

Incumbent Effects and Partisan Alignment in Local Elections: a Regression Discontinuity Analysis Using Italian data

Emanuele Bracco Francesco Porcelli
University of Lancaster University of Warwick

Michela Redoano*
University of Warwick

First version: February 2011

This version: October 2011

Abstract

This paper provides a simple model to explain the political and economic interdependence between different tiers of governments. We derive precise predictions that the level of intergovernmental grants and the probability of re-election for an incumbent depends on her political alignment with an upper tier of government and on the sensitivity of the jurisdiction's voting behavior to the grants received (how "swing" a jurisdiction is). Moreover, the theoretical model predicts that local parties announce higher tax rates the safer is the jurisdiction. We test these predictions using a new dataset on Italian public finance and electoral data at the central and municipal level. Using quasi-experimental methods based on regression discontinuity analysis, final results provide robust empirical evidence in line with the predictions of the theoretical model.

KEYWORDS:

JEL CLASSIFICATION: H2, H77, H87, D7

Address for correspondence; Department of Economics, Warwick University,
Coventry, CV4 7 AL, United Kingdom. E-mail Michela.Redoano@warwick.ac.uk.

* We are very grateful to Ben Lockwood for very helpful comments and suggestions.

1. Introduction

The starting point is that there are interdependence between public goods (or policies) provided by different level of governments. These interdependencies arise for several reasons. First, even if some public goods are provided by one level of government, they are actually funded by more than one level through intergovernmental grants (for example the local level of government is in charge of the policy but the funding comes partially or entirely from the regional or central level). Other goods or services are provided by more levels of government at the same time (think about roads, education etc.). In other cases goods and services provided by one tier of governments are complementary to the ones provided by a different tier, think about social services (which are generally provided by the local level of government) and health (which is provided in many countries by the regional level of government).

This follows that the decisions taken by the government at one level will effect the performances of other governments at different level. So we should expect that if the government of a region decides to target a particular sub-area in the same region by spending some public funds, we should observe two effects. The first one, a direct one, is on the popularity of the ruling party at the regional level of government. The second one, an indirect one, on the popularity of the party ruling at the local level because of the afore mentioned externalities.

Also it is reasonable to think that voters are not able to fully distinguish between the competencies of each level of government when they make their voting decisions, so there is a further externality at work, which can go on both directions from the local level toward the central level and vice versa. Voters observe the total level of "local public" goods in their jurisdictions and the overall amount of taxes paid and they make their voting decisions. Consider for example the case of a party in power in a region and that a set of local authorities in that region are ruled by the same party as the upper level while the remaining are ruled by the opposing party. Assume that in order to win the next elections the party in power at the regional level, must win in the majority votes in at least 50% of the of the local authorities. So, intuitively, the best strategy for the incumbent party at the central level is to overspend in the local authorities where the same party is in power, but especially, with a narrow majority. So that, they will have an advantage over the ones ruled by the opponent party, and therefore their probability of victory of the incumbents at local level will increase (this is part of the story of the incumbent effect that is often found).

The idea that aligned jurisdictions should get more funds from the central level is not

knew (see for Lindebeck and Weibull (1987) Dixit and Londregan (1998), Arulampalam et al (2008) and Sole'-Olle' and Navarro (2008)) however the focus of these papers is on the strategic behavior of the *central* government that channels funds toward local jurisdictions in order to win elections, in all the previous set up the role of the local governments is a passive one. Instead the focus of our theoretical analysis and the empirical testing is mainly on the behavior of the *local* governments on how they respond to transfers from the upper level and on how they pursue they electoral goals themselves.

To address these issues we develop a simple model which verifies and refines this intuition following Dixit and Londregan (1998), Arulampalam et al (2008) and Sole'-Olle' and Navarro (2008). We model the behavior of two levels of government in a nation, where each of the incumbent governments manipulate grants and taxes in order to being re-elected, the central government set a income tax on residents in order to collect tax revenue to *discretionally* redistribute to lower levels of governments. Lower levels of government receive the grants and set a local income tax on their residents in order to fund the local public goods. Voters make their voting decisions based both on economic grounds and on ideology. We derive some testable predictions that aligned and swing municipalities get more funds from the central level than non aligned ones and have higher probability that the incumbent will be re-elected at the next elections, moreover our last finding is that local parties announce higher tax rates the safer is the jurisdiction.

