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Which factors discourage people to vote? Turnout in Argentine Provinces

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Turnout in Argentine Provinces

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Abstract

There is a vast literature of turnout for different developed countries that show a declining trend in turnout, and Argentina has not been the exception). The abundant literature on turnout that focused mainly on developed countries have explained this phenomenon with an ample set of socioeconomic and political variables that varies little among countries. We study the case of 7 gubernatorial elections for 23 provinces from 1983 to 2007. Our main innovation is to model the determinants of turnout in Argentina, which is a developing country. Unemployment rate, the growth of crime rate, GSP per capita, illiteracy rate and several political variables, all powerfully shape turnout in Argentinian provinces. This paper contributes to the knowledge using a dynamic panel model displaying the effect of three sets of variables: social, economic and political. There is evidence consistent with a *withdrawal effect* between unemployment and turnout, and a clearly negative relation between illiteracy and turnout.

Keywords: Turnout, Unemployment, illiteracy, Closeness, Argentina.

JEL Classification Codes: H0, I2

1 Introduction

Recent opinion surveys show that Argentinians take pride on their democracy. They consider that democracy is a major collective achievement. However, turnout in all levels of elections are decreasing through time. The average turnout for gubernatorial elections fell from 82.4% in 1983, the year that Argentina recovered democracy after seven years of dictatorship, to 73.8% in 2007. This is rather cumbersome since Argentina, like many other countries, has a compulsory voting system for all citizens between 18 and 70 years old but the enforcement of such law is rather weak which may be part of the explanation of the observed decline in turnout rates (Lijphart 1998).

But this is not an isolated fact, in the western hemisphere, many democracies have also experienced important decline in the past decade or longer (Blais et al., 2004; Gray and Caul, 2000). The abundant literature on turnout that focused mainly on developed countries have explained this phenomenon with an ample set of socioeconomic and political variables that varies little among countries (Gallego, 2010).

The aim of this paper is to find the determinants of the steady decrease in turnout for Argentine gubernatorial elections since the return of democracy, in 1983. The case of Argentina is interesting because it is a middle-income country, with a high heterogeneity of resources and economic status among regions. Surprisingly, this heterogeneity generates a difference in the level of turnout among the provinces, however, along time the negative trend persists for all of them.

In our analysis we present three sets of variables: political, economic and social. In particular, we discuss the influence of unemployment, the rate growth of crime, the level of GSP per capita and some political and social controls. A priori, the impact of unemployment on turnout can go either way since there are two opposite effects: the mobilization effect, that incentives turnout and the withdrawal effect that discourages it. Our dynamic panel data estimations show that the concurrence of Presidential and gubernatorial elections and the improving in the GSP per capita contributes to larger turnout, but the increases in unemployment impact negatively the desire of citizens to vote. That is, we find that withdrawal effect predominates over the mobilization effect.

The paper is structured as follow. In section 2, we present the main contributions of the empirical literature. Section 3 shows the data and the methodology used in this investigation. The results of the model are in section 4. Finally, section 5 present some concluding remarks. The Appendix includes robustness check and some relevant tests for the econometric method applied in the investigation.

2 Literature Review

Regarding to the relationship between the economic situation and turnout, in the literature we find two alternative theories. The first one is the *Mobilization Effect* in which people attend more frequently to the elections when they are undergoing a bad economic situation, (Scholzman and Verba, 1979). Furthermore, people cast a ballot as a way of protesting against the incumbent government because of their economic hardship. For people, being more politically active, it enhances their chances to change their current economic situation. Actually, the participation in the ballots is the connection between the economy and the outcomes.

On the contrary, the second theory is the so called-*Withdrawal effect*- and suggests that people give up voting in adverse economic situations (Rosenstone 1982) . The cost to attend to the elections is high, due to the fact that their priority is to cover their basic needs and as a result they give less attention to the external factors such as the political one. There are empirical evidences that support the idea that poor and

unemployed show a strong reduction in their participation in politics, (Wolfinger and Rosenstone 1980; Caldeira et al. 1985)

Following the results from Radcliff (1992), our hypothesis about how the relationship between unemployment and electoral participation turnout works, is that, in the case of Argentina, we expect a negative correlation, using aggregate data. Radcliff (1992) found that when a country does not guarantee welfare protection, and during bad economic periods, people tend not to participate in politics. The opposite happens when a country has a strong social-security system that protects the more vulnerable people. Argentina has a weak social-security system, and thus, it is unable to provide a real support to those who need it most.

