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FISCAL DECENTRALIZATION AND VOTERS' CHOICES AS CONTROL

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This paper investigates, empirically, the voters' choices as a mechanism of control of the municipal governments in Argentina. In particular, the paper explores the question of whether voters choose to support the political party in office based on its fiscal performance while in office. After a learning period, citizens vote considering the fiscal performance. The smaller the jurisdiction, the more sensitive the citizens. Voters, in evaluating fiscal performance to take voting decisions, consider the performance in the recent past. Municipal elections are not a mere rehearsal of national or provincial elections. We conclude that we can trust in fiscal decentralization and voting. Perhaps, it is a better option than fiscal centralization.

JEL classification codes: H72 - D72
Key words: fiscal decentralization, local governments, fiscal performance, voters' choices

I. Introduction

Fiscal decentralization plays a crucial role both in public finance theory and in the design and evaluation of fiscal policies. At the theoretical level, there is no agreement on the most important issues about fiscal decentralization or on the real

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functioning of the multilevel governments.[1] In this paper we empirically investigate on ballot box as a mechanism of control of fiscal variables. We analyze the case of 125 municipal governments in the Province of Buenos Aires in Argentina, where 12,5 million people live (census 1991). For decades civil and military governments have alternated in our country. Since 1983 democracy prevails and since then

[1] A few examples are the following:

"The federal system was created with the intention of combining the different advantages which result from the magnitude and the littleness of nations" (Alexis de Tocqueville: Democracy in America);

"The optimum form of government: a federal system" (W. E. Oates: Federalismo Fiscal);

"Decentralization can jeopardize stability," "Decentralization can undermine efficiency," "Decentralization can (...) be the mother of segregation," "corruption is more widespread at the local than at national level" (Remy Prud'homme: The Dangers of Decentralization);

"and it does seem enough to call for a revision in the conventional wisdom that stabilization should not be a state responsability" (E. M. Gramlich: Federalism and Federal Deficit Reduction);

"Properly applied, the conventional theory of decentralization can help improve the enactment and execution of government policy," "It takes a great deal of production efficiency, which Prud'homme says is an advantage of centralization, to offset a central government choice to waste resources on activities that are harmful to the populace" (military, palaces or anything else of low priority to the populace) (Ch.E.Mc Lure Jr (Comment on Prud'homme));

"I find it quite appropriate that subnational governments should participate in redistribution, as they do in practice; (...) Some participation by subnational governments in stabilization policy is also sensible. Finally, the case for decentralization is fundamentally based on efficiency considerations." (D. O. Sewell (Comment on Prud'homme));

"on the assumption that people should get what they want -rather than someone else wants them to want (...) decentralization is in principle a plus, not a minus." "Nonetheless, decentralization is still a good idea" (Bird and Rodriguez: Decentralization and Poverty Alleviation).

"Federal decentralization, and in particular local autonomy, is another constitutional element which can be hypothesized to positively affect citizens` happiness. Political decision making in municipalities is closer to relevant information about residents` preferences and also closer to direct control by its citizens" (Frey and Stutzer: Happiness, Economy and Institutions).

there have been four municipal elections. This fact has raised the intriguing question of whether ballot box is an efficient mechanism to control fiscal variables.

In Section II we review three models of fiscal decentralization, namely "vote with their feet" as in Tiebout, concentration of the fiscal decision power as in political economy models, and the ballot box. Section III studies some conditions for the functioning of fiscal decentralization in practice. Section IV presents results about the relationship between election outcomes and fiscal performance for Argentina. Section V concludes.

The results of this paper, though preliminary, suggest that fiscal decentralization and ballot box plus mobility of goods and factors could make fiscal centralization less necessary than political economy models and several attempts of creating new fiscal institutions in Argentina have suggested.

II. Models of Fiscal Decentralization

One of the first developments in this field is Tiebout (1956). This model arises as an answer to Samuelson (1954,1955) who, in his extension of welfare theory to incorporate public goods, concludes that "the "solution" exists; the problem is how to find it." The "solution" requires that the summation of the marginal rates of substitution over all members of the community be equated to the marginal rate of transformation. A competitive market fails and the quantity of public goods provided is likely to be less than the Pareto-optimal quantity (Laffont, 1988; Mueller, 1989). According to Tiebout, it is necessary to distinguish between national or federal public goods –for which Samuelson's result applies- and local public goods for which there is a mechanism that functions "like the market" and yields the same optimal solution that a private market would. The Tiebout consumer-voter may be visualized as choosing among several communities with already set revenue and expenditure patterns and picking that community which best satisfies his preference pattern for public goods. Mobility –"vote with their feet"- is the mechanism that yields the provision of the optimal bundle of goods at the minimum cost. In Tiebout`s words (1956: 422): "just as the consumer may be visualized as

walking to a private market place to buy his goods, the prices of which are set, we place him in the position of walking to a community where the prices (taxes) of community services are set. Both trips take the consumer to market. There is no way in which the consumer can avoid revealing his preferences in a spatial economy. Spatial mobility provides the local public-goods counterpart to the private market's shopping trip". A practical implication of the analysis is that policies that promote mobility and increase the knowledge of the consumer-voter will improve the allocation of public expenditures. Tiebout (1956: 424) concludes that the "local government represents a sector where the allocation of public goods (as a reflection of the preferences of the population) need not take a back seat to the private sector." Information, knowledge, interjurisdictional competition and mobility are the keys of the model.

In its over four decades of life, Tiebout's paper has generated a wealth of literature, both theoretical and empirical.[2] It could not have been different because it is a very short paper (only eight pages) without mathematics or figures, with strong assumptions and not well clarified issues. We would like to emphasize two points about the paper. The first is about Tiebout's mechanism for obtaining economic efficiency, that is, the mobility of the consumer-voter ("vote with their feet") and the later extension to goods and productive factors.[3] The second is that, in the presence of fiscal disparities among regions, fiscal decentralization should include a mechanism for transferring financial resources from wealthy to poor regions (Buchanan, 1950; Oates, 1972). Similar to a world where only private goods exist, the solution arising from competition is efficient but not necessarily

[2] An example is Zodrow (ed.) (1983). The theoretical and empirical literature has grown considerably until now; for references see Oates (1994).

