Do private campaing contributions affect electoral results? An examination of Argentine national elections

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Abstract

In this paper we examine the impact of campaign contributions on electoral results in Argentine elections for the period 2003-2013. We provide a model of a multi-party electoral competition with mixed campaign contributions. Using previously unavailable micro-level data on private campaign contributions we test several hypothesis concerning the relationship between contributions and electoral results. Our findings suggest that while parties receive both public and private funds, only

private contributions are significantly associated with electoral performance –i.e. the higher the ratio of private to public contributions the higher the vote share. Interestingly, while challengers see an increase in vote shares as a result of an increase in private contributions, this is not the case for incumbents. One possible explanation for this is that incumbents have other sources of funding available to them –official advertising, informal campaign spending- which are substitutes to formal private funding. This intuition has important implications for policy design as limiting or prohibiting private contributions in the legal regime may actually be more detrimental to challengers than to incumbents, with the likely effect of increasing incumbency advantage.

JEL Codes: D70; D72; D73; D78

1 Background and motivation

"There are two things that are important in politics. The first is money and I can't remember what the second one is"

Marcus A. Hanna, 1895

The relationship between money and politics has long attracted the attention of scholars in political science and other social sciences. Theoretical work in the late 80's and early 90's in the field of political economy fueled a surge in research in this field. The interest is not merely academic since in recent decades, the spread of democratic conditions through the developing word has brought along various concerns regarding the effective functioning of political institutions. One such concern is related with the role of money in politics, or more specifically, political and electoral finance. This concern is particularly relevant for most Latin American countries which have sustained democratic conditions for several decades and have evolved into increasingly complex democracies with multiple political and economic actors. Argentina is of specific interest due to both its federal arrangement and its changing dynamic of party politics. While there are several studies of the relationship between campaign contributions and electoral outcomes for established democracies, very little theoretical and empirical research has been conducted for Latin American countries and specifically for Argentina.

This issue is all the more important considering the recent debate in the region concerning accountability and transparency and the efforts aimed at improving the institutional design and its implementation. A recent study conducted by IDEA International (2012) shows that 23% of democratic countries do not have any regulation on political finance. As the recent wave of democratization sweeps across much of the globe, more democratic countries are likely to introduce regulations on political finance. In Argentina, public funding of parties dates back to 1957 but only in recent years there have been significant changes in the institutional framework devised to regulate political finance[1]

In this paper, we focus exclusively on electoral finance. In other words, we are interested in exploring whether money *before* the election has any effect on electoral outcomes. We explore some extensions on the possible effects contributions *after* the election may have on electoral results and on policies. Policies may be secured with money before or after the election. But in order to test the predictions of our model we need to gather data on money that goes through informal (and illegal) channels.

There is evidence that money into politics has become ever more important in Argentina. In the last decade, total contributions to all political parties in were over 25 million Argentine pesos in 2005 and more than doubled in 2013 in constant terms[2]. In current princes, all parties received a total of 266 million Argentine pesos in the legislative election of 2013; some electoral experts suggest that it would take around 800 million pesos for a challenger to contest the 2015 Presidential election. That is three times as much money for only one party than what all parties received only two years ago[3]. However, if we look at the structure of financing, a clear pattern emerge: private contributions have been increasing throughout the last decade both in nominal and real terms and as a fraction of total contributions.

The plan of the paper is as follows. Section 2 presents the literature review. Section 3 introduces some theoretical considerations. Section 4 outlines the system of electoral

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[1]One of these changes was to outlaw private contributions from corporate and business firms donors in 2009. The stated goal behind that regulation was to limit the influence of special interest groups on electoral outcomes through formal channels. There is much debate whether this regulation actually improved transparency and accountability since it may have in fact encouraged informal donations by these special interest groups. We will address this issue later in the paper.

[2]Note that we used private inflation estimates to deflate. Using official inflation mesaures, money in politics increases as many as 5 times.

[3]In fact, the legal spending limit for any party for the 2015 Presidential election is around 250 million pesos

finance in Argentina. Section 5 describes the data and empirical strategy. Section 6 presents a discussion of the results and implications.

2   A survey of the literature

Despite an increasing flow of academic studies, very little in terms of comparative work or empiric studies has been done. The narrowest definition of "political finance" we could try is "money for electionneering". In general terms, it refers to all money in the political process, but it takes so many forms that it is difficult to define. Nevertheless, for the purposes of this paper, "political finance" will be understood to mean the financing of ongoing political party activities and electoral campaigns (it is beyond the scope of this paper to cover all the interconnected aereas related to money in politics). There is discussion around the world about the best way or most appropriate model to face political finance. From the 1950's, a great number of countries has incorporated a mixed (private and public) political funding process in their internal law. According to a study conducted by IDEA International in 2012, 66% of countries (-out of 175)- have adopted a strictly public funding system for regulating aspects of political and electoral finance. Other countries use a mixed system of political financing. Karl Nassmacher considers that the percentage of public funding in relation to total funding (total income) varies in each country: from 2% (United Kingdom) and 3% (USA), to 65% (Sweden) and 68% (Austria).

