRAZO. EL GOBERNADOR TUCUMANO ALPEROVICH Y CRISTINA KIRCHNER, RECONCILIADOS, AYER. PRESIDENCIA DE LA NACION

- Alperovich, governor of Tucumán
 - His campaign promise:
 - “Vamos a conseguir más plata de Buenos Aires”

MUESTRA GANADERA - EL BOICOT OFICIAL **Alperovich defendió el cierre del stand**

El mandatario admitió que su decisión fue netamente política, “para ayudar a todos los tucumanos”. Dijo que es más importante lo que consiguió de la Nación, al hablar de \$ 60 millones para obra pública. El stand abrió sólo dos horas y costó \$ 583,33 por minuto.

A seis días de haber dispuesto el cierre del stand de la provincia en la Exposición Rural de Palermo, el gobernador de Tucumán, José Alperovich, admitió esa decisión como un hecho necesario para el bien de los tucumanos, y ensayó una respuesta a las diversas críticas que recibió, tanto del arco político como desde el sector ruralista.

“A ver chicos (por los periodistas). Quiero ser sincero y decirles la verdad a todos los tucumanos. Yo soy gobernador de 1,6 millón de habitantes, y tengo que tomar medidas como gobernador y no como José Alperovich. Tengo que hacer lo que más le convenga a Tucumán. Eso lo tengo claro. Las medidas que tomo son para ayudar a Tucumán, y parte de no poner el stand en la Sociedad Rural es una decisión política para ayudar a todos los tucumanos; que quede claro”, reiteró.

En el encuentro que mantuvo ayer con la prensa, Alperovich ahondó en la justificación del cierre abrupto del stand. “Actué por el bienestar de todos. Yo no puedo ponerme a gobernar como productor de soja, como productor de maíz o como vendedor de autos. Yo soy concesionario de las marcas Ford y Volkswagen; en estos años al frente de la Provincia me excluí de venderle autos al Estado”, apuntó.

“Me tengo que cuidar como gobernador, y cada una de las medidas que tomo es en defensa de los tucumanos. Por eso asumí la decisión política del cierre del stand **Mucho más importante es lo que conseguí de la Nación. En un día y medio de gestión en Buenos Aires logré \$ 60 millones para obras públicas en la Provincia. ¿Díganme si eso no es importante?**”, interrogó -más bien afirmando- el gobernador a los periodistas.



El pampeano Jorge, alineado con la Casa Rosada

El gobernador de La Pampa, el justicialista Oscar Jorge, le expresó al ministro del Interior, Florencio Ranzazzo, su "total respaldo" al Gobierno nacional, durante un encuentro que mantuvieron ambos ayer en la Casa Rosada. Durante el paro del campo, Jorge hi-

zo equilibrio entre las demandas de los productores agropecuarios y la posición del Gobierno, pero no sacó los pies del plato. Ahora el gobernador busca apoyo para la difícil elección a intendente en Santa Rosa del próximo 31 de agosto.

Clarín.com - 2 de Febrero de 2005

El vicegovernador de La Rioja dio otra seña de acercamiento a Kirchner: "Está haciendo un buen gobierno"

El vicegovernador y jefe de gabinete de La Rioja, Luis Beder Herrera, afirmó que el presidente Néstor Kirchner "está haciendo un buen gobierno". Así, aportó un nuevo gesto de acercamiento de la gestión provincial con la Casa Rosada.

"Hoy por hoy es una realidad incontrastable que el presidente Néstor Kirchner está haciendo un muy buen gobierno, nos está sacando del default y está haciendo crecer al país", destacó el vicegovernador en declaraciones a la prensa hechas en la localidad de Famatina, unos 300 kilómetros al oeste de la capital riojana.

En una muestra más de la decisión del gobierno provincial de alinearse tras el proyecto de Kirchner, Beder Herrera conjeturó que "el pueblo de la Nación va a premiar todas estas gestiones"

"Nosotros, como riojanos, hemos hecho un compromiso con el presidente Kirchner pidiéndole ayuda porque nuestra provincia es la que más depende del Presupuesto nacional", agregó.