[3] Migrations have been important in Argentina. For example, between 1914 and 1947 immigrate 850.000 people from other parts of the country into Capital Federal and the Province of Buenos Aires. Between 1947 and 1960 more than 1,1 million people immigrated to the Province of Buenos Aires. The net migration of natives between 1914 and 1947, between Provinces, both in absolute values and in relation with the population of 1914, could be explained by the differences of "economic capacity" and the "per capita provincial expenditures" (Ennis and Porto, 1997).

fair. "Thus, our analysis suggests that we should applaud interjurisdictional competition on efficiency grounds whenever the federal government has fulfilled the redistributive function" (Oates and Schwab, 1991: 128).

An alternative approach to Tiebout can be found in the literature focusing on the political and institutional determinants of fiscal results (Alesina et.al., 1995; Alesina y Perotti, 1996; Stein et.al., 1997; Velasco, 1997). The essence of this approach can be freely outlined as follows: when there are several levels of government and revenue sharing systems, revenues become "common property" at various levels. On this "common property" influence fiscal and political institutions leading to intergovernmental grants higher than optimal, excessive local public goods, inadequate local tax effort, fiscal deficits, excessive public debt, etc. All of these probably end in macroeconomic calamities (e.g. high inflation or hyperinflation). The implicit or explicit message of this approach seems to be that fiscal decentralization is the mother of all evils, that in a decentralized world the fight for "common property" is exacerbated and that the "solution" must be in the hands of a central planner. The greater the power of this central planner, the better the fiscal results obtained. If in this context decentralization is required it must be simply understood as "deconcentration" or "delegation" (Bird, 1995). The central planner is the "principal" who tells "agents" how much to spend and on what, how much to tax and how (what taxes, bases and tax-rates), etc. Because at the central level there are several actors the message seems to be that the best solution is an Executive that prevails over Congress, a dominant Finance Minister in the Executive, a Congress dominated by the President's political party and so on. In this political scenario, good fiscal results would be obtained.[4]

In a third kind of model of fiscal decentralization the political institutions of each society have a central role together with democratic mechanisms for decision making (ballot box). Rather than the "general case," it is emphasized that each society solves in a different way both its political and fiscal organizations. "One

[4] In the Argentine case, these political scenarios do not generate good fiscal results. The closest example to the description of the text is the government elected between 1946 and 1955 and the "de facto" government between 1976 and 1983.

cannot pick an institution from a specific setting, plant it in the alien soil of another environment, and expect to obtain the same result. The choice of perspective is thus essential in approaching issues of fiscal decentralization."[5] To evaluate fiscal decentralization it is necessary to distinguish whether you put the focus on the intrinsic or on the instrumental aspects of the subject. The centralist model looks at fiscal decentralization from an instrumental point of view and the judgement is negative due to excessive expenditures, excessive public debt, macroeconomic catastrophes, etc. The alternative view looks at the intrinsic value of decentralization. "Local people may make wrong decisions from the perspective of an outside observer, but if they make them, the decision must, by definition, be assumed to be right for them. From this perspective, then, decentralization is intrinsically good because it institutionalizes the participation of those affected by local decisions. The results of a good process must themselves be good" (Bird, 1995). The recent literature puts another plus for fiscal federalism and ballot-box: the positive impact on citizens' happiness (Frey and Stutzer, 1999).[6]

III. Fiscal Decentralization in Practice

Two important questions for the analysis of fiscal decentralization are:

A) Which are the conditions for the efficient working of fiscal decentralization?
B) If we trust in democratic mechanisms (the ballot box and the political institutions of each country) for fiscal decision-making and control, which fiscal variables

[5] In general, this vision could be applied to all fiscal policies. Related to models of political economy and the requirements of budget rules, Romer (1997) in a comment to Poterba (1997) suggests that "the adoption of balanced budget requirement could do anything from significantly worsening a country's fiscal problems to leading to their gradual solution. Determining where in this range of possibilities the truth lies is of great importance for public policy and social welfare."

[6] "Federal decentralization, and in particular local autonomy, is another constitutional element which can be hypothesized to positively affect citizens' happiness. Political decision making in municipalities is closer to relevant information about residents' preferences and also closer to direct control by its citizens" (Frey and Stutzer, 1999).

do consumers-voters take into consideration when they vote? Which fiscal variables should politicians attend to if they wish to win the following election?

A) Conditions for Efficient Working of Local Governments and Fiscal Decentralization

As it is expressed in Oates (1994: 126) "the public sector in the real world, however, consists of a set of institutions –and spending and tax programs are enacted and function within this context." Tiebout (1956) also expresses this worry. The question that arises is whether there is a set of social institutions, which could lead to an efficient allocation of resources in the public sector. In general, the conditions for the efficient functioning of local governments –fiscal decentralization– are (Bahl y Linn, 1994; Bird y Rodriguez, 1995):

(a) local authorities chosen through democratic mechanisms;
(b) tradition and culture in local decisions-making;
(c) well-qualified, trained and professional bureaucracy;
(d) relative balance in the regional distribution of income and wealth; or incorporation of regional disparities as a desirable goal of fiscal policies;[7]
(e) effective or yardstick competition.

B) The Relevant Fiscal Variables

An important issue is whether citizens "look at" variables of fiscal performance when they vote and, if they do, which variables they consider. Conversely, we need to discover if politicians take these variables into account. It is hard to find an absolute answer. Probably different societies, different levels of government, different moments or circumstances will influence the relevant variables for citizens and politicians.

[7] In the Argentine case, as in the case of other countries, another condition that could be added is that "properties rights" over fiscal resources have to be clearly defined. This has to be done after an open discussion in the society about what the different levels of government are doing and what they have done with the money.