Using a unique dataset collected from several sources –Poder Ciudadano, Camara Nacional Electoral, AFIP Codification of Economic Activities, and the Ministerio del Interior– we test the model using data for all the national elections –Presidential and Legislative, both definitive and primaries- from 2007 through 2013. In this paper, we are interested in several hypothesis. Firstly, we explore the relevance of the amount of private contributions (relative to public funding) in explaining electoral results for both "incumbents" and "challengers". Secondly, we investigate the relationship between the composition of private contributions, according to whether they are individual or corporate and whether they represent sectoral interests, and the electoral performance of political parties. In particular, we are interested in exploring whether sectoral interest align with certain parties. Additionally, we test the hypothesis contesting the ideological motive relative to the influence-buying motive as the driver for the private contributions. To the best of our knowledge, this is the first attempt to use microdata on campaign contributions to

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examine the relationship between electoral finance and election results for Argentina. In this paper, we use both formal theoretical models and quantitative techniques.

The study of the relationship between money and politics can be divided into four separate areas. Early studies looked into the electoral effect of campaign contributions. Although the large majority of these studies find either a relatively small positive effect or no significant effect of private campaign contributions on electoral results, the findings are conflicting. Some studies find that electoral returns to private campaign contributions are much higher for the challenger than for the incumbent, given the incumbent's campaign spending [[Jacobson (1978, 1985), Abramowitz (1988), Chappell (1982), and Palda and Palda (1998)]. There are also those studies which find that electoral returns to both incumbent and challenger are equally effective while there are also those which find that neither is significantly related with electoral results [Green and Krasno (1988), Gerber (1998), Levitt (1994)]. Finally, a small number of studies find that campaign spending has a negative effect on incumbents election chances in legislative elections [Feldman and Jondrow (1984) and Ragsdale and Cook (1987)]. More recently, it has been suggested [[Green and Krasno (1988), Gerber (1998), Moon (2002)] that the independent variable –campaign spending- is likely to be influenced by the dependent variable –some measure of electoral returns; taking this into account, these authors find that there are no significant differences between the electoral returns of campaign spending for incumbents and challengers. These results are somewhat puzzling against the evidence that politicians seem to invest a lot of effort in raising funds and in light of the popular belief that money wins elections.

It is undeniable that the relationship between political finance and electoral results is not a straightforward one and in fact, electoral results are determined by several other variables. The relationship between campaign contributions and election results has been widely studied in the United States. However, studies of this type for Latin America are scarce; in the case of Argentina, aside from Rubio (1997) and Ferreira Rubio et al. (2004) and a few other studies analyzing the political financing system, there are no empirical studies that deal with this issue. In fact, we find that the studies around political contributions and the effects of this in the political game applied in Argentina is almost inexistent; the only study that tries to provide an analysis of this phenomenon we find it in Samuels (2001) in which the author analyses the role of contributions and the relationship of this and the electoral results in a particular field around incumbents and challengers, and finally compares this structure whit the system of United States. But as we noted earlier this

concern is particularly relevant for Argentina where sustained democratic conditions for three decades have shaped an increasingly complex multi-party democracy with multiple political and economic actors. Now, before going into the details of the Argentine case, we need to be clear about the previous studies around this subject, which as stated earlier involves many hypotheses and variables. Our main concern has to do with the role of the groups of interest, private contributions, electoral results and lobbying. Looking at this phenomenon we must realize first that the game has to have a playfield, and this playfield is configured by the electoral institutions, electoral system, the role of the players (incumbent and challenger) and the advantages and disadvantages of each. First of all, it is clear that interest groups make contributions in order to influence the legislation into his favor [Kau et al. (1982); Frendreis and Waterman (1985); Tosini and Tower (1987)]. Of course these contributions are heterogeneous in nature and have different origin –i.e. private donors, public donors, other donors. Now, what do the different studies say about this phenomenon in different places? Stratmann (1991) concludes in his paper that that campaign contributions from not only one period, but from at least two periods, are important predictors of legislative voting. Contributions that are given at approximately the same time as the vote have a larger impact on the congressional voting behavior than contributions that the legislator received to win the last popular election, looking at this we realize that the time variable is very important and is a very powerful card to play by the different groups of interest. But the real question is how we can see the results of these contributions? Specifically, what are "political favors" that the lobbys win? Like we said early it has to do primarily with the legislative part in order to get legislations and laws that follow their interests.

3   Theoretical considerations

Electoral competition between political parties represents a key aspect of political organization of modern societies. In recent decades, campaign spending associated with electoral competition have increased significantly, in part due to the use of more costly communication technologies. In a large number of countries, parties meet their campaign expenditures using three sources of funding: contributions from individuals, contributions from firms and special interest groups and contributions from the public sector. This is not only true for Latin American countries but also for most European countries. The evidence shows that in many cases public contributions outweigh private contributions by

Table 1: Structure of campaign contributions: Argentina,2005-2013

Source	2005	2007	2009	2011	2013	Period avg
Public	0.48	0.77	0.69	0.87	0.77	0.72
Private	0.23	0.17	0.27	0.12	0.20	0.20
Other	0.29	0.06	0.04	0.01	0.03	0.08
Total	1.00	1.00	1.00	1.00	1.00	1.00

a large margin. Table 1 shows the numbers for Argentina[4] contributions.