We then take the model to the data to test this predictions. We use regression discontinuity analysis to overcome the fundamental identification problem that arises from the likelihood that whether or not the identity of a party in power in a municipality does depends on the particular characteristic of the municipalities itself. Other paper have use similar analysis to investigate the incumbent and party effect on policy like Lee, Moretti, Buther (2004) and Ferreira and Gyourko (2009) and Pettersson-Lidbom (2008) . In particular Ferreira and Gyourko (2009) find that when Democrats barely win the election they have about a 66% chance of winning the next election, and if they barely loose it they have a third chances. However they do not attempt to give a theoretical explanation on why this should occur, which is a distinctive contribution of our paper.

The paper is organized as follows. Section 2 introduces the economic environment and the model. Section 3 presents some background information on Italy and the description of the data, the econometric strategy is discussed in Section 4. Finally, Section 5 discusses the main results, and conclusions are presented in Section 6.

2. The Theoretical Framework

Following Dixit and Londregan (1998), Arulampalam et al (2009) and Sole'-Olle' and Navarro (2008), we build a theoretical model in which the incumbent party at the central level can use center-local transfers to promote its electoral prospects. Advancing on the above-mentioned models, we also investigate how local government respond to the central government strategy, through setting a local tax.

The model is quite a standard one in fiscal federalism. There are two tiers of government in a nation: a central level and a local one. Residents in each local jurisdiction derive their utility from the consumption of *local* public good, and are characterized by some degree of political ideology. The public good is provided by the local government but it is funded both by local taxes and transfers from the central level. The central government may want to transfer more funds to jurisdictions where the same party is in power, in order to increase its party's electoral prospects. It may also distinguish between jurisdictions that were marginally won (or lost) by its party.

This framework is further enriched by the fact that local governments are free to impose a local tax on their jurisdiction, in order to increase the public good provision in their localities.

2.1. The Model

A country is subdivided in J equally sized¹ jurisdictions, indexed by the letter j . Each voter belongs to one and only one jurisdiction, and can be of three types: left-wing, right-wing, or swing voter (also called independent voters). Partisan voters always vote for the party they belong to, so that parties will compete to secure swing voters' ballots. In each jurisdiction we define the share of left- and right-wing voters and the share of swing voters as $\pi_{Lj}, \pi_{Rj}, \pi_{Ij}$, with $\pi_{Lj} + \pi_{Rj} + \pi_{Ij} = 1$.

In each jurisdiction j the local government provides a local public good g_j , which is funded by a local income tax t_j and by block grants Tr_j received by the central government, such that:

$$g_j = t_j + Tr_j$$

Voters' utility depends on both the amount of public good provided g , and the local tax rate t . More specifically, a swing voter i belonging to jurisdiction j has the following utility function:

¹If we consider all the variables as per capita, the analysis is absolutely analogous as one in which the size of jurisdiction is instead free to be heterogeneous.

$$U_{ij} = u(g_j) - t_j + \Gamma_L \delta_i + \epsilon, \quad \text{with} \quad g_j = Tr_j + t_j \quad (1)$$

where $\delta_i \sim U[-\tau, \tau]$ is the ideological leaning of swing voter i , which is uniformly distributed around 0, Γ_L assumes value 1 if party Left wins, and zero otherwise, and finally $\epsilon \sim U[-\eta, \eta]$ is a mean-zero idiosyncratic shock.

Conjecture 2.1. $\eta < \tau$

Before any local election, the local branches of party Left and party Right make binding proposals on the tax rates $\{t_{Lj}, t_{Rj}\}$ they are going to impose in case each wins the local elections. Each party $s \in \{L, R\}$ maximizes the following utility function:

$$U_s = P_s h(g_s) \quad (2)$$

where $h(\cdot)$ is monotonic, increasing and strictly concave, and P_s is party s 's probability of winning. This modelling choice wants to capture in the more general way possible the fact that the local party enjoys political rents proportional to the public expenditure (or amount of public good provided) in case it wins the elections. Moreover, it is assumed that there are decreasing marginal returns to the public good.²

After the elections take place, the central government, which without loss of generality is assumed to be ruled by party Left, decides how much in grants to devolve to each jurisdiction. More specifically, it maximizes the following utility function:

$$U_{gov} = \sum_{j \in J_L} [h(g_j)] - \frac{\lambda}{2} \sum_{j \in J} (T - Tr_j)^2 \quad (3)$$

where $h(\cdot)$ is the same monotonic, increasing and strictly concave function as in the local parties utility. Parties at the local and central level therefore exhibit very similar preferences, with the major difference that the central government has the advantage of taking its decision after the local elections have taken place, knowing therefore which are the jurisdictions J_L belonging to its same party, and which jurisdictions J_R are instead ruled by the opposition party. Finally, also for computational simplicity, we assume that if the government wants to grant to a jurisdiction different levels of grants than a “normal” amount T , it has to bear a quadratic utility loss. This captures the idea that resources are scarce, and that there is a political and administrative cost in publicly differentiating among jurisdictions the amount of grants awarded.