The analysis of the citizen-voters response to fiscal variables is based on a simple model following Peltzman (1987, 1990, 1992, 1998) and Besley and Case (1995). Two comments are necessary. In the first place, it is supposed that voting is used to discipline the political party in office. Secondly, it is assumed that consumer-voters are able to evaluate the performance of the political party in office and that this evaluation is made using available information from the municipality where they live. Such assessment is made considering the impact of the activities of the municipal public sector on the utility (U). The change in utility due to the fiscal policy of the political party in office may be positive or negative and it depends on the change in municipal fiscal variables. This change and the evaluation is made by consumer-voters ex post, that is, the assessment is based on past performance. Voters take the change in utility into account to decide whether or not to re-elect the incumbent party. There is a function f (U), with $f' < 0$, that transforms the variation in utility in probability to change the political party in office. The transformation is made with a function

$$V_i = A_i + b\,U_i + c\,P_i + d\,Y_i$$

$$U_i = g\,(X_i) \qquad (1)$$

where V_i is the probability to change the political party in office in the municipality i; A_i is a constant indicating the "normal" probability of change explained by other variables (e.g. that citizens prefer rotation in the office per se, etc.); U_i is function of the change in municipal fiscal variables (X_i); P_i is the population in i; Y_i is the change in income per capita in i.

The dependent variable in Peltzman's model for the United States is the incumbent party's share of the vote in jurisdiction i. In his 1987 paper he obtained several results of interest for our research. Firstly, voters, in gubernatorial elections, understand that national rather than local policies have the dominant effect on the change of income per capita. Secondly, voters respond to local fiscal variables under the governors' control. Thirdly, voters use their vote to penalize the growth of the state budget. Finally, voters consider the four-year percentage change in the

fiscal variable –what suggests that the role of the voters' memory is more significant than often assumed. Peltzman's 1990 paper confirms some of the previous findings and some new ones are worth mentioning. For example, it is particularly important to notice that Peltzman finds ex-post settlement between principals (voters) and agents (political parties). Another important result is that voters reward only permanent improvement in their welfare, that is, they do not reward a policy that increases their welfare prior to the election and reduces it after the election. In Peltzman (1992) the analysis is extended to the direct effect of the fiscal policy. He offers evidence in support of four conclusions: first, that voters penalize growth both in federal and state expenditures; second, that the composition of state budget matters, though not that of the federal budget; third, that the way spending is financed does not matter at a political level; and finally, that the voting market shows considerable learning within a relatively short interval.

For the re-election of governors in the USA, the most important variable seems to be the level of compared taxation. Besley and Case (1995) have shown that voters choose whether to re-elect governors based "on their performance while in office." For this purpose, citizens compare such performance with that of neighbours ("yardstick competition"). Moreover, if some policies lead to electoral success, one could hypothesize that such policies would spread, with the consequence that the "voters' choice and incumbent behaviour are determined simultaneously." The importance of this study lies in the fact that, regardless of the fiscal variable considered, there is a relationship between fiscal performance (in this study, relative) and electoral result. Democracy "matters" and affects the decisions of politicians. Politicians, knowing how citizens behave, are encouraged to adopt the fiscal measures that citizens deem appropriate. The democratic mechanism, together with the mobility of goods, factors, and people, may lead to good fiscal results without the need to resort to centralized solutions. In Besley and Case's model, the functioning is as follows: if one governor increases taxes and neighbouring governors do not, there is a strong likelihood that citizens will vote against him in the following election, in which case he will not be re-elected. The governor is knowledgeable of how citizens vote and checks that his tax level is not significantly

different from that of his neighbours. For Argentina, Gasparini (1997) also finds evidence of municipal interrelationships in tax policy. It could be objected that this mechanism may result in the sub-production of local public goods and a mix far from optimum. The answer resides in the fact that the same competition exists for expenditures (Case, Hines and Rosen, 1993; Porto, 1995), what will act as a balancing mechanism. The important conclusion is that, considering both taxes and expenditures, citizens vote in the ballot box and politicians consider their opinions in implementing policies.[8] [9]

In an analysis of the principles of local taxing, Spahn (1995: 222-23) also emphasizes the interaction between voters and politicians. "Local politicians should be responsive to the expressed preferences of their local citizens or expect to encounter defeat in local elections. This is the basic principle of accountability of local policymakers, and it is essential both for economic efficiency and democratic representation." A central issue for the good functioning of the political system is the information made available for the community. "Information policies are crucial for a decentralized government. Information is necessary to make co-ordination effective, and inform the national governments and its voters (...). It is also important to estimulate competence between jurisdictions and thus encourage innovations" Spahn (1997: 227-228).

IV. Voters'Choices as Control of Fiscal Variables

The Argentine experience since the return to democracy in 1983 offers some interesting results. The 125 municipalities of the province of Buenos Aires and the four elections at this level (1983, 1987, 1991, 1995) are considered. Given the initial situation (result of the 1983 election), three important questions arise:

i) Has the political affiliation of municipal officials changed since 1983? If so, in what proportion?

[8] One of the weakness of our paper is to leave aside the simultaneity in the relationship between voters and politicians (see footnote 11).

[9] For an interesting review of the literature in relation with fiscal competition, see Schulze and Upsrung (1999). We obtained this reference from Prof. Schulze.

ii) Did the citizens' voting behavior vary depending on the type of election (municipal officials, governor, president)?
iii) Are the results of elections related to the fiscal performance of governments?