Y garantizó que La Rioja "está dispuesta a cumplir" acuerdos políticos necesarios para la provincia.

Empirical Analysis

Empirical Specification

- Basic equation:
- $WINNER_{it} = \alpha_0 + \alpha_1 POLITICAL_{it} + \alpha_2 SOCIOECONOMIC_{it} + \alpha_3 EXPENDITURE_{it} + \varepsilon_{it}$
- **WINNER** is a binary variable with the value 1 if the incumbent party wins the gubernatorial election and 0 if it is defeated.
- **EXPENDITURE** is the rate of change of real per capita total public expenditure from the beginning to the end of gubernatorial term.
- **Estimation method: *Logit with random effects***. Our dependent variable registers no variation for 12 provinces because the incumbent party was never defeated (San Luis, Santa Cruz, Neuquén, etc.), hence a Logit with fixed effects leaves us with roughly half of observations.
- For the 12 provinces in which WINNER varies, we carried out Logit with fixed and random effects and performed the Hausman test indicating no significant differences between both estimations.
- We also computed conditional fixed effects, having regions (NOA; NEA; Cuyo, Centro, Patagonia and Pampeana) as controls for the key fixed effects of the "area".

What do incumbents manipulate?

- Explicar porq usamos gasto y no deficit
- Candidates
 - Expenditures
 - Fiscal Deficit
 - Expenditure mix
- For most of the provinces and for most of the periods under study, fiscal deficit only reflects accounting decisions/norms . Governors knew in advance that they would receive discretionary transfers “below the line” (that is, extra resources to finance expenditures)
- Fiscal deficit is not a uniform measure throughout the period

Political & Socioeconomic Variables

- **PARTY (+):** the normal share of votes of the incumbent party in a given province
- **REELECTION (+):** a dummy variable that is intended to reveal the extra effort that receives a party when the incumbent governor runs for the reelection.
- **MARGIN (+):** the margin of victory in the last gubernatorial election
- **NATLCOAT (+):** dummy variable that tries to capture the influence of simultaneous elections for President and Governors.

- **Provincial GDP per capita (+)**

- **Unemployment (-)**

- **Business cycle (+)**

- **Inflation rate (-)**

Voters might be prone to support provincial incumbent party *affiliated to the same party of the President*, as a way to sustain a successful (in terms of GDP growth) national economic policy. Conversely, high inflation rates negatively affect the electoral performance of provincial incumbent parties that respond to the President

Data

- **Period: 1983 – 2003**
- **Districts: 24 (23 provinces plus the federal district)**
- **Observations: 112**
- **Missing data: districts of Corrientes, Tierra del Fuego and the City of Buenos Aires (Federal District).**
 - **Province of Corrientes: we only consider the elections of 1983, 1987 and 1991 since provincial authorities were intervened twice by the federal government in the period 1992-2001, amounting for four years of intervention. In addition, in contrast to the other cases of national intervention, the linkage between the partisan affiliation of the national government designated interventor within the context of provincial politics is not as clear cut in the case of Corrientes. (That is why we exclude Corrientes, but not Tucumán, Catamarca, and Santiago del Estero)**

Basic Specification

Variables	Control Variables	(1)	(2)
Expenditures		0.0408** (0.0174)	0.0413** (0.0166)
National Coat	1.1225 (0.7129)	1.960 (0.8735)	
Party	0.1058*** (0.0369)	0.0948** (0.0406)	0.0928** (0.0383)
Margin	0.0442 (0.0337)	0.0589* (0.0359)	0.0577* (0.0331)
GDP per capita	0.0433 (0.0477)	0.0847 (0.0530)	0.0905* (0.0519)
Unemployment (electoral year)	-0.1550* (0.0864)	-0.1999* (0.1040)	-0.1797* (0.030)
Crime rate	-0.0204 (0.0167)	-0.0491** (0.0250)	-0.0470* (0.0244)
Cycle	0.2796** (0.1395)	0.4799** (0.1984)	0.4571** (0.1869)
Inflation	-0.0339*** (0.0106)	-0.0446*** (0.0146)	-0.0418*** (0.0133)
Constant	0.7130 (1.6132)	0.3332 (1.8818)	0.0306 (1.7215)
Observations	112	112	112
Districts	24	24	24
Observations per group MIN	2	2	2
Observations per group MAX	5	5	5
Observations per group AVG	4.7	4.7	4.7
Log Likelihood	-40.490921	-36.963375	-38.024437

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

Why does that happen?