Despite the evidence that most electoral finance around the world takes the form of mixed financing, most of the existing theoretical models analyze only extreme cases: either a pure public or a pure private case. The goal of this paper is to contribute to this literature by considering the mixed case –i.e parties finance their campaigns using *both* public and private funds. The mixed case is particularly interesting since both sources of finance trigger divergent forces of electoral competition and they different intertemporal implications. When it comes to private finance, parties are induced to design and announce policy proposals aligned with the preferences and interests of potential donors for the present election. This is not the case for public finance since it rewards parties on the basis of their vote shares in precedent elections.

In a two-party system scenario with voters preferences defined as usual, both forms of campaign finance affect policy positions in contrasting ways. While increasing public funds prompt parties to make less ideological proposals and converging to the median, vying for private funds creates an incentive for parties to propose more ideological policies. If we define the private-to-public electoral contributions ratio as $PPEC = \frac{pri_{i,t}}{pub_{i,t}}$ where pri_i and pub_i are total private and public contributions to party "i" in year "t", then the higher this ratio, the higher policy polarization will be.

Another important theoretical implication associated with the effect of electoral contributions is the relation between these and the vote shares of parties. If the two parties are symmetric, then each party's vote share will be equal in equilibrium and independent of electoral contributions. If parties are assymetric, however, then there are different re-

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[4]The National Electoral Office reports other contributions coming from non-governmental organizations and other sources of funding like central party reallocations specific for electoral campaigns. Aside from the unusually large number in 2005 –mostly due to a change in the recording procedure which considered many public contributions as "other" contributions-, these other sources of funding represent on average less than 5% of total party contributions.

sults. If we assume that the assymetry lies in one party being the incumbent and the other being the challenger, then it may be the case that the challenger's only source of funding is private contributions whereas the incumbent may be able to use official budget funds (non-campaign funds) to meet campaign expenditures and therefore influence its own vote share.

If campaign expenditures have an effect on the popularity of parties as it is usually assumed in the literature, then this assymetry will traduce in different vote shares for incumbents and challengers. This difference constitutes what is it often called incumbency advantage. Interestingly, this advantage seems to be inversely related with the PPEC ratio: a reduction in private contributions relative to public funds have a greater negative effect on challengers than incumbents (as they have alternative sources of finance). Moreover, for this reason, it is possible that stricter regulations on political finance concerning caps and bans on private contributions to parties have differing effects depending on whether they are incumbents or challengers and have the ultimate effect of shoring up the incumbent's advantage.

4 Electoral system and finance in Argentina

Argentina elects both members of the upper and lower house using a closed-list proportional representation system with multi-member districts. Voters are only able to cast their votes for a party or an electoral alliance, thus they have little influence on who gets elected to either house. Twenty four electoral districts elect 257 members to the Chamber of Deputies (lower house) and 72 members to the Senate (upper house). The district magnitude ranges from 5 to 70 for the Deputies election. For the Senate election, all districts elect three members.

There exists a significant degree of party fragmentation at the congressional level in Argentine politics. It ranks among the highest in Latin America besides Brazil. The Laakso-Taagepera's Effective Number of Parties (ENP) measure has been on average around 6 for the period 2005-2013. At the time of writing this article, there were 37 parties represented in the lower house and 23 parties in the Senate.

Argentina use a two-round system for the national executive election which involves a plurality system where a second round is held if the winning party fails to obtain either

a 45% of the vote share or a 40% of the vote share with a margin of at least 10% against the runner up. Legislators are elected using multi-member districts with closed lists and a proportional rule to allocate seats to parties.

In each district, lower- and upper-house elections take place every two and six years, respectively. In other words, every district holds lower-house elections every two years concurrently but not all district hold upper-house elections concurrently. This means that not all parties compete in all districts at every election. Nominations are decided at the national-level party organs for national parties and at the state-level party organs for state/local parties. The existence of both national- and state-level parties coupled with the closed-list system has important implications in terms of electoral campaigning. In an open-list system, a prospective legislator has an incentive to invest in political capital outside her party to climb up the party list. This is the case in Brazil. In a closed-list system, such as in Argentina, a prospective legislator has in incentive to invest in political capital inside her party to climb up the ranks.

These circumstances favor the existence of non-individualistic electoral campaigns in Argentine legislative elections. In fact, this seems to be the case with recent elections where most prospective legislators run non-individual events and accommodate to the needs of the party. More specifically, parties may have to balance between loyalty and/or seniority of legislator and popularity and standing outside the party ranks. Regardless of the result of this balance, parties finance their campaign expenditures by raising money collectively rather than individually.

Argentina has a mixed system of party financing. As "fundamental institutions of the democratic system"[5], political parties finance their activities with both public and private funds. In this article, we focus strictly on electoral financing therefore we will not consider the regular funding parties receive for institutional strengthening and development. Public electoral contributions comprise a fixed amount of money for ballot-printing and a variable amount of money for campaigning. The former is equal for all parties and the latter is a function of past electoral performance[6]. Parties can also collect private electoral contributions –both from firms and individuals up to 2009 when contributions from firms were prohibited. All political parties are required to keep books on these contributions and to submit two reports –preliminary and final- to the National Electoral Authority. Parties

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[5]The fundamental provisions for the existence and functioning of parties are laid out in article 38 in the National Constitution. This was introduced by a constitutional reform in 1994.