Results indicate that in the 1987 election 37 municipalities changed political party (29,6 %); in 1991, 36 (28,8 %); and in 1995, 39 (31,12 %). The average of changes for the three elections is 29,9 %. The main finding is that about one third of the municipal officials elected belong to a different political party from the one in office after each election. Elections at the municipal level coincide with elections of provincial authorities. Data show that there is vote discrimination (governor vs. municipal official). In 1987, of the 37 changes in municipal officials, 92% corresponded to the political party of the governor elected; in 1991, the percentage decreased to 64%; and in 1995 to 56%. This suggests, in the first place, that for this specific case, it is not true that "local elections, when they exists, are usually decided on the basis of personal, tribal, or political party loyalties (...) local elections are often a mere rehearsal of national elections and say little about local preferences" (Prud'homme, 1995: 208). In the second place, that there is learning in the ballot box mechanism. Only in 1983 and 1995 did elections at the three levels coincide. Although in 1995 the President and the Governor of the Province of Buenos Aires belonged to the same party, there were changes in 39 municipalities. This election is particularly interesting because changes occurred in both directions: the UCR political party (Unión Civica Radical) lost 18 municipalities and the PJ political party (Partido Justicialista) 15; the UCR political party won 13 and the PJ political party 22 (Tables 1 to 3).

Considering the three elections, the highest percentage of changes in the political affiliation of officials in municipalities (46 %) was recorded in the less populated areas. Conversely, the lowest percentage (19 %) corresponded to more populated districts. This suggests that the smaller the size of the population, the higher the probability of changes in the political color of authorities. This result can be explained by recourse to the argument that in a small community citizens are more sensitive to the performance of officials in government and that individual votes have strong power (Table 4).

Table 1. Political Parties between Levels of Government 1983, 1987, 1989, 1991 and 1995

President	Governor		Municipalities	
			Number	Percentage
		1983		
UCR	UCR	UCR	91	72,80
		PJ	29	23,20
		Other	5	4,00
		Total	125	100,00
		1987		
UCR	PJ	PJ	61	48,80
		UCR	59	47,20
		Other	5	4,00
		Total	125	100,00
		1989		
PJ	PJ	PJ	61	48,80
		UCR	59	47,20
		Other	5	4,00
		Total	125	100,00
		1991		
PJ	PJ	PJ	76	60,80
		UCR	41	32,80
		Other	8	6,40
		Total	125	100,00
		1995		
PJ	PJ	PJ	83	66,40
		UCR	36	28,80
		Other	6	4,80
		Total	125	100,00

Source: Estadística Bonaerense (1996) and information of the Junta Electoral of the Province of Buenos Aires. PJ = political party Justicialista. UCR = political party Unión Cívica Radical.

Table 2. Municipal Elections 1987, 1991 y 1995

Number and Percentage of Municipalities			
1987			
Change in the political party	37 (29,6 %)	33 no longer UCR	
No change in the political party	88 (70,4 %)	2 no longer PJ	35 become PJ
Total	125 (100 %)	2 no longer Other	2 become Other
1991			
Change in the political party	36 (28,8 %)	25 no longer UCR	7 become UCR
No change in the political party	89 (71,2 %)	8 no longer PJ	23 become PJ
Total	125 (100 %)	3 no longer Other	6 become Other
1995			
Change in the political party	39 (31,2 %)	18 no longer UCR	13 become UCR
No change in the political party	86 (68,8 %)	15 no longer PJ	22 become PJ
Total	125 (100 %)	6 no longer Other	4 become Other
Average years 1987, 1991 y 1995			
Change in the political party	37,33 (29,9 %)	25,33 no longer UCR	6,67 become UCR
No change in the political party	87,67 (70,1 %)	8,33 no longer PJ	26,67 become PJ
Total	125,00 (100%)	3,67 no longer Other	3,33 become Other

Source: Estadística Bonaerense (1996) and information of the Junta Electoral of the Province of Buenos Aires. PJ = political party Justicialista. UCR = political party Unión Cívica Radical. Other = political parties different from PJ and UCR.

Table 3. Changes in Political Party of the Municipalities. Relationship with the Political Party of the Governor

	1987	1991	1995
1. Municipalities in which change the political party (1)	37	36	39
1.1. The winning political party is that of the Governor (1)	34	23	22
Percentage of number of changes	91,89	63,89	56,41
Percentage of number of Municipalities	27,20	18,40	17,60
1.2. The winning political party is different of that of the Governor (0)	3	13	17
Percentage of number of changes	8,11	36,11	43,59
Percentage of number of Municipalities	2,40	10,40	13,60
2. Municipalities in which not change the political party (0)	88	89	86
2.1. The winning political party is that of the Governor (1)	27	53	61
Percentage of number of changes	30,68	59,55	70,93
Percentage of number of Municipalities	21,60	42,40	48,80
2.2. The winning political party is different of that of the Governor (0)	61	36	25
Percentage of number of changes	69,32	40,45	29,07
Percentage of number of Municipalities	48,80	28,80	20,00
Total of Municipalities	125	125	125

Source: Estadística Bonaerense (1996) and information of the Junta Electoral of the Province of Buenos Aires.

To answer the third question, three fiscal variables were selected for the analysis of the relationship between results in elections and fiscal performance: first, the porcentual change in the per capita provincial grants to the municipality after the last election (at constant terms); second, the change for the same period in the per capita total expenditures; and third, the change for the same period in the

Table 4. Changes in the Political Party of the Municipalities and the Size of Population

Electoral section	Population 1991 (thousands)	Number of Municipalities	Number of changes 1987/1991/1995	Percentage of changes per election
First	4268	20	16	26,67
Second	592	15	13	28,89
Third	4522	16	9	18,75
Fourth	542	18	15	27,78
Fifth	1079	26	26	33,33
Sixth	677	21	23	36,51
Seventh	241	8	9	37,50
Eighth	528	1	1	33,33
Total	12449	125	115	30,67

Source: Estadística Bonaerense (1996) and information of the Junta Electoral of the Province of Buenos Aires.

per capita public investments of the municipality.[10] [11] People, it is supposed, consider provincial grants because the more the municipality obtains, ceteris paribus, the less taxes they will have to pay, or the more goods they will get for the same taxes.[12] They also consider, one can assume, total expenditures since the

[10] For example, the porcentual change in any variable between the average 1984-1986 and 1983.

[11] Despite the fact that there could be some evidence that those selected variables could be endogenous ones leading to bias estimation problems, there is no more municipal information available to take this problem into account. So, we prefer to take in mind the bias generated by endogeneity rather than another one generated by wrong estimations.