- Using within case variation, to explain general result
- Exercise limited
 - Just within case variation
 - Limited sample size
- But useful to point to future comparative research
- “interaction terms”
 - interprovincial variation
- Our main candidate: vertical fiscal imbalance

Vertical Imbalance

The impact of expenditures on the probability of victory increases when we exclude the districts with VFI less than 25%

Variables	Basic Specification (24 districts)	17 districts
Expenditures	0.0413** (0.0166)	0.0581** (.0246)
Party	0.0928** (0.0383)	0.1169*** (0.0457)
Margin	0.0577* (0.0331)	0.0624 (0.0397)
GDP per capita	0.0905* (0.0519)	0.1582* (0.0825)
Unemployment (electoral year)	-0.1797* (0.030)	-0.2886** (0.1346)
Crime rate	-0.0470* (0.0244)	-0.0458 (0.0291)
Cycle	0.4571** (0.1869)	0.4625** (0.2213)
Inflation	-0.0418*** (0.0133)	-0.0497*** (0.0174)
Constant	0.0306 (1.7215)	0.2601 (2.0351)
Observations	112	80
Districts	24	17
Observations per group MIN	2	2
Observations per group MAX	5	5
Observations per group AVG	4.7	4.7
Log Likelihood	-38.024437	-23.702883
Excluded Districts	None	CABA, BA, Córdoba, Santa Fe, Mendoza, Entre Ríos, La Pampa

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

The impact of Vertical Fiscal Imbalance III

Interacting Vertical Fiscal Imbalance (average of each gubernatorial period) with the rate of growth of total expenditures

Variables	Basic Specification	VFI
Expenditures	0.0413* (0.0168)	
Interaction: Expenditures * Vertical Fiscal Imbalance		0.0954* (0.0544)
Party	0.0928* (0.0383)	0.0977*** (0.0365)
Margin	0.0577 (0.0331)	0.0488 (0.0325)
GDP per capita	0.0905 (0.0519)	0.0655 (0.0481)
Unemployment (electoral year)	-0.1797 (0.030)	-0.1833** (0.0913)
Crime rate	-0.0470 (0.0244)	-0.0334 (0.0208)
Cycle	0.4571* (0.1869)	0.4046** (0.1747)
Inflation	-0.0418** (0.0133)	-0.0398*** (0.0126)
Constant	0.0306 (1.7364)	-0.1711 (1.6746)
Observations	112	112
Districts	24	24
Observations per group MIN	2	2
Observations per group MAX	5	5
Observations per group AVG	4.7	4.8
Log Likelihood	-38.024178	-40.062809

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

Other Possible Explanations

(from the literature)

- Democratic maturity
- “Transparency”?
 - There were improvements in national and subnational fiscal transparency throughout the period

Democratic maturity / transparency

As time goes by ...

incentives keep doing their job

Variables	Basic Specification (all elections)	Elections 1987-1991	Elections 1995-1999-2003
Expenditures	0.0413** (0.0166)	0.1320* (0.0788)	0.1003** (0.0421)
Party	0.0928** (0.0383)	0.0152 (0.1021)	0.1673** (0.0778)
Margin	0.0577* (0.0331)	-0.0049 (0.1094)	0.0916* (0.0486)
GDP per capita	0.0905* (0.0519)	0.1599 (0.1077)	0.2830** (0.1398)
Unemployment (electoral year)	-0.1797* (0.030)	-0.4939 (0.3640)	-0.3048* (0.1761)
Crime rate	-0.0470* (0.0244)	-0.0045 (0.0386)	-0.1483* (0.0796)
Cycle	0.4571** (0.1869)	2.3966** (1.0942)	0.4262 (0.3486)
Inflation	-0.0418*** (0.0133)	-0.1169** (0.0473)	-0.0087 (0.2124)
Constant	0.0306 (1.7215)	6.0761 (5.5461)	-0.1730 (2.7148)
Observations	112	44	68
Districts	24	22	23
Observations per group MIN	2	2	2
Observations per group MAX	5	2	3
Observations per group AVG	4.7	2	3
Log Likelihood	-38.024437	-10.696875	-19.094603
Excluded districts	None	Capital Federal, Tierra del Fuego	Corrientes