[6]Parties are required a certain amount of minimum votes to be entitled to this campaigning money.

that fail to do that are fined and/or are excluded from the recipients of public electoral contributions. To date, despite improvements in reporting standards, a significant number of parties do not comply with the regulations.

One interesting feature of the Argentine case is that the legal regime governing political and electoral finance has been modified three times in the last 10 years. The first modification came about shortly after one of the greatest economic crisis in history which triggered a political representation crisis. This regulation outlined and specified the structure, content, and delimitations of the regime of politica finance in Argentina. The second modification involved changes toward improved transparency and accountability but only minor modifications concerning the nature, amounts and types of donors. The third modification included one very significant change which was to prohibit private contributions coming from firms, corporate donors and other institutional investors. Although we would like to examine the impact on the structure of contributions of these institutional changes, the avaialble data will only allows us to make some conjectures. This is particularly relevant considering the discusion above in relation to the effect that tightening the regulations has on both incumbent and challengers.

The current regime is potentially biased against smaller parties: since bigger parties receive larger funding, they are usually those with the highest probability of winning the election. Because of this, it is possible that private contributions are directed towards the bigger parties[7] . For example, for the 2013 election, public contributions to the main 3 parties represented just over 30% of total public contributions (out of 88 parties). The situation is even more striking when it comes to assymetries in private financing: the same 3 parties received almost 69% of all total private contributions (out of 60 parties). As it can be seen, these assymetries do not simply result from the way the institutional regime is designed but also from the specifics electoral dynamics.

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[7]Political parties vary in number and depth in Argentina but they have been growing in number ever since the political representation crisis in 2001-02. As of 2015, there are 77 nation-wide parties recognized by the *Cámara Nacional Electoral*. The number of state-wide parties is several times higher. One of the reasons for this is that there are low barriers to entry. Another reasons is that several of the bigger parties have dismembered in the last 10-15 years and each faction has created a new party. In the period under study, there are on average 11 parties –both nation- and state-wide parties- per district competing in a legislative election. Many of the key electoral districts in terms of population size have a larger number of competing parties.

5 Data and methodology

The data used in this paper come several different sources[8]. The electoral finance data came from three sources: the *Cámara Nacional Electoral*, *Dinero y Politica* and the project *La Ruta Electoral*. This is to the best of our knowledge a unique dataset comprising public and private contributions to political parties in all 24 districts for all the Argentine national elections during 2003-2013. Electoral results were obtained from the Dirección Nacional Electoral and were cross-checked with the *Atlas Electoral Project* when there were discrepancies and missing data. The data cover several recent elections –the 2007 and 2011 Presidential elections, all the Legislative elections from 2005 to 2013 and we also include the 2011 and 2013 primary elections[9] Summary statistics for selected variables are given in Table 2.

Since our main interest is to study the relationship between campaign contributions and electoral results, the individual-level data were aggregated at the party level. This posed several methodological problems. Aside from having a large number of parties, longitudinal studies of Argentine politics are further complicated by the fact that parties are not always comparable between two consecutive elections. One such case is when party A runs for the election in year "t" and is part of an electoral coalition in the next election in year "t+1". Clearly these are two different units and should be treated as such. This problem is aggravated by recording deficiencies from the official bodies[10]. We decided to select the unit of analysis pragmatically using a Faustian criterion: use the party whenever we collected disaggregated electoral data and use the alliance whenever this was not possible. As a result of this, the unit of analysis results in "party and/or alliance" hybrid. This strategy allowed us to use all the information present in the raw data without making far fetched assumptions about the underlying coalitional dynamics. Since data on campaign contributions are reported at the party (not alliance) level, we decided to add up the contributions received by parties that ran within an electoral coalition[11]

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[8]See the Methodological Appendix for detailed information on the data sources and the variables.

[9]We also obtained some data for the year 2003 but decided against including it in the empirical analysis due to it being incomplete and sketchy.

[10]One such problem is that electoral counts and reports are not centrally provided. Each district uses its own conventions regarding party denominations and alliances and there are different criteria to report vote counts, particularly for the case of electoral alliances with some districts apportioning the votes received by each party within the alliance and some others not disaggregating these data.