[12] We investigated if the change in provincial grants to each Municipality is influenced by the decisions of political parties at the provincial level. To this aim, we used the Wilcoxon test to investigate whether the distribution of the changes in provincial grants in the

higher the expenditures, the higher the taxes to finance them. People supposedly observe public investment at the municipal level because it affects daily life: public lightening, traffic lights, roads, and urban infrastructure in general. This kind of expenditure represents a permanent improvement in individuals' welfare. As a control variable, we add the size of the population taking into account that the smaller the community, the more sensitive citizens will be to the performance of authorities in government and the more powerful individual votes will be (the power of votes is 1/N, where N is the population).[13] [14] We also include two proxy variables for the changes in income per capita: the change in the consumption of home electricity per capita and the change in the number of cars per capita. Lack of data on the evolution of personal income led us to use these proxies.

Table 5.1, 5.2, and 5.3 describe the variables and present a summary of the basic statistical results. The tables show that, in the three periods, the average variation in capital expenditures was higher for the subgroup of municipalities where the political party did not change. Higher average variations for provincial grants and total municipal expenditures were also observed, even though the differences are not so marked as in the case of capital expenditures. There are two interesting things to note. First, that where the political party changed, the average population was always smaller; second, that information for the 1995 election

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Municipalities with the same political party as the Governor's equals the changes in Municipalities with different political party from the Governor's. The results reveal that, for the three periods, the variable shows similar distributions. The average variation did not differ significantly either. We appreciate Streb's suggestion in this respect.

[13] We also use a number of control variables such us unsatisfied basic needs, education of human resources, fiscal capacity, human development, etc. The results were not very different from the ones presented and are omitted for simplicity.

[14] Following one suggestion from Streb, we included in our analysis a term to catch the interaction between fiscal variables and population. We defined this interaction term as "fiscal perception" which amounts to the division of each fiscal variable by the population of each Municipality (fiscal perception = fiscal variable/N). This new variable neither improved the estimations nor illuminated further conclusions.

Table 5.1. Descriptive Statistics. 1987

	Capital expenditures	Total expenditures	Provincial grants	Population
Municipalities with no change in the political party (87)				
Mean	102,95	23,55	45,73	105,78
Standard deviation	416,36	25,14	35,83	184,29
Maximum	3425,98	102,23	217,21	1117,32
Minimum	-87,76	-24,04	-53,44	1,43
Municipalities with change in the political party (38)				
Mean	6,53	17,43	42,28	86,28
Standard deviation	70,36	22,40	28,13	147,26
Maximum	233,95	82,87	101,27	637,31
Minimum	-80,55	-19,58	-41,98	6,96

Table 5.2. Descriptive Statistics. 1991

	Capital expenditures	Total expenditures	Provincial grants	Population
Municipalities with no change in the political party (88)				
Mean	-20,18	-16,49	8,78	107,62
Standard deviation	56,08	14,49	32,17	188,15
Maximum	204,94	39,46	159,67	1117,32
Minimum	-93,14	-43,68	-66,67	1,43
Municipalities with change in the political party (37)				
Mean	-32,07	-17,78	2,78	81,39
Standard deviation	41,65	12,11	27,95	132,86
Maximum	121,96	19,87	128,43	527,76
Minimum	-79,73	-37,54	-41,98	6,96

Table 5.3. Descriptive Statistics. 1995

	Capital expend.	Total expend.	Provincial grants	Efficiency	Energy	Cars	Pop.
Municipalities with no change in the political party (85)							
Mean	141,86	29,54	24,82	0,02	21,54	89,00	123,48
Standard deviation	228,12	19,07	22,89	0,27	16,03	410,90	197,24
Maximum	1429,02	107,07	142,95	1,13	73,54	2761,11	1117,32
Minimum	-52,88	-6,99	-34,13	-0,84	-19,89	-19,34	2,84
Municipalities with change in the political party (40)							
Mean	56,88	25,72	21,80	-0,05	17,50	37,47	49,65
Standard deviation	77,65	17,28	22,31	0,29	14,29	91,67	90,15
Maximum	273,91	62,05	102,50	0,42	83,87	575,80	524,23
Minimum	-57,71	-8,00	-5,97	-0,65	-8,07	-9,66	1,43

Capital expenditures: variation of capital expenditures per capita between 1983 (1987/1991) and the average of 1984-86 (1988-90/1992-94).
Total expenditures: variation of total expenditures per capita between 1983 (1987/1991) and the average of 1984-86 (1988-90/1992-94).
Provincial grants: variation of provincial grants per capita between 1983 (1987/1991) and the average of 1984-86 (1988-90/1992-94).
Population: population census 1991.
Efficiency measure of efficiency of Municipalities (1995).
Energy: variation of consumption of home electricity per capita between 1991 and the average of 1992-94.
Cars: variation of cars per capita between 1991 and the average of 1992-94.
Source: Estadística Bonaerense. (1996). Information of the Junta Electoral of the Province of Buenos Aires.

showed -in average- less efficacy in fiscal performance and worse general economic conditions in the municipalities with changes.[15]

[15] We use the Wilcoxon test to investigate whether the distributions of variables in the Municipalities with changes in the political party in office are equal to those in Municipalities without changes. The tests show more similar distributions for 1987 and 1991 than for 1995. In 1995, five of seven variables show different distributions

We used the logit regression method to analyze the changes in political parties in the Municipalities of the province of Buenos Aires. In this case, the dependent variable is a binary variable, which takes two values depending on the change –or not– of the political party in office after an election. The variable is valued one if the political party changes in an election and zero otherwise. Three different elections were analyzed, corresponding to 1987, 1991, and 1995 (Model I.1., Table 6.1.)

The results for the 1987 election show that there is no individual significance for any of the independent variables (investment is the most significant individual variable, at 20 %). In addition, there is not overall significance of the model. The signs are as expected for the grants (the less the grants, the higher the probability of change in political party), for the investment (the less the investment, the higher the probability of change in political party) and the population (the less the population, the higher the probability of change in political party –the less perception of fiscal variables or the less power of individual votes), but not for the total expenditures.