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

Extensions:

1. Composition
2. Timing

1. Composition

- We saw that spending helps reelection
- Are there specific components that matter more?
 - Is our result driven by some specific components?
- Drazen and Eslava (2005)
- Others

Extension: expenditure composition

Capital and Current Expenditures

-The ratio current to capital expenditure is not significant (regressions IV and V)

-The rate of growth of capital expenditure is significant at 10% level when current expenditures are excluded (regression I) but if both are included, only current expenditures are significant (regression III)

-The rate of growth of current expenditures is significant at 5% when capital expenditures are excluded (regression II)

Variables	Basic Specification	I	II	III	IV	V
Capital Expenditure (growth rate)		0.0152* (0.0079)		0.0091 (0.0078)		
Current Expenditure (growth rate)			0.0428** (0.0170)	0.0349* (0.0180)		
Total Expenditure	0.0413** (0.0166)				0.0433** (0.0171)	
Ratio Current to Capital Expenditures					0.1658 (0.1396)	0.0930 (0.1252)
Party	0.0928** (0.0383)	0.0995*** (0.0383)	0.0972*** (0.0376)	0.0947** (0.0395)	0.0953** (0.0376)	0.1041*** (0.0356)
Margin	0.0577* (0.0331)	0.0555 (0.0343)	0.0546* (0.0323)	0.0608* (0.0337)	0.0663** (0.0328)	0.0487 (0.0329)
GDP per capita	0.0905* (0.0519)	0.0634 (0.0482)	0.0939* (0.0527)	0.0957* (0.0529)	0.0918* (0.0508)	0.0473 (0.0463)
Unemployment (electoral year)	-0.1797* (0.030)	-0.1830** (0.0911)	-0.1595* (0.0891)	-0.1835* (0.0950)	-0.2219** (0.1015)	-0.1627* (0.0849)
Crime rate	-0.0470* (0.0244)	-0.0351 (0.0219)	-0.0440* (0.0235)	-0.0495** (0.0249)	-0.0439* (0.0234)	-0.0190 (0.0165)
Cycle	0.4571** (0.1869)	0.3672** (0.1609)	0.4521** (0.1814)	0.4871** (0.1932)	0.4326** (0.1914)	0.2268* (0.1381)
Inflation	-0.0418*** (0.0133)	-0.0381*** (0.0120)	-0.0417*** (0.0131)	-0.0440*** (0.0139)	-0.0391*** (0.0136)	-0.0295*** (0.0103)
Constant	0.0306 (1.7215)	-0.1260 (1.6863)	-0.0500 (1.6619)	-0.0488 (1.7609)	-0.9319 (1.7758)	-1.4377 (1.6563)
Observations	112	112	112	112	112	112
Districts	24	24	24	24	24	24
Observations per group MIN	2	2	2	2	2	2
Observations per group MAX	5	5	5	5	5	5
Observations per group AVG	4.7	4.7	4.7	4.7	4.7	4.7
Log Likelihood	-38.024437	-39.238349	-37.9444023	-37.125937	-37.263938	-41.57783

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

- Both
- If anything, is more current than capital

The impact of Vertical Fiscal Imbalance IV: CURRENT Expenditures

Interacting Vertical Fiscal Imbalance (average of each gubernatorial period) with the rate of growth of CURRENT expenditures