[11]This way of dealing with these problems meant three possible situations. One with parties running without an alliance where voting and contributions data are available at the party level-; another with parties running within an alliance where the voting and contributions data are available at the alliance

Table 2: Descriptive statistics

Statistic	N	Mean	St. Dev.	Min	Max
primary	2,722	0.27	0.44	0	1
afil	1,244	13,511.28	63,396.61	0	1,290,449
afilpop	1,100	0.01	0.03	0.00	0.20
sh	2,720	0.11	0.16	0.00	0.82
shpre2	1,410	0.14	0.18	0.00	0.87
comp	2,722	12.26	6.49	2	30
marginpre	2,722	0.22	0.18	0.001	0.84
cbole_c	2,722	21,095.35	69,886.99	0.00	1,520,833.00
ccamp_c	2,722	14,758.32	66,404.03	0.00	2,050,502.00
cprip_c	2,722	30,631.51	269,602.70	0.00	8,960,474.00
cprie_c	2,722	6,039.04	145,153.40	0.00	7,089,441.00
coth_c	2,722	4,676.86	32,956.79	0.00	498,364.00
ctot_c	2,722	77,201.08	451,841.70	0.00	17,602,446.00
cpub_c	2,722	35,853.66	115,373.50	0.00	2,120,139.00
cpri_c	2,722	36,670.55	391,319.10	0.00	16,049,915.00
cbolet	1,433	0.44	0.29	0.00	1.00
ccampt	1,433	0.30	0.26	0.00	1.00
cpript	1,433	0.18	0.31	0.00	1.00
cpriet	1,433	0.01	0.06	0.00	0.97
cotht	1,433	0.07	0.21	0.00	1.00
cpubt	1,433	0.74	0.37	0.00	1.00
cprit	1,433	0.19	0.33	0.00	1.00
cpripub	2,722	2,425.34	39,874.41	0.0000	1,733,173.00
incpre	555	0.06	0.23	0	1
incleg	1,367	0.13	0.34	0	1
incleg2	1,034	0.10	0.29	0	1
incleg3	1,035	0.21	0.41	0	1

Figure 1 illustrates a partial correlation between our main variables, ratio of private contributions and vote shares. Note that we use three sub-samples: the full sample, a sample with only positive values –i.e. greater than zero- for both variables and a sample for parties with private funds at least 25% of the total amount received.
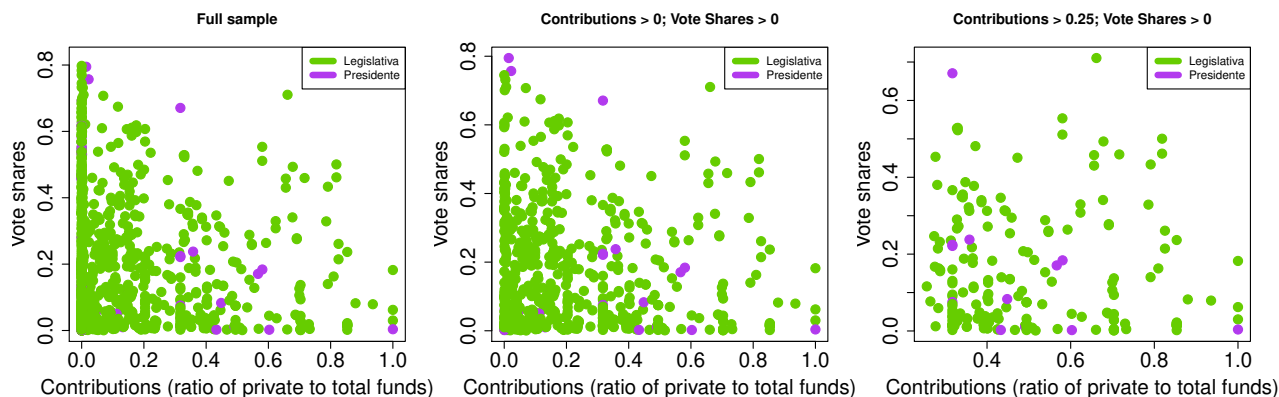

Figure 1: Private contributions and vote shares

Figure 2 provides a rough view of the heterogeneity between districts in terms of the district-wide mean value of the ratio between private to total contributions. On average, the ratio of private-to-total contributions is just above 0.18 for the full sample (left panel), and 0.31 for the sample considering only those parties receiving positive amounts of both private and public contributions (right panel). The province-wide means show significant variation as can be seen in this figure. If we look at these rations by province, however, we see that there is significant variation between them. Focusing on the right panel, the ratio ranges from as low as 0.04 for Chaco (CHA) and Corrientes (COR) and to significantly higher ratios in Neuquen (NEU) and Tierra del Fuego (TDF). This simple graph suggest that state-level effects may be present when considering the relationship between finance and votes. We will get back to this in our empirical specification.

If we look at the structure of party financing during the period it is interesting to note that the regime change brought about by the Ley 25670 in 2009 appears to have had significant effects on the structure of party financing. Looking at Table 3, we can see how private funding has been decreasing as a means of electoral financing.