The results for the 1991 election are similar to those of the 1987 election. They also show that there is no individual significance for any of the independent variables (as before, investment is significant at 20 %) and that there is not overall significance of the model. However, for 1991 some results are worth noticing: all individual variables have the expected sign, and the test of individual significance improves with respect to the previous model.

Finally, the results for the cross-section of the 1995 election are even more valuable. The model as a whole is significant. The signs for the four variables are as expected. Of all individual variables, capital expenditures and population are the most significant in statistical terms (4 %), while total expenditures and grants are still not significant. Some interesting results were obtained from other estimations for the 1995 election (Table 6.2.). We added one variable for the efficiency of the municipal government (real versus estimated output with a Cobb-Douglas function),[16] for which we expect a negative sign: the greater the municipal

[16] A measure of efficiency was obtained comparing the estimated and real output for each municipality using a Cobb-Douglas function. Details can be seen in Brambilla et.al. (1998).

Table 6.1. Probability Models for Elections in 1987, 1991 y 1995

	Elections 1987 (1)		Elections 1991 (2)		Elections 1995 (3)	
	Model I.1.	Model I.2.	Model I.1.	Model I.2.	Model I.1.	Model I.2.
Variation of capital expenditures	-0,68	-0,47	-1,90	-1,93	-1,13	-1,07
	(-1,31)***	(-0,89)	(-1,34)***	(-1,36)***	(-2,14)*	(-2,01)*
Variation of total expenditures	-0,17	-1,65	3,71	3,67	2,72	2,21
	(-0,07)	(-0,81)	(0,79)	(0,78)	(0,92)	(0,73)
Variation of provincial grants	-0,74	0,32	-1,12	-1,22	-1,22	-1,17
	(-0,61)	(0,28)	(-0,74)	(-0,81)	(-0,59)	(-0,57)
Population	-0,13	-0,41	-0,39	-0,43	-0,92	-0,88
	(-0,55)	(-2,13)*	(-1,32)***	(-1,43)***	(-2,24)*	(-2,14)*
Dummy		0,48		0,07		-0,07
		(5,23)*		(0,84)		(-0,90)
Constant	-0,10	-0,35	-0,13	-0,17	-0,03	0,02
	(-1,32)***	(-3,54)*	(-1,64)**	(-1,81)**	(-0,38)	(0,20)
Overall significance	6,03	54,05	4,83	5,54	15,56	16,37
Log likelihood	-72,91	-48,90	-72,63	-72,28	-69,80	-69,40
Goodness of fit	0,70	0,78	0,71	0,71	0,70	0,68
Observations	125	125	125	125	125	125

Model I.2. includes a dummy variable values 1 if the political party in Municipalities coincides with the political party of the Governor and 0 otherwise.
Coefficients are multiplied by 1.000 (except those of the constant and the dummy).
The values in parenthesis present the value of statistic z (* 5 % significant; ** 10 % significant; *** 20 % significant).
The test of overall significance corresponds to statistic x^2. The critical value at 5 % for regressions (1), (2) y (3) is 9,49 (model I.1.) y 11,07 (model I.2.).

Table 6.2. Probability Models for Elections in 1995

	Elections 1995 (4)		Elections 1995 (5)		Elections 1995 (6)	
	Model I.1.	Model I.2.	Model I.1.	Model I.2.	Model I.1.	Model I.2.
Variation of capital expenditures	-1,09	-1,02	-1,1	-1,03	-1,16	-1,10
	(-2,04)*	(-1,91)**	(-2,04)*	(-1,89)**	(-2,18)*	(-2,05)*
Variation of total expenditures	2,50	1,96	2,62	2,07	2,67	2,13
	(0,85)	(0,65)	(0,88)	(0,68)	(0,90)	(0,70)
Variation of provincial grants	-1,62	-1,61	-1,16	-1,08	-1,09	-1,05
	(-0,77)	(-0,77)	(-0,56)	(-0,52)	(-0,53)	(-0,51)
Population	-0,91	-0,87	-0,92	-0,88	-0,84	-0,81
	(-2,19)*	(-2,09)*	(-2,24)*	(-2,14)*	(-2,02)*	(-1,94)**
Municipal efficiency	-132,26	-139,90				
	(-0,92)	(-0,97)				
Variation of automobiles			-0,05	-0,06		
			(-0,26)	(-0,29)		
Variation of energy consumption					-2,23	-2,24
					(-0,84)	(-0,85)
Dummy		-0,08		-0,07		-0,07
		(-0,96)		(-0,91)		(-0,91)
Constant	-0,02	0,03	-0,03	0,02	0,08	0,06
	(-0,28)	(0,33)	(-0,36)	(0,23)	(0,08)	(0,55)
Overall significance	16,42	17,33	15,64	16,48	16,29	17,12
Log likelihood	-69,38	-68,92	-69,76	-69,35	-69,44	-69,03
Goodness of fit	0,70	0,70	0,70	0,69	0,68	0,70
Observations	125	125	125	125	125	125

Model I.2. includes a dummy variable values 1 if the political party in Municipalities coincides with the political party of the Governor and 0 otherwise.

Coefficients are multiplied by 1.000 (except those of the constant and the dummy).

(4) Regression for 1995 period including a variable of Municipal efficiency.

(5) Regression for 1995 period including a variable of variation of automobiles per capita.

(6) Regression for 1995 period including a variable of variation of consumption of residential energy per capita.

The values in parenthesis present the value of statistic z (* 5 % significant; ** 10 % significant; *** 20 % significant).

The test of overall significance corresponds to statistic x^2. The critical value at 5 % for regressions (4), (5) y (6) is 11,07 (model I.1.) y 12,59 (model I.2.).

efficiency, the less the probability of change in the political party. The sign is as expected but not significant. The change in general economic conditions does not have a significant effect on municipal elections. Following Peltzman we would say that voters understand that their personal income (or proxies) is affected by national or provincial policies rather than municipal policies.