The timing of the game is the following:

²Also the probability of winning as well is subject to diminishing (or, more precisely, non-increasing) marginal returns. This feature wants to capture the fact that the marginal utility coming from a 1% increase in the probability of winning may be very low if one is already in a strong position, while it may be very high in case the probability of winning is lower. As h is concave, our analysis also encompasses the simpler case in which the probability enters linearly in parties' utility.

1. In each jurisdiction, local parties announce their binding policy proposals $\{t_{Lj}, t_{Rj}\}_{j=1}^J$
2. Voters in each jurisdiction vote sincerely at the local elections
3. The central government observes the local-election results, and decide on the grants $\{Tr_j\}_{j=1}^J$ to be transferred to each jurisdiction

The equilibrium concept is the Subgame Perfect Equilibrium. We solve therefore by backward induction.

2.2. Theoretical Results

2.2.1. Voters' behavior

As already mentioned, partisan voters always vote for the party they belong to, while a generic independent voter i votes for party L if:³

$$\delta_i < u(g_L) - t_L - (u(g_R) - t_R)$$

This implies that, given the policies chosen by local parties and central government, there will be an indifferent independent voter m , such that:

$$\delta_m = u(g_L) - t_L - (u(g_R) - t_R)$$

which in turn implies that party L obtains a share of votes equal to

$$V_L = \bar{\pi}_L + \frac{\bar{\pi}_I}{2\tau} (\delta_m + \tau)$$

From this we can calculate the probability of winning for party L :

Lemma 2.2. *The probability of winning for party L , given grants and local taxes, is:*

$$P_L = \frac{1}{2} + \frac{\delta_m}{2\epsilon} + \frac{\tau\kappa}{2\epsilon}$$

with $\kappa = \frac{\bar{\pi}_L - \bar{\pi}_R}{\bar{\pi}_I}$, $\delta_m = u(g_L) - t_L - (u(g_R) - t_R)$

This implies that the probability of winning for party L depends positively (negatively) on the amount of public good provided by party L (party R), and negatively (positively) by the local tax rate announced by party L (party R) before the elections. Moreover is positively affected by the jurisdiction ideological makeup κ , which is larger the more the jurisdiction is ideologically leaning in favor of party L .

³To avoid unnecessary notation, we drop by now the jurisdiction index j , as all the variables are referred to the same generic jurisdiction.

2.2.2. Central and Local Government Behavior

Lemma 2.3. $Tr_{Rj} = T, \quad \forall j \in J_R$ (4)

As the central government receives no political rent from the public good provided in unaligned jurisdictions, it will devolve to those the minimum amount of grants possible or, in other words, would not want to make any “effort” in devolving extra grants to dissonant governments.

Proposition 2.4. *The central government devolves larger grants to aligned jurisdictions.*

The central government will instead be willing to devolve larger grants to consonant jurisdictions, as this will have many positive effects on its own utility. As voters perfectly anticipate the central government’s decision, this will increase the probability of victory for the aligned party, and increase the amount of public spending (and therefore rents) coming from that jurisdiction.

Proposition 2.5. *Ceteris paribus, the aligned party enjoys higher probability of winning than its opponent, and higher levels of public good are delivered in jurisdictions ruled by the same party locally and centrally.*

Proposition 2.6. *Local parties announce higher tax rates the safer is the jurisdiction, i.e. $\frac{\partial t_L^*}{\partial \kappa} > 0, \quad \frac{\partial t_R^*}{\partial \kappa} < 0$*

As local parties have to face political competition, local jurisdictions which are subject to more intense political instability (i.e. in which ex-ante no party has a clear electoral advantage) will be ones in which local tax rates are lower, and both parties will be more interested in convincing independent voters through advantageous fiscal policies. On the contrary, as a party enjoys a strong electoral advantage in a jurisdiction, will be more willing to trade in part of its probability of winning in exchange of a higher amount of public spending (i.e. higher local taxation).