The structure of our data can be summarized as follows. Our main variables are a

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level-; and another with parties running within an alliance where the voting data are available at the alliance level and contributions data are available at party level. The first two cases pose no problems; for the latter, we add up party-level campaign contributions to match up with the electoral data in the case of alliances.
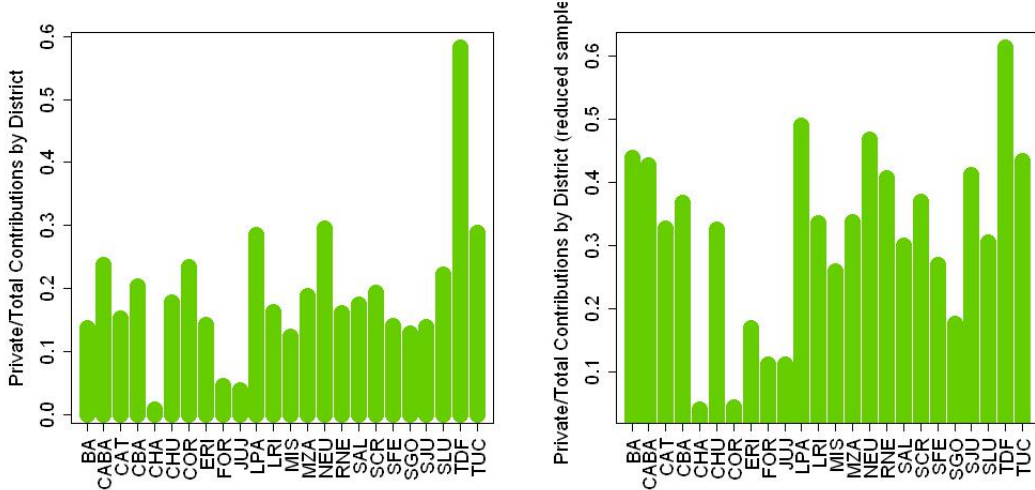
Figure 2: Private funds as fraction of total funds

Concept	2007	2009	2011	2013
Ratio of private-to-total (full sample)	0.17	0.26	0.11	0.21
Ratio of private-to-total (positive private contributions)	0.53	0.51	0.32	0.39
Ratio of non-corporate (personal) to private (full sample)	0.84	0.89	1	1

Table 3: Structure of party financing pre and after reform

party/alliance's vote share and the amount and structure of its campaign contributions. These variables can be disaggregated by election, district and year. Hence, our vote share variable has the following disaggregation:

$$sh_{isht} \quad where \quad i = 1, ..., N; s = 1, ..., S; h = 1, ..., H; t = 1, ..., T. \tag{1}$$

where sh_{isht} is the vote share of party/alliance i in district s in the election type h for the year t. In our specific case, there are 410 i parties/alliances; s are the 24 provincial districts; h are election types –one of where we have two alternative codings –one, separating between Presidental and Congressional elections; the other, separating between Presidential; Diputados (Lower House) and Senadores (Upper House/Senate) elections; and t are the election years. We include from 2005 to 2013 in our analysis.

In a strictly bi-partisan setting, the resulting dataset would most likely be a balanced panel. In a multi-party setting with a large number of nation-wide parties, an even larger number of state-wide parties and complex and volatile coalitional party dynamics, the resulting data would be significantly unbalanced. Table 4 summarizes the number of

cases (parties/alliances) per year per district. Even if we consider elections that are held in all districts every two years –Diputados (LH)- the number of cases varies between 140 and 339. Since this is clearly not well suited to conform a panel-data structure we will use two alternatives for analyizing our data: complete pooling of observations and no-pooling (mixed effects).

Table 4: Parties/alliances by election type and elective office

office	General						Primary		
	2005	*2007*	*2009*	*2011*	*2013*	*Total*	*2011*	*2013*	*Total*
Diputados (LH)	181	339	271	154	140	1085	203	173	376
Presidente y Vice	–	385	–	170	–	555	240	–	240
Senadores (UH)	46	110	101	43	44	344	62	60	122
Total	227	834	372	367	184	1984	505	233	738

In line with some of the standard models in the empirical literature, we test the influence of campaign contributions on the vote share of parties. Our baseline model includes alternative measures of campaign contributions plus aditional controls like the number of competing parties and the degree of electoral competition in a district. The baseline specification is therefore:

$$sh_{isht} = \beta_0 + \beta_1 pri_{isht} + \beta_2 comp_{sht} + marginpre_{sht} + \beta_3 oth_{isht} + \epsilon_{isht} \tag{2}$$

where sh_{isht} and pri_{isht} are the vote share and amount of private contributions received by party/alliance i in district s in the election type h for the year t respectively; $comp_{sht}$ and $marginpre_{sht}$ are the number of challengers and the the degree of electoral competition in district s in election type h for the year t; oth_{isht} are other control variables –at the party and/or district level; ϵ_i is a random error term.

The models presented in Table 5 include all the parties that receive a strictly positive amount of campaign contributions, either private or public. About a third of the parties in the sample compete in elections but received no contributions at all[12]. It would make little sense to include these observations since from a theoretical point of view, there is no relation to explore. Empirically, due to the large number of zeroes, it woulc call for a different approach. We define the variable of interest using three alternative measures.

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[12]This may be due to different factors. Firstly, it may be the case that a party was not entitled to public contributions since it failed to comply with the legal requirements to inform about its balance sheet. Secondly, it may be possible that a party did not receive any private contributions.

Firstly, we simply use the total amount of private and public contributions (due to inflation during the period we deflate the series and these are expressed at 2003 prices) entering linearly in the specification. The results are presented in Model 1. Both coefficients are significant but its size is very small. This is part due to scalign but also to a relatively small expected effect of contributions on vote share: an increase of one standard deviation in private contributions (public contributions) would increase a party's vote share by around 0.01 (around 0.06). Controls have the expected sign: the larger the number of competing parties, the smaller a party's vote share (comp) while the larger the margin of victory in the district in the previous election (marginpre) the larger the vote share for parties.