Education[2] represents a good proxy to measure unequal turnout[1]. Some article that reflects this phenomenon are detailed below. Gallego (2010) supports the idea that well-educated citizens vote more frequently than poor educated ones. Moreover, Blais (2000) suggests that education is a good predictor of social position, even more than social class or income, in terms to predict whether a person vote or not. As a result, it exists a substantial gap between turnout rates of more educated people and individuals who have less education, because the last ones are less informed about politics and feel apart from the political system (Verba et al., 1995; Rosenstone and Hansen, 1993).

Given the relation between education and turnout, an interesting point is to analyse what happens with the two extremes. On the one hand, we use illiteracy to display the effect of total lack of education. On the other hand, we present the effect of complete university degree, as a variable that captures the maximum level of education possible to attain.

Thus, illiteracy is one of the most influential factors in explaining the individual decision to cast a ballot. In particular, the illiterate, who are usually also the poorest, tend to vote less, and when this occurs, they are less taken into account by the political system. For instance, its legitimacy is modified due to this non-participation -in addition to other factors- (Lazarte Rojas, 1995). The lack of education raises costs in terms to vote through the absence of basic skills, like reading or writing. In accordance with this, illiterate citizens have less incentives to go to vote.

Furthermore, the existence of a compulsory voting system produces a modification of the benefit and cost structure (Gallego 2010) further increasing the cost of illiterates to cast a ballot. In Argentina we don't expect that this effect has a strong influence, due to the low cost of the sanction associated with the failure to vote.

Despite the fact that Lazarte Rojas (1995) proposes that illiterates are part of the social groups with the least information about the exercise of the vote, in Argentina there are large networks of political clientelism which focus their attention on the illiterate people, who belong to the poorest sectors. Clientelism, can be defined as giving goods in return for electoral support (Stokes, 2009). This phenomenon has been (and is) an effective instrument because it uses 'faceto-face', or 'house-to-house' contact in order to recruit support (Sezftel, 2000). The logistics of political clientelism suggests that people sell their vote in exchange for a good, and as Seztfel (2000) proposes, that it often generates a way to giving a democratic voice to the poors. At this point, we would expect a positive relationship between the percentage of illiterates and the percentage of people who will vote.

[1] Gallego (2010) defines unequal turnout as the pattern where socially privileged citizens vote more often than the disadvantaged.

[2] As education we considered people with a university degree.

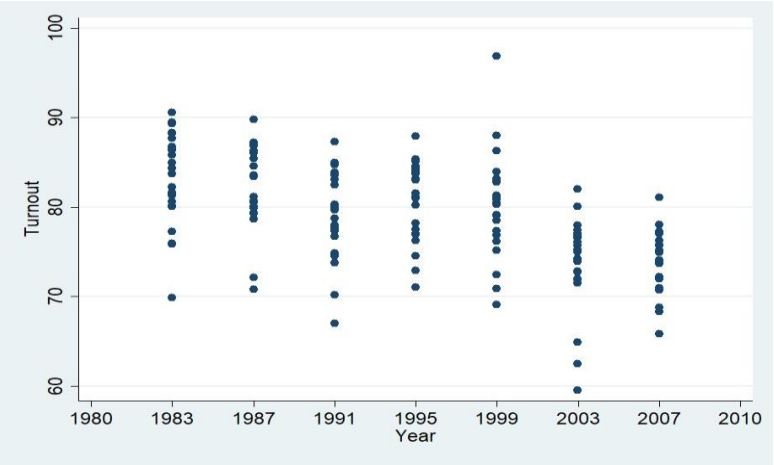
3 Model Specification and Data

To estimate the conjectured connection between turnout in gubernatorial elections and socioeconomic and political variables, we proposed the estimation of the following standard equation:

$$Turnoutt_{i,t} = \alpha_1 Turnoutt_{i,t-1} + \beta_1 Soc_{i,t} + \beta_2 Econ_{i,t} + \beta_3 Pol_{i,t} + \beta 4 YearDummies_i + v + \epsilon$$

The dependent variable *Turnoutt*$_{i,t}$ is measure as the ratio of the total votes, including null and blank ones, to the total registered citizens[2]. The lagged dependent variable attempts to capture the inertia of the turnout from one election to another. Figure 1 shows the evolution of turnout for gubernatorial elections in all 23 provinces, for the period 1983 -2007. The federal district, the Autonomous City of Buenos Aires (CABA) was excluded because the Chief of Government was appointed by the President of the Republic for most of the period under study.