3. Background Information on Italy and data

In this section we present some relevant background information on Italian electoral system and local public finance and a brief description of the data. In particular we describe the electoral system both at the central, regional and local level of governments and its major reforms during the last decades. Moreover we discuss the basic structure of transfers system and co-fundings from the central and regional levels towards the local level on which our paper is based.

3.1. Tiers of governments and elections

Italy is a unitary democratic state ruled by a parliamentary central government with three sub-national levels: 20 regions (*regioni*), 111 provinces (*province*), and 8101 municipalities (*comuni*), (7391 with a population below 15,000). It is important to note that a minority group of five regions, composed by the two main islands in the south and three smallest border regions in the north, enjoy the status of special regions that gives them higher level of legislative autonomy from the central government.

At the beginning of the 1990s, in response to the political and financial crises, the old proportional electoral systems adopted at various level of governments since the end of the II world war, were replaced with majoritarian systems in order to stimulate the electoral accountability of public officials. Before the reform, all local governments were ruled by a proportional parliamentary system similar to that adopted at the centre: citizens voted for members of the municipal councils and regional parliaments, where political parties won a number of seats proportional to their votes, then the mayor and the president of the region were elected respectively by the council or the regional parliament.

In 1993 the reform of municipal electoral system introduced the direct election of the mayor under plurality rule, with a single round for municipalities below 15,000 inhabitants, and with a runoff system above this threshold. Specifically, below the 15,000 population threshold, each party (or coalition of parties) presents a list of candidates for the council and supports one candidate mayor, voters then vote for the mayor and the council. The candidate mayor who gets the majority of votes becomes mayor and the list (or group of lists) that supports the elected mayor gain 2/3 of all seats. Above the 15,000 population threshold, again, parties (or coalitions of parties) present lists of candidates for the council and supports one candidate mayor. At the first round, however, voters vote for the mayor and the council and the mayor gets elected only if he or she win more than 50% of votes. Otherwise, after two weeks, the two top candidates will run again in a second round where voters vote only for one of the two mayoral candidates. Like in the single round system, the lists supporting the winning candidate mayor will enjoy a majority premium in the council.

The transition from the proportional to the majority electoral system immediately followed also for the election of the members of the national parliament. In 1994 the new electoral law replaced the previous proportional system introducing single-member constituency with first past the post method for the election of 3/4 of the members on the parliament. The remaining 1/4 of the members, instead, continued to be elected with a proportional method. Then in 2006 the electoral law was again reformed. Among the

main innovations single-member constituencies have been repealed and the proportional system has been reintroduced with a majority premium for the party or the coalition of parties that obtained the majority of votes. The majority premium, however, was distributed on a national base for the composition of the lower chamber and on a regional base for the composition of the senate. Finally, under the new law voters can not vote for a specific candidate anymore, since their vote can only be cast for a party, or coalition of parties, that support a specific candidate for the leadership of the central government.

The regional electoral system was reformed in 1995 in normal regions, and in 2001 in regions with special statues. Differently from the new municipal electoral rules, the base of the regional system remained proportional. The main innovation was that 20% of the seats would have been assigned by the majority method. This allows the winning party (or the winning coalition of parties) to form a government sustained by a stable majority in the parliament. Moreover, under the new electoral system, the names of the candidates for the presidency appeared, for the first time, on the ballots as heads of the electoral lists. As a result, beginning in 1995, the form of regional governments began to evolve towards a presidential regime, although it was only in 1999 that direct election of the heads of the regional governments was formally introduced.

Table 3.1 - Election Years at different level of Governments

Years	Elections		
	National Parliament	Regional Parliaments	Municipal Councils
2000		X	X
2001	X		X
2002			X
2003			X
2004			X
2005		X	X
2006	X		X

3.2. Local Public Finance

The degree of fiscal decentralization in expenditures in Italy (calculated as the ratio of subnational public expenditures over total public expenditures) has been roughly constant and around 30% for the past 30 years. *Regioni* and *comuni* account for most of

subnational public expenditures (20% and 11 % respectively using 2006 figures) while only 2% is allocated to *province*. For these reason usually most of the studies on Italian local public finance focuses only on *regioni* and *comuni*. *Comuni*'s expenditures are primarily in the area of land management and environment (water, sewage, public hygiene), local transport, local police, culture and recreation, education (nursery schools, training programmes). *Regioni*'s activities are instead primarily in the area of health, environment and vocational training.