Variables	Basic Specification	VFI (Current Exp)
Expenditures (total)	0.0413* (0.0168)	
Interaction: Rate of growth of CURRENT Expenditures per capita * Vertical Fiscal Imbalance		0.1246** (0.0627)
Party	0.0928* (0.0383)	0.0981*** (0.0363)
Margin	0.0577 (0.0331)	0.0458 (0.0318)
GDP per capita	0.0905 (0.0519)	0.0729 (0.0489)
Unemployment (electoral year)	-0.1797 (0.030)	-0.1824** (0.0905)
Crime rate	-0.0470 (0.0244)	-0.0360* (0.0211)
Cycle	0.4571* (0.1869)	0.4381** (0.1794)
Inflation	-0.0418** (0.0133)	-0.0420*** (0.0130)
Constant	0.0306 (1.7364)	-0.1996 (1.6587)
Observations	112	112
Districts	24	24
Observations per group MIN	2	2
Observations per group MAX	5	5
Observations per group AVG	4.7	4.8
Log Likelihood	-38.024178	-40.062809

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

The timing of spending

From PBC concerns

The timing of spending

Variables	Basic Specification	(1)	(2)
Expenditures	0.0413** (0.0166)		
Rate of growth of Election Year Spending (t versus t-1)		0.0044 (0.0180)	
Rate of growth of election Year Spending (t versus average of t-1; t-2; and t-3))			0.0058 (0.0214)
Party	0.0928** (0.0383)	0.1032*** (0.0361)	0.1044*** (0.0361)
Margin	0.0577* (0.0331)	0.0438 (0.0329)	0.0420 (0.0334)
GDP per capita	0.0905* (0.0519)	0.0494 (0.0481)	0.0499 (0.0483)
Unemployment (electoral year)	-0.1797* (0.030)	-0.1380* (0.0823)	-0.1380* (0.0818)
Crime rate	-0.0470* (0.0244)	-0.0211 (0.0181)	-0.0203 (0.0174)
Cycle	0.4571** (0.1869)	0.2648* (0.1441)	0.2682* (0.1465)
Inflation	-0.0418*** (0.0133)	-0.0325*** (0.0108)	-0.0328*** (0.0110)
Constant	0.0306 (1.7215)	0.8836 (1.5548)	0.9126 (1.5517)
Observations	112	112	112
Districts	24	24	24
Observations per group MIN	2	2	2
Observations per group MAX	5	5	5
Observations per group AVG	4.7	4.7	4.7
Log Likelihood	-38.024437	-41.825302	-41.817764

Note: Standard errors below coefficient. *** Significant at .01. ** Significant at .05. * Significant at .10

The End

(below extra slides)

Fixed versus Random Effects

Hausman Test

Variables	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random		
Party	.0561227	.0999096	-.043787	.0300776
margin	-.0042187	.0240863	-.028305	.0399375
gdppcsr1	.0303888	.0782643	-.0478755	.0180654
uelecyar	-.2135683	-.1266058	-.0869625	.1620026
crimesr1	-.0448535	-.034941	-.0099125	.0144566
infsr	-.0478131	-.0367548	-.0110583	.014012
cyclesr	.6240594	.4223144	.2017449	.2135023
explr2	.0433573	.0367073	.00665	.0132608

b= consistent under Ho and Ha; obtained from xtlogit

B = inconsistent under Ha, efficient under Ho; obtained from xtlogit

Test: Ho: difference in coefficients not systematic

$$\begin{aligned} \text{chi2}(8) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\ &= 0.40 \end{aligned}$$

Prob>chi2 = 0.9999

(V_b-V_B is not positive definite)

**-Observations= 58
- Provinces= 12**

Conclusions

- **Argentine voters reward fiscal profligacy.**
- **As democracy matures and fiscal transparency increases, still rational and well informed voters reward public expenditures increases.**
- **These findings are consistent with the set of incentives prevailing in the Argentine political system and the federal fiscal arrangements.**
- **The Argentine voter at the provincial level has incentives to reward politicians who are effective at extracting resources from the federal government. Voters, particular in small and poor districts, and to a lesser extent in large provinces, know that they are not going to pay the full cost of their local authorities' imprudent fiscal behavior.**
- **What is the fundamental difference between U.S., Israeli and Colombian voters and the Argentinean voters?**
- **Both respond to incentives. Both may even dislike prodigal politicians. The real difference is in the set of incentives they face.**