Figure 1: **Provincial Average Turnout for each election**



Source: own calculations based on Dirección Nacional Electoral

In addition, in table 1, presents the turnout for each province (in percentage) for three selected elections: 1983, 1995 and 2007. The initial year in this new democratic era shows the highest turnout for all districts, so we considered a benchmark.

[2] On the definition of turnout (Geys, 2006)

Table 1: Turnout in Argentine Provinces. Selected years

	Year		
Provinces	1983	1995	2007
Buenos Aires	87.69	84.0	77.3
Catamarca	81.3	83.0	70.8
Chaco	75.9	77.1	74.9
Chubut	80.6	81.1	75.8
Córdoba	88.3	83.8	72.0
Corrientes	77.3	76.9	70.9
Entre Ríos	83.7	85.2	77.0
Formosa	75.9	77.5	71.0
Jujuy	84.3	74.5	75.1
La Pampa	89.5	88.0	81.1
La Rioja	89.3	84.6	75.8
Mendoza	86.6	85.4	78.1
Misiones	80.2	78.2	75.7
Neuquen	86.8	83.7	73.9
Rio Negro	85.8	83.2	72.0
Salta	80.1	72.9	72.2
San Juan	86.4	84.3	73.7
San Luis	85.0	80.2	68.3
Santa Cruz	82.2	81.0	76.3
Santa Fe	88.3	81.2	77.0
Santiago	69.9	71.0	65.8
Tierra del Fuego	90.6	81.6	68.8
Tucumán	81.7	76.2	74.1

Source: own calculations based on Dirección Nacional Electoral

Our explanatory variables are grouped into three categories: social, economic and political.

Social Variables

This group includes two variables suggested by the literature that tries to capture the idea that well educated individuals vote from frequently than poorly educated ones. The variable coded COLLEGE is defined as the percent of people which obtained a university degree and ILLITERACY is computed as the ratio between illiteracy people and total population. To compute this variable we used data from the Censuses 1991, 2001 and 2010[3] and interpolate the missing values by means of a linear progression.

Another variable incorporated under the category of social variables is the percentage of population over 70 years old (coded POB70). In Argentina voting is compulsory for all individuals between 18 and 70 years old. We expect older people to have less incentive to vote.

[3] www.indec.gob.ar

[4] GSP at constat pesos of 2004

We also include in this group the variable CRIME that was usually left aside by the literature but we consider very important for the case of Argentina since the increasing consensus on the media and opinion surveys throughout the country shows that crime is foremost in voters' consideration. We define CRIME as the rate of growth of the number offences per 100,000 inhabitants in a given district i in the period t. Data on crime rate were obtained from *Dirección Nacional de Política Criminal*. Two opposite effects determine the expected sign of CRIME. On one hand, if citizens' asses that they can influence the governor´s security policy, a positive correlation between the rate of growth of crime rate and turnout will result. On the other hand, a negative sign is expected if citizens are discouraged about their influence on government security policies by means of the voting system.

Economic Variables

As in most of the turnout studies at subnational level, we include the *unemployment* (coded U) and the *GSP per capita* (named GSPpc) for each province. As explained above, the sign of unemployment is theoretically undetermined, depending on which effect, mobilization or withdrawal, dominates. Quite the reverse, the expected impact of GSP per capita is clear: as income increases the intention to participate in lections augments. We constructed the GSP[4] with data from various sources: the IFC (*International Finance Corporation*), UNLP (*Universidad Nacional de La Plata*), and MECON (*Ministerio de Economia de la Nacion*). We explore the effect of two alternative variations of GSP per capita: the level during the election year, that captures the short-run effect and the average of the entire gubernatorial period (four years) that controls for the long-run influence of income per capita on turnout.

Political Variables

A set of traditional political variables are included in the empirical model. Most of the empirical studies for developed countries show that the coincidence of Presidential and gubernatorial elections augments turnout. For a given constituency the unit cost of casting a vote reduces as more elections are held the same date. Hence, we include in our explanatory variables set a *dummy variable*, called *DATE*, that takes 1 when presidential and governmental are carried out on the same date, and 0 otherwise. According to the national constitution gubernatorial elections are held every four years. From 1983 to 1989 Presidential elections were held every six years but the constitutional amendment of 1994 diminishes the presidential period to four years what increases the probability of concurrence of elections for both levels of government. Nonetheless, in most provinces, governors are allowed by law to move provincial elections various month in the same year.