The degree of fiscal decentralization on the revenue side instead, measured in terms of local fiscal revenues in percentage of total fiscal revenues, is currently around 15%. It is worth mentioning that the degree of tax autonomy (i.e. the percentage of own fiscal revenues as a percentage of total current revenues) has sharply increased during the early Nineties, when a considerable part of intergovernmental grants have been replaced by new local taxes. In particular, for *comuni*, fiscal autonomy substantially increased in 1993 through the introduction of the municipal property tax (ICI), which brought the degree of municipal fiscal autonomy up to 43% and it is still the main source of tax revenue for Italian municipalities. The remaining source of revenues for local governments is represented by intergovernmental grants (mainly unconditional), tax sharing, and local debt.

The grants system has been the subject to various reforms, partial reforms or short lived reforms starting from the early Nineties, before that all municipalities received grants covering almost the whole amount of any expenditure they incurred in, and the financial autonomy of municipalities was very low. The final outcome is a system with little internal coherence and fruit of successive sedimentation of different interventions⁴.

To note also that from the early Nineties municipalities enjoy a quite large financial autonomy, but the heterogeneity in tax compliance, fiscal capacity and expenditure across the country generate a very patchy picture. To note that each Budget Bill contains a large amount of ad-hoc funding provisions, which may be more likely to follow political, rather than efficiency and equity criteria.

The grant system from the central government to *comuni*, is now articulated on mainly five different grants that the central government, through the Interior Ministry, transfers to municipalities: (1) the Ordinary Grant (Fondo Ordinario), (2) the Consolidated Grant (Fondo Consolidato), in which many small funding streams for the most different aims, (3) an Equalization Grant (Fondo Perequativo), aimed to target territories with smaller ex-

⁴For detailed information on the italian grant system reform see Bracco (2010).

pected tax revenue, calculated at the basic or default tax rates, (4) the Ordinary National Investment Grant (Fondo Nazionale Ordinario Investimenti), which was aimed to finance investment and large public works expenditure, but that has been largely used to finance underfunded very small municipalities (under 3,000 inhabitants), (5) the Investment Development Grant (Fondo Sviluppo Investimenti), which is aimed only at financing the mortgage repayments relative to older investment expenditures, and therefore is bound to expire when the mortgages will be totally repaid. There are also other smaller grants, aimed at directly financing the functions that have been devolved to municipalities over time.

Overall it must be underlined how there is no implicit or explicit formula which overlooks the whole system, and each Budget Bill establishes "freely" the amount of each grant, and the way to distribute it across municipalities, taking as a point of reference the previous year's decisions.

3.3. Data Description

Our dataset includes municipal financial data, census data, and ballot data of the municipal elections and of the national parliament elections from 1998 up to 2007; all data are disaggregated at municipal level. The large number of municipalities implies that every year can be observed local election, instead general election have been held only in 2001 and 2006. We have restricted our analysis to comuni with at least 15,000 inhabitants, given the above mentioned electoral rules.

4. Empirical strategy

To test the alignment effects on grants and incumbency (Propositions 2.4 and 2.5) we use regression discontinuity design, in order to overcome the fundamental identification problem that arises from the likelihood that a party in power in a municipality does depends on the particular characteristic of the municipalities itself (income, historical reasons, geographical location etc.). Following this approach, we compare municipalities where the elected major is barely "aligned" with central governments with ones where the major is "barely unaligned", where barely aligned means that the major won the election with at tight margin and that his party is the same as the ruling party at the central level, which are our swing municipalities in our theoretical model. *Mutatis mutandis*, Lee (2001, 2008) shows that this approach represents quasi-random variation in party winners, because when the race is very tight, the identity of the winning party is likely to

be determined by pure chances as long as there some unpredictable aspect of the votes. To note that our paper differs from other related papers using regression discontinuity to test for party effect in the definition of the treatment variable, Lee (200) et al test wether or not party affect policies by considering the effect of a party (lets us say the democrats) on various measures of policies, in our set our the treatment is not the party itself but is the alignment with the central government, using similar arguments as in Lee (2001, 2008) this approach represents quasi-random variation in alignment status.

As far as we know this is the first attempt to use regression discontinuity design to address alignment swing effect, all the other papers investigating similar issues follow different routes, see for example Arulampalam et al (2008) and Sole'-Olle' and Navarro (2008).