From the analysis of the three periods separately, it becomes evident that the model is increasingly significant as one moves in time, with overall significance for the 1995 election. The significance of individual variables follows a similar pattern. An interesting example is the variation in per capita capital expenditures. This is the only fiscal variable that is significant on its own in the third period (4 %). As it happens with the overall significance of the model, the tests show that this variable is increasingly useful. The variation in total expenditures and provincial grants, though not individually significant, have the expected signs and, as one moves in time, the coefficients tend towards individual relevance.

Some interesting results arise when we add, for each election, a dummy variable which distinguishes whether the winning party in the Municipality is the same (1) or different (0) from the Governor`s party. This variable is only significant in the 1987 election and when it is included, the total estimation improves. For this election, the positive sign shows that the probability of change is higher if the Governor's political party is challenging in the Municipalities. This result reveals that the 1987 municipal elections were deeply influenced by the results of the provincial election. The dummy variable is not significant in the other elections (Model I.2., Tables 6.1 and 6.2).

Several interpretations are possible. First, results suggest that after a learning period, citizens vote considering the fiscal performance of municipal authorities. Our study suggests that citizens interpret bad fiscal performance as evidence that their political party is unqualified for the position and unseat it in the next election. Only in 1987 were municipal electoral outcomes influenced by the provincial election. Second, the smaller the jurisdiction, the more sensitive the citizens. Third, citizens use information related with the years prior to the election. Voters, in evaluating fiscal performance to take voting decisions, consider the performance

in the recent past as a benchmark. Finally, it is the changes in the fiscal variables that affect votes. Our findings reveal that the electoral performance of one jurisdiction depends upon the jurisdiction's own fiscal policy; that voters seem to understand who (national, provincial or municipal governments) is responsible for what policy; that the possibility of "looking" is verified for the variables that are palpable for citizens (e.g. capital expenditures), with a permanent effect on their welfare. Those citizens would penalize the growth in total expenditures and would reward provincial grants and municipal efficiency. These results are congruent with Peltzman's. One additional conclusion is that the increase in municipal information, both from a citizen's municipality and the neighbouring municipalities (yardstick competition), may contribute to improve the performance of municipal governments. Finally, looking for new and appropriate political institutions like direct democracy may also benefit performance and happiness as several studies for other countries suggest (Pommerehne and Weck, 1996; Frey, 1997; Feld and Savioz, 1997).[17] Results, though preliminary, seem to show that it is possible to trust in fiscal decentralization and the democratic mechanism.

The previous analysis was based on cross-section specifications where the observable units are the Municipalities in three different elections. Now, as an additional instrument, we use the panel data structure. The fundamental advantage of a panel data set over the cross-section is that it allows great flexibility in modeling differences in behaviour across Municipalities and/or over time. In this case, our main objective is to analyze the intertemporal evolution of the coefficients. To this aim, we suggest two models for the analysis of the panel data structure. Firstly, we used a model (Model II, Table 7) to estimate homogeneous parameters for the whole Municipalities, without distinguishing between intermunicipal or intertemporal differences. We suppose that parameters do not change either between Municipalities or along time. Secondly, we used a model (Model III, Table 8)

[17] The reform of 1994 in the Constitution of the Province of Buenos Aires introduces forms of direct democracy that we hope will help to improve the functioning of the municipal sector. Until now it was used only once in only one Municipality.

which allowed us to estimate homogeneous parameters for all Municipalities, distinguishing only intertemporal differences. For this, we suppose that the parameters may change only along time (not between Municipalities).

In Model II, the signs of the variables (capital expenditures, total expenditures, provincial grants and population) are as expected both with and without the dummy variable. They are all individually significant at 5 or 10 % (except for the provincial grants). The coefficient of the dummy variable is positive and it is significant at 5 %. Both specifications of Model II are significant as a whole. Model III, which imposes the hypothesis of intermunicipal homogeneity of the parameters, shows us that for most cases, the variables have the same signs as those found in Model I when we considered the three periods separately. In addition, the individual significance of each of the variables is very close to that we found in Model I. As in the case of Model II, both specifications of Model III (with and without the dummy variable) are significant as a whole. In brief, Model II reveals expected signs for the variables, individual significance for all of them (except for provincial grants) and overall significance of the model as a whole. Model III shows that in most cases the signs of the variables are as expected, the model as a whole is significant, and the variables which are individually significant are the same as those in Model I.

Our next step is to compare these two models using a likelihood ratio test to see the significance of a group of coefficients. We compare the likelihood of one restricted model (in this case, Model II) with the likelihood of another unrestricted model (in this case, Model III). When the dummy variable is not considered as another explicative variable, the test reveals that the models are very similar. But things take a different direction when we include it, revealing a better functioning of Model III.[18] We think this result is in agreement with the learning process when democracy returns.[19]

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[18] The likelihood ratio test is 2,66 for specifications of Model 1 (Model II.1 and III.1) and 40,44 for specifications of Model II (Model II.2 and III.2).

[19] Another important issue is to test the presence of intermunicipal heterogeneity analyzing fixed effects in the logit model by using the conditional logit method of Chamberlain. The

Table 7. Intertemporal and Intermunicipal Homogeneity of Parameters

	Model II.1.	Model II.2.
Capital expenditures	-1,03	-1,11
	(-2,90)*	(-3,10)*
Total expenditures	2,30	2,51
	(1,82)**	(1,98)*
Provincial grants	-0,98	-0,88
	(-1,23)	(-1,12)
Population	-0,39	-0,49
	(-2,32)*	(-2,86)*
Dummy		0,17
		(3,66)*
Constant	-0,10	-0,20
	(-3,23)*	(-4,65)*
Overall significance	20,57	34,72
Log likelihood	-218,36	-211,29
Goodness of fit	69,60	70,40
Observations	375	375

Model II.2. includes a dummy variable values 1 if the political party in Municipalities coincides with the political party of the Governor and 0 otherwise.