Another variable that is usually considered a key determinant of turnout is *CLOSENESS*, defined as the differences in percentage vote between the winner and the runner-up party. This variable reflects the competitiveness of the political parties in the elections. There is a consensus in the literature about the relationship between turnout and closeness: the closer the results of the previous elections, the higher the turnout (Geys, 2004). This variable is particularly important for the case of Argentina since there were no alternation in various provinces and large differences between rivals in some other districts.

Our data set also incorporates *the Effective Number of Parties*[11], a concept introduced by Laakso and Taagepera (1979), which provides the number of hypothetical *equal-size* parties. This is also a standard variable in the literature of turnout: the larger the options for the voters, the higher the turnout.

Table 2: Descriptive Statistics

	Variable	Obs	Mean	Std.Dev.	Min	Max
Dependent Variable	Turnoutt	161	78.98	5.97	59.53	96.87
Explanatory Variables	GSPpcAverage	161	10.43	9.78	1.22	73.11
	Date	161	0.34	0.47	0.00	1.00
	Effective Number of Parties	161	2.52	0.59	1.02	4.25
	Pob70	161	0.04	0.02	0.01	0.09
	Growth Crime	138	0.16	19.76	-59.71	124.31
	College	161	0.02	0.01	0.01	0.05
	Iliiteracy	161	0.05	0.03	0.01	0.17
	Closeness	161	16.51	15.73	0.23	84.54

We work with a panel data that comprises 23 out of 24 Argentine districts and 7 consecutive gubernatorial elections from 1983 to 2007. Since its return to democracy in 1983, Argentina has held gubernatorial elections every four years in most of its 24 jurisdictions: 1987, 1991, 1995, 1999, 2003, and 2007. The only exception, which results in exclusion in our panel, is the City of Buenos Aires that held its first gubernatorial elections in 1996. By focusing on a single country this paper exploits within-country variation. This is a remarkable source of variation that goes beyond cross-country empirical studies.

4 Results

As already remarked, our specification includes the lagged dependent variables, so we estimate our models using the dynamic panel technique developed by Arellano and Bover (1995) and Blundell and Bond (1998) to cope with the poor performance of the classic Arellano-Bond when operating with datasets with many panels and few periods. Strictly speaking, the number of periods in our dataset is seven and the number of panels is 21. Although we can use OLS models for panel data, if we add the lag of the dependent variable to the estimation, our results will be inconsistent, due to that the lagged dependent variable is correlated with the error term, even though we assume that the disturbances are not auto-correlated, Arrellano-Bond (1991).

Table 3 presents the results of four alternative specifications with robust standard errors. All of them include state-invariant year dummies. It is observed that the lagged dependent variables are statistically significant in two of the four models, at the customary levels in all the equations, supporting the choice of the lagged dependent variable model and confirming that inertia is very important in turnout studies. Notice also that in all regressions we cannot reject the null hypothesis of the Sargan[12] test of over-identifying restrictions, implying that over-identifying restrictions are valid.

Model I is our main model that includes all variables from each set. Except for the percentage of citizens over 70 and effective number of parties, all the variables are significantly at the usual levels. These results indicate that turnout tend to be smaller as illiteracy rate is higher.

[11] $N = \frac{1}{\sum_{j=1}^{n} p_j^2} = \left(\sum_{i=1}^{n} p_i^2\right)^{-1}$, where p_i is the fractional share of the *i*-th party.

[12] In the appendix we present the *Sargan Test* of over-identifying restrictions and the *Arellano-Bond Test* for zero autocorrelation in first differenced errors. We do not use robust errors because of the results of the Sargan test, (Montero 2010)

The negative sign of unemployment reflects that the *withdrawal effect* dominates the mobilization effect. This is rather unexpected since vote buying to vulnerable people was a widespread practice in some Argentinian provinces (Stokes, 2005, 2007, Weitz-Shapiro, 2003), what implies a positive correlation between unemployed (mostly vulnerable people) and turnout. The negative sign of the rate of growth of crime is also surprising. It indicates that withdrawal dominates mobilization. A priori, we expected that people would try to use the electoral instrument to change the increasing levels of crime prevalent in the majority of the districts of Argentina during most of the period under study. Finally, the estimated coefficients for *Date* and *Closeness* are significant at 1% and 5% respectively and have the expected sign.

Model II reports the estimation of our standard equation using per-capita GSP in the election year instead of the GSP average to test whether constituencies focus on the performance of the whole governmental period rather than the election year.