More in details, we test Proposition 2.4 that municipalities aligned with the central government receives more grants (*alignment effect on grant*) by estimating the following polynomial form:

$$Tr_{i,t} = \mu_i + \tau_t + \gamma_o AL_{i,t} + f(MA)\varphi + v_{i,t}$$

where $Tr_{i,t}$ are transfers to municipality i at time t ; $AL_{i,t}$ is our alignment dummy that takes value of one if the ruling party at the local level in i is the same as the party in power at the central level, this is our treatment variable. $MA_{i,t}$, the margin of alignment, is our assignment variable, is calculated as the difference in votes between the winner and the second placed⁵, multiplied by the alignment dummy. So negative values refer to unaligned municipalities and positive ones to aligned; values close to zero indicated that municipality is just (or just not) aligned. The alignment effect is estimated controlling for the margin of victory in linear, quadratic, and cubic form, as well as the interaction of all of these terms with AL . The coefficient of interest is γ_o , which is our alignment effect, expected to be positive according to the theory.

Similarly we test Proposition 2.5, that incumbents aligned with the central government have an higher probability of being re-elected compared to an unaligned one, (*alignment effect on incumbency*), using the following model:

$$I_{i,e+1} = \mu_i + \tau_e + \gamma_2 AL_{i,e} + f(MA_{i,e})\varphi + v_{i,e}$$

the dependent variable is now $I_{i,e+1}$, which is equal to one if the winner of local elections at time $e + 1$ is the same (or at least belong to the same party, see more below) as the

⁵Note on how margin of victory is calculated in the case of first round or second round victory.

winner in the previous elections and zero otherwise. The coefficient of interest is γ_2 , which is our alignment effect, expected to be positive according to the theory.

Proposition 2.6 is, instead, is tested only graphically at the moment because we are still studying the suitable econometric model that can be used to provide more robust empirical evidence.

5. Regression Results

5.1. The Main Results

Figure 5.1 provides graphical evidence of the relationship between the political alignment and the flow of grants from the central to the local governments. On the horizontal axis is reported, with positive values, the margin of victory of aligned local government, instead, on the left of zero, is reported the margin of victory of not aligned councils. In general, more aligned councils tend to receive more grants, and around zero it is clearly visible the discontinuity obtained using the fourth polynomial approximation of the margin of victory. Point estimates of the discontinuity are displayed in Table 5.1. Independently on the polynomial approximation the impact of the political alignment on the amount of grants is positive and statistically significant. The magnitude of our estimates shows that an aligned municipality can receive, on average, between 8% and 2% more grant than a council led by a party in competition with the Prime Minister's party.

Figure 5.1

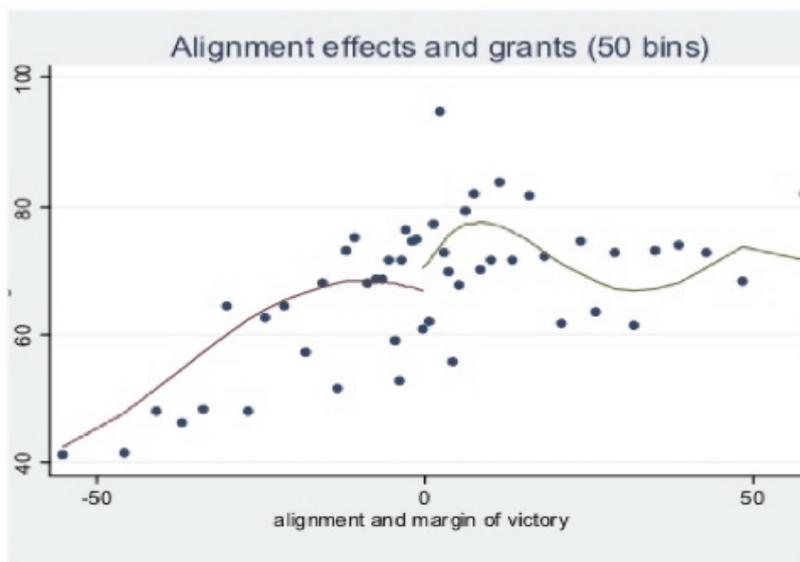


Table 5.1 - Alignment effect on grants (fondo ordinario per capita).