Coefficients are multiplied by 1.000 (except those of the constant and the dummy).

The values in parenthesis present the value of statistic z (* 5 % significant; ** 10 % significant; *** 20 % significant).

The test of overall significance corresponds to statistic x^2. The critical value at 5 % for model II.1. is 9,49 and for model II.2. is 11,07.

Table 8. Intermunicipal Homogeneity of Parameters

	Model III.1.	Model III.2.
Capital expenditures 1987	-0,73	-0,62
	(-1,37)***	(-0,89)
Capital expenditures 1991	-1,88	-1,77
	(-1,35)***	(-1,42)**
Capital expenditures 1995	-1,11	-0,96
	(-2,09)*	(-1,98)*
Total expenditures 1987	-0,20	-2,21
	(-0,09)	(-0,81)
Total expenditures 1991	3,68	3,45
	(0,80)	(0,83)
Total expenditures 1995	2,58	1,89
	(0,86)	(0,69)
Provincial grants 1987	-0,75	0,44
	(-0,60)	(0,28)
Provincial grants 1991	-1,11	-1,20
	(-0,75)	(-0,91)
Provincial grants 1995	-0,91	-0,92
	(-0,43)	(-0,49)
Population	-0,40	-0,55
	(-2,38)*	(-3,30)*

Table 8. (Continue) Intermunicipal Homogeneity of Parameters

	Model III.1.	Model III.2.
Dummy 1987		0,64
		(5,33)*
Dummy 1991		0,07
		(0,93)
Dummy 1995		-0,07
		(-0,98)
Constant 1987	-0,07	-0,48
	(-1,01)	(-3,54)*
Constant 1991	-0,12	-0,14
	(-1,68)**	(-1,69)**
Constant 1995	-0,07	0,003
	(-0,94)	(0,04)
Overall significance	23,24	75,15
Log likelihood	-217,03	-191,07
Goodness of fit	70,13	72,8
Observations	375	375

Model III.2. includes a dummy variable values 1 if the political party in Municipalities coincides with the political party of the Governor and 0 otherwise.
Coefficients are multiplied by 1.000 (except those of the constant and the dummy).
The values in parenthesis present the value of statistic z (* 5 % significant; ** 10 % significant; *** 20 % significant).
The test of overall significance corresponds to statistic x^2. The critical value at 5 % for model III.1. is 18,31 and for model III.2. is 22,36.

V. Conclusions

This paper has investigated, empirically, the voters' choices as a mechanism of control of the municipal governments in the Province of Buenos Aires (Argentina), where there are 125 municipalities with a population of 12,5 million people (1991). In particular, the paper has explored the question of whether voters choose to support the political party in office based on its fiscal performance while in office. After the alternation of civil and military governments, democracy prevails since 1983. In that period, there were four elections at the municipal level. It has been argued that, when political processes are interrupted for a long time and democracy returns -as in Argentina-, voters engage in a learning process that, evidently, takes time.

This paper has sought answers for the following questions:

i) Has the political affiliation of municipal officials changed since 1983? If so, in what proportion?
ii) Did the citizens' voting behaviour vary depending on the type of election (municipal officials, governor, president)?
iii) Are the results of elections related with the fiscal performance of governments?

Results indicate that in the 1987 election 37 municipalities changed political party (29,6 %); in 1991, 36 (28,8 %); and in 1995, 39 (31,12 %). The average of changes for the three elections is 29,9 %. Elections at the municipal level always coincide with elections of provincial authorities and every twelve years with presidential elections too. Data show that there is vote discrimination.

Three fiscal variables were selected for the analysis of the relationship between results in elections and fiscal performance: first, the change in the per capita provincial grants to the municipality after the last election; second, the change for the same period in the per capita total expenditures; and third, the change for the

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results show expected signs and individual significance of the variables. The Hausman test shows that the null hypothesis of fixed effects is rejected in both specifications (with and without the dummy variable). So, in this case, as we reject the hypothesis of the existence of fixed effects, the logit estimator is consistent and efficient while the Chamberlain estimator, though consistent, is inefficient.

same period in the per capita public investments of the municipality. People, it is supposed, consider provincial grants because the more the municipality obtains, ceteris paribus, the less taxes they will have to pay, or the more goods they will get for the same taxes. They also consider, one can assume, total expenditures since the higher the expenditures, the higher the taxes to finance them. People supposedly observe public investment at the municipal level because it affects daily life: public lightening, traffic lights, roads, and urban infrastructure in general. As a control variable, we add the size of the population taking into account that the smaller the community, the more sensitive citizens will be to the performance of authorities in government and the more powerful individual votes will be (the power of votes is 1/N, where N is the population). We also include a variable representing the changes in general economic conditions (proxies of the changes in income per capita). We also add a dummy variable in order to analyze the relationship between the political party of the province and the political party of the municipalities.

We used the logit regression method where the dependent variable is a binary variable valued one if the political party changes in an election and zero otherwise. First, results suggest that after a learning period, citizens vote considering the fiscal performance of municipal authorities. Our study suggests that citizens interpret bad fiscal performance as evidence that their political party is unqualified for the position and unseat it in the next election. Only in 1987 municipal electoral outcomes were influenced by provincial election. Second, the smaller the jurisdiction, the more sensitive the citizens. Third, citizens use information related with the years prior to the election. Voters, in evaluating fiscal performance to take voting decisions, consider the performance in the recent past as a benchmark. Finally, it is the changes in the fiscal variables that affect votes. Our findings reveal that the electoral performance of one jurisdiction depends upon the jurisdiction's own fiscal policy. They also suggest that voters seem to understand who is responsible for what policy.

To conclude, preliminary results suggest that fiscal decentralization and the democratic mechanisms, together with the mobility of goods and factors, can make fiscal centralization less necessary than the models of political economy and several

proposals for countries like Argentina suggest. If we add the impact of decentralization on happiness we have another interesting plus.

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