Table 5: Regression results - Pooled OLS

	Dependent variable:						
	sh						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
cpri_c	0.0000***						
	(0.00)						
cpub_c	0.0000***						
	(0.0000)						
cpubt		−0.08***					
		(0.01)					
cprit			0.09***	0.06***			
			(0.01)	(0.01)			
log(cpripub)					0.003***	0.003*	0.004***
					(0.001)	(0.001)	(0.001)
comp	−0.01***	−0.01***	−0.01***	−0.004***	−0.004***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
marginpre	0.09***	0.09***	0.10***	0.004	−0.01	−0.01	−0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
log(cpripub):shpre2							−0.01***
							(0.004)
shpre2				0.66***	0.67***	0.67***	0.61***
				(0.02)	(0.02)	(0.02)	(0.03)
log(cpripub):comp						0.0000	
						(0.0001)	
Constant	0.18***	0.25***	0.17***	0.08***	0.11***	0.11***	0.12***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	1,431	1,431	1,431	911	891	891	891
R^2	0.11	0.11	0.11	0.52	0.51	0.51	0.52
Adjusted R^2	0.10	0.11	0.11	0.52	0.51	0.51	0.51
F Statistic	42.05***	57.81***	60.73***	243.57***	233.38***	186.49***	189.26***

Note: *p<0.1; **p<0.05; ***p<0.01

Models 2 and 3 use an alternative specification for the independent variable. We do not use the total amounts of either contribution but rather a ratio of both public and private contribution to total contributions[13]. We include the ratio of public-to-total contributions

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[13]In addition to reducing the potential bias due to misdeclaration and missing data, since both public

in model 2 and the ratio of private-to-total contributions in model 3. One surprising result is that the coefficient for the public contributions ratio is negative, suggesting that the larger public contributions as fraction of total contributions the smaller the vote share[14]. The ratio of private contributions is positive and significant which gives the expected sign. In model 4, we introduce *shpre*2 which is a party-level variable measuring a party's vote share in the previous election[15]. Despite our best efforts, around 25% of the cases are dropped in model 4. Interestingly, this variable comes out as highly significant and positive while *cprit* decreases its size somewhat but it is still significant.

Models 5 through 7 use our final alternative specification for the variable measuring private and public contributions. This measure is what most closely approaches our theoretical considerations. We define *cpripub* as the ratio of a party's private contributions to its public contributions[16]. It is interesting to note that the *cpripub* variable –ratio of private to public funding- emerges as positive and significant in all three models. All other variables retain their sign and significance except for *marginpre*. It should also be noted that models 4 through 7 provide a much better fit of the model than models 1-3[17]. Models 6 and 7 run some interactions between *cpripub* and *comp* and *shpre*2. The first interaction is to see whether there is evidence of whether relation between the ratio of private-to-public contributions and vote shares differs with the number of competitors in a district. The second interaction is more intuitively interesting: whether the relation between financing and votes depends on a party's past electoral performance. Interestingly, it appears that

and private contributions respond to different theoretical forces, it may be sensible to take ratios as a way of capturing both influences.

[14]This result would not look so strange if parties, especially incumbents, are using public funds to finance their campaigns.

[15]This variable took considerable time to build. Due to the considerations made regarding the coalitional dynamics in the Argentine political system, we decided to build two alternative variables measuring the past performance of parties. We define a strict *shpre* variable where for any party to be assigned a "shpre" it has to feature in two consecutive elections with exactly the same name and without being in an alliance. This variable meant that many cases were dropped due to name changes and not participating in consecutive elections. For the second, more flexible, "shpre2", we relax these criteria and include all those parties which changed their name, which did not participate in consecutive elections (but had at least participated in any other previous election) and we also tracked identical candidates participating in different elections with different alliances.

[16]Since this ratio can include a zero in the denominator –i.e public contributions amount to zero-, we make a slight transformation of all the data by adding a very small constant to all contributions. This is to overcome the problems that an indeterminate fraction would bring along.

[17]Although not directly comparable, we ran models 1 through 3 with the exact subsamples used to produce models 4 throught 7. The results are qualitative and quantitatively similar.

the larger a party's previous vote share the less effective private financing is.