	(1)	(2)	(3)	(4)	(5)
AL	8.202***	5.928***	6.952***	2.580*	1.862*
	(2.777)	(2.277)	(2.453)	(1.417)	(1.093)
Observations	4821	4821	4821	4821	4821
Comuni	598	598	598	598	598
MV polynomial	Fourth	Fourth	Third	Second	Linear
Controls	yes	no	yes	yes	yes

Robust standard errors in brackets

*** p<0.001, **p<0.05, * p< 0.10

Table 5.2 reports the point estimates of the impact of the political alignment on the probability of reelection of the incumbent mayor. In general, independently on the model specification, a mayor that belongs to the same party of the Prime Minister exhibits, on average, between 70% and 40% more chances of re-election than an incumbents that is not aligned. Looking at Table 5.2, the first four columns include in the sample only those municipalities where the incumbent mayor can stand for reelection, instead in the last four column we consider a larger sample measuring the alignment effect in terms of the incumbent party. Finally, columns one and two report the contemporaneous effect, instead columns three and four report the effect lagged by one period.

Table 5.2 - Alignment on incumbency

	"Lame ducks" (term limits) excluded				Incumbent Party			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	Cont.	Cont.	Lag.	Lag.	Cont.	Cont.	Lag.	Lag.
AL	0.742***	0.729**	0.506***	0.510***	0.467**	0.496**	0.393***0	04.27***
	(0.283)	(0.289)	(0.099)	(0.098)	(0.228)	(0.243)	(0.085)	(0.093)
Model	Probit	Probit panel	Probit	Probit Panel	Probit	Probit Panel	Probit	Probit Panel
Observations	937	937	846	846	1246	1246	1155	1155
Comuni	580	580	575	575	598	598	598	598
MV polynomial	Fourth	Fourth	Fourth	Fourth	Fourth	Fourth	Fourth	Fourth
Controls	yes	yes	yes	yes	yes	yes	yes	yes

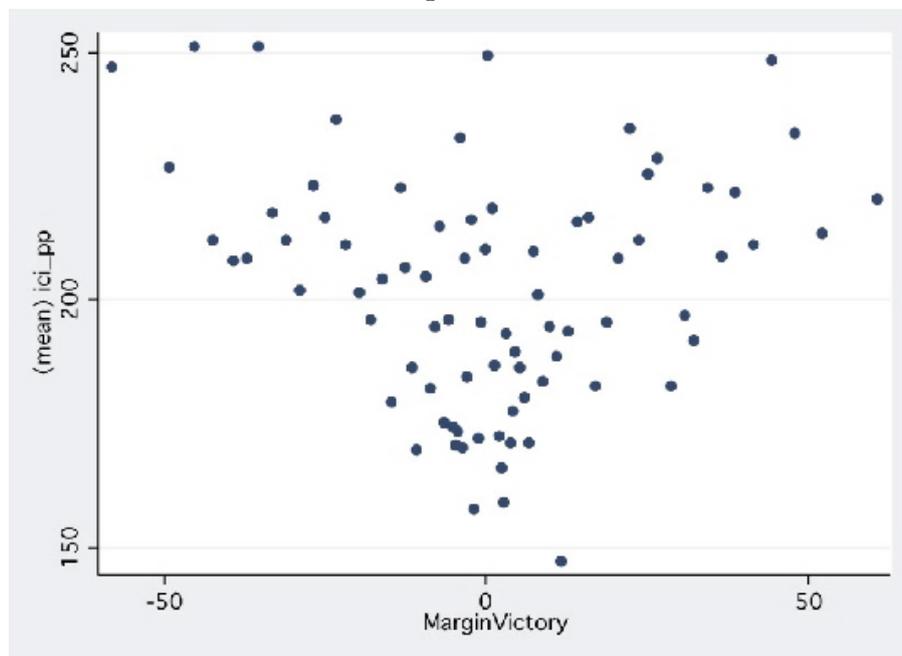
Robust standard errors in brackets

*** p<0.001, **p<0.05, * p< 0.10

Figure 5.2 displays on the horizontal axis the margin of victory and on the vertical axis the local property tax per capita. Clearly "solid elected" mayors tend to tax more than

"marginally elected" mayors regardless of their alignment with the central government ruling party.

Figure 5.2



5.2. Robustness Checks

In progress ...

6. Conclusions

This paper has explored, both from the theoretical and the empirical point of view, some aspects of the political and economic interdependence between tiers of governments. In particular, using new data from Italian municipalities, it has been possible to show robust empirical evidence in support of the three main predictions provided in the theory: 1) councils ruled by a party in competition with the Prime Minister's party receive less grants from the central government; 2) mayors not aligned with the central government majority have substantially lower probability of reelection; 3) finally, mayors elected with a narrow majority tend to set lower local taxes regardless of their alignment with the central government ruling party.