Table 3: Dynamic Panel Model: Arellano-Bover

Variable	Model I	Model II	Model III	Model IV
Turnout(t-1)	-0.194**	-0.115	-0.197**	-0.110
	(0.0801)	(0.0834)	(0.0782)	(0.0810)
Unemployment	-0.324***	-0.391***	-0.295***	-0.346***
	(0.110)	(0.117)	(0.104)	(0.111)
GSPpcAverage	-0.377***		-0.400***	
	(0.0725)		(0.0686)	
GSPpcLastYear		-0.303***		-0.334***
		(0.0679)		(0.0651)
Date	3.525***	4.038***	3.520***	4.035***
	(0.866)	(0.924)	(0.859)	(0.920)
EffectiveNumberofpartiesLaa	-0.669	-0.663		
	(0.607)	(0.652)		
pob70	55.34	83.53		
	(55.30)	(57.78)		
gr.crime	-0.0449**	-0.0478**	-0.0442**	-0.0492**
	(0.0191)	(0.0204)	(0.0187)	(0.0200)
College	187.2*	121.3	220.6**	166.5
	(112.0)	(116.8)	(107.5)	(113.7)
Illiteracy	-151.4***	-123.5***	-145.7***	-112.7***
	(38.18)	(38.57)	(37.44)	(37.02)
Closeness(t-1)	-0.0544**	-0.0569**	-0.0562**	-0.0616**
	(0.0246)	(0.0263)	(0.0242)	(0.0259)
Constant	91.05***	84.54***	91.58***	85.55***
	(7.447)	(7.671)	(7.263)	(7.559)
Observations	138	138	138	138
Number of Provinces	23	23	23	23
Year Fixed Effect	YES	YES	YES	YES
Standard errors in parentheses *** p¡0.01, ** p¡0.05, * p¡0.1				

5 Concluding remarks

This paper contributes to the turnout literature through an economic analysis of the determinants of elections in Argentina. Empirically, we focus our attention on three group of variables considering social, economic and political aspect. The first one is unemployment rate, which shows a negative relation with turnout in Argentinian provinces. The extent literature has focused on this relation displaying, on the one hand, a *mobilization effect* and on the other hand, the *withdrawal effect.* Our findings agree with the withdrawal effect, which discourages people to vote when unemployment rate raises. The second variable is illiteracy, which illustrates a negative relation with turnout, because the lack of learning such as not knowing how to read or write, represents a great cost for the illiterate when it comes to voting. The last one is closeness, which demonstrates in our model that the greater the difference between the candidate who won and the one who came second in the previous vote, the lower the percentage who vote in the following elections.

For the years included in our sample, the declining trend in turnout persists in all Argentinian provinces, in spite of the existence of heterogeneous socio-economic indicators between them. Taking into account, that Argentina presents different degrees of political clientelism throughout the provinces, it would be interesting to raise a discussion about its effect on electoral participation, and how it affects unevenly depending on the level of education.

The article we develop here is the first that investigates the incentives that individuals have in going to vote in Argentina. Most of the literature focuses its analysis of turnout on developed countries, such as. We expect this paper will provide insights that could help developing countries, due to the fact that Argentina is one of them.

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6 Appendix

Sargan test of overidentifying restrictions: Model I- Arellano-Bover

H0: Overidentifying restictions are valid
chi2(44)= 47.2733 Prob>chi2= 0.3404

Robustness Check: OLS and Arellano-Bond Models

VARIABLES	OLS (random Effect)	Arellano-Bond
Turnout(t-1)		-0.266*** (0.0974)
PBGpcAverage	-0.195***	-0.310***
	(0.0576)	(0.0871)
Unemployment	-0.234**	-0.293*
	(0.105)	(0.156)
Date	3.409***	3.494***
	(0.819)	(0.898)
EffectiveNumberofpartiesLaa	-0.282	-0.883
	(0.555)	(0.633)
pob70	41.08	25.55
	(41.78)	(100.4)
Crime	-0.0351**	-0.0514***
	(0.0172)	(0.0196)
College Complete	107.5	-43.03
	(93.61)	(263.1)
illiteracy	-83.21***	-116.9
	(27.16)	(72.82)
Constant	73.65***	103.1***
	(3.728)	(10.24)
Observations	138	115
Number of Provinces	23	23

Year Fixed Effect	YES	YES
Standard errors in parentheses *** p¡0.01, ** p¡0.05, * p¡0.1		