References

- [1] Arulampalam , Wiji, Sugato Dasgupta, Amrita Dhillon, and Bhaskar Dutta, (2009) "Electoral Goals and Center-State Transfers: A Theoretical Model and Empirical Evidence from India," *Journal of Development Economics*, XXX
- [2] Bordignon, Massimo and Guido Tabellini, (2009) "Moderating Political Extremism: Single Round vs Runo Elections under Plurality Rule," Working Papers 348, IGIER (Innocenzo Gasparini Institute for Economic Research), Bocconi University.
- [3] Case, Anne, (2001) "Election goals and income redistribution: Recent evidence from Albania," *European Economic Review*, 45 (3), 405-423.
- [4] Chamon, Marcos, Jo ao Manoel Pinho de Mello, and Sergio Firpo, (2008) "Electoral rules, political competition and scal spending : regression discontinuity evidence from Brazilian municipalities," *Textos para discussu* 559, Department of Economics PUC-Rio (Brazil).
- [5] Dixit, Avinash and John Londregan, (1998), "Fiscal federalism and redistributive politics", *Journal of Public Economics*, 68 (2), 153-180.
- [6] Imbens, Guido and Thomas Lemieux,(2007) *Regression Discontinuity Designs: A Guide to Practice*", NBER Technical Working Papers 0337, National Bureau of Economic Research.
- [7] Johansson, Eva, (1999) *Intergovernmental Grants as a Tactical Instrument: Some Empirical Evidence from Swedish Municipalities*," Working Paper Series 1999:10, Uppsala University, Department of Economics.
- [8] Lancaster, Thomas D. (1986), *Electoral Structures and Pork Barrel Politics*," *International Political Science Review*, 7 (1), 67-81.
- [9] Lee, David S., (2008) "Randomized experiments from non-random selection in U.S. House elections", *Journal of Econometrics*, February 2008, 142 (2), 675-697.
- [10] Levitt, Steven D. and Jr. Snyder James M., (1995) *Political Parties and the Distribution of Federal Outlays*," *American Journal of Political Science*, 39 (4), 958-980.
- [11] Lizzeri, Francesco and Nicola Persico, (2001) "The Provision of Public Goods under Alternative Electoral Incentives",*American Economic Review*, 2001, 91, 225-339.

- [12] Lockwood, Ben, "Distributive Politics and the Costs of Centralization," *Review of Economic Studies*, 2002, 69, 313-337.
- [13] Milesi-Ferretti, Gian Maria, Roberto Perotti, and Massimo Rostagno, (2002) "Electoral Systems And Public Spending," *The Quarterly Journal of Economics*, 117 (2), 609-657.
- [14] Oates, W, *Fiscal Federalism*, New York: Harcourt- Brace-Jovanovich, 1972.
- [15] Osborne, Martin J and Al Slivinski, (1996) "A Model of Political Competition with Citizen-Candidates," *The Quarterly Journal of Economics*, February, 111(1), 65-96.
- [16] Persson, Torsten and Guido Tabellini, (1999) "The size and scope of government: Comparative politics with rational politicians," *European Economic Review*, 43 (4-6), 699-735.
- [17] Persson, Torsten and Guido Tabellini, (2005), *The Economic Effects of Constitutions*, Vol. 1 of MIT Press Books, The MIT Press.
- [18] Porto, Alberto and Pablo Sanguinetti, (2001) "Political Determinants of Intergovernmental Grants: Evidence From Argentina," *Economics and Politics*, 2001, 13(3), 237-256.
- [19] Sole-Olle, Albert and Pilar Sorribas-Navarro, "The Effects of Partisan Alignment on the Allocation of Intergovernmental Transfers. Differences-in-Differences Estimates for Spain," *Journal of Public Economics* XXX
- [20] Worthington, Andrew and Brian Dollery, (1998) "The political determination of intergovernmental grants in Australia," *Public Choice*, March 1998, 94 (3), 299-315.
- [21] Cox, Gary W. and Mathew D. McCubbins, "Electoral Politics as a Redistributive Game", *The Journal of Politics*, 1986, 48 (2), 370-389.
- [22] Grossman, Philip J (1994) , "A Political Theory of Intergovernmental Grants", *Public Choice*, March 1994, 78 (3-4), 295-303.