Table 6: Regression results - Pooled OLS - Reduced Sample (Only positive private contributions)

	Dependent variable:						
	sh						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
cpri_c	0.0000*						
	(0.00)						
cpub_c	0.0000***						
	(0.0000)						
cpubt		−0.04**					
		(0.02)					
cprit			0.04**	0.04**			
			(0.02)	(0.02)			
log(cpripub)					0.0002	−0.001	0.002
					(0.001)	(0.003)	(0.002)
comp	−0.01***	−0.01***	−0.01***	−0.004***	−0.004***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
marginpre	0.13***	0.14***	0.14***	0.08*	0.06	0.06	0.06
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
log(cpripub):shpre2							−0.01
							(0.01)
shpre2				0.59***	0.60***	0.60***	0.60***
				(0.04)	(0.04)	(0.04)	(0.04)
log(cpripub):comp						0.0001	
						(0.0002)	
Constant	0.22***	0.25***	0.21***	0.10***	0.12***	0.12***	0.12***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	593	593	593	405	405	405	405
R^2	0.12	0.11	0.11	0.44	0.44	0.44	0.44
Adjusted R^2	0.12	0.10	0.10	0.44	0.43	0.43	0.43
F Statistic	20.91***	23.12***	23.65***	79.28***	77.02***	61.61***	62.15***

Note: *p<0.1; **p<0.05; ***p<0.01

Table 6 reproduces the same models but using a smaller sample, comprising only parties with positive private contributions. Thus we restrict our attention to parties that have actually managed to attract private funding, which is one of the key motives behind our theoretical considerations. The results in this table are qualitatively similar to those in Table 5. There is a significant loss in the number of observations as only around 20% of the parties in the sample receive private contributions larger than zero. Models 1 through 4 are qualitatively similar to those in the previous table. The variable *cpripub*, however, loses significance in models 5 to 7. Whether this is due to the significantly smaller sample or to the fact that we have missing variables, we do not know.

The previous models have not taken into account the structure of the data. We now

Table 7: Regression results - Linear Mixed Effects

	Dependent variable:				
	sh				
	(1)	(2)	(3)	(4)	(5)
cpri_c	0.0000**				
	(0.00)				
cpub_c	0.0000***				
	(0.0000)				
cprit		0.06***	0.07***	0.07***	
		(0.01)	(0.01)	(0.01)	
cpripub					0.0000
					(0.0000)
comp	−0.01***	−0.004***	−0.004***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
marginpre	0.09***	0.002	0.01	0.01	−0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
shpre2		0.66***	0.65***	0.65***	0.67***
		(0.02)	(0.02)	(0.02)	(0.02)
Constant	0.16***	0.08***	0.12***	0.12***	0.13***
	(0.01)	(0.01)	(0.04)	(0.04)	(0.03)
Observations	1,431	911	911	911	891
Akaike Inf. Crit.	−1,126.64	−1,172.54	−1,187.92	−1,185.94	−1,125.62
Bayesian Inf. Crit.	−1,089.78	−1,138.84	−1,149.40	−1,142.61	−1,087.29

Note: *p<0.1; **p<0.05; ***p<0.01

take this into account by specifying a mixed-effects model where we introduce and model party-, state- and election-level variables. Table 8 reproduces most of the models in Table 5 although we now introduce varying intercepts to control for differences in the effect of private contributions on vote shares across provinces. We test different group effects –state group effects ("idjur"), election group effects ("elec2") and primary election group effect ("primary"). Both the results (not shown here) evidence that there state and election type contribute to explaining an important part of the variance in the dependent variable. The results for the random intercepts are shown in Figure 3. Looking at the models, it can be seen that models 2 to 4, where we use the ratio of private-to-total contributions are the models that best fit the data. The coefficient is positive and significant and significantly larger than in the previous tables.

Finally, we would like to test whether the relationship between money and votes is similar for incumbents than for challengers. In order to do that, we split the samples and work with two different sub-samples, one for incumbents, another for challengers. The results of doing this are shown in Table. The most striking result here is that *cprit* has a different sign for incumbents and challengers. In the first two columns, using the larger sample,

Table 8: Regression results - Linear Mixed Effects

	Dependent variable:				
	sh				
	(1)	(2)	(3)	(4)	(5)
cpri_c	0.0000*				
	(0.00)				
cpub_c	0.0000***				
	(0.0000)				
cprit		0.04**	0.04**	0.04**	
		(0.02)	(0.02)	(0.02)	
cpripub					0.0000
					(0.0000)
comp	−0.01***	−0.004***	−0.004***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
marginpre	0.13***	0.07	0.07	0.07	0.06
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
shpre2		0.59***	0.59***	0.59***	0.60***
		(0.04)	(0.04)	(0.04)	(0.04)
Constant	0.22***	0.11***	0.11***	0.11***	0.12***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	593	405	405	405	405
Akaike Inf. Crit.	−456.99	−463.17	−461.17	−459.17	−456.13
Bayesian Inf. Crit.	−426.29	−435.14	−429.14	−423.14	−424.10

Note: *p<0.1; **p<0.05; ***p<0.01

it can be seen that *cprit* is negatively and significantly correlated with incumbents' vote share while it is positively and significantly correlated with challengers' vote share. These results reproduce some of the findings in early literature on congressional voting in the United States, despite the fact that we are somehow controling endogeneity using *shpre2*. However, they are based on a rather small number of observations and caution is advised when interpreting them. We provide a plot of the relationship between money and votes for both sub-samples, incumbents and challengers in Figure 5.

More importantly, this difference for incumbents and challengers may be due to the so-called incumbency advantage effect, which we do not capture explicitly in our estimation model. One possible correction of this would be to include the official advertising expenditures made by the incumbent government in the months prior to the election[18]

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[18]To the date of writing this version of the paper, we have not been able to process these data. It is available, however for the period 2012-2013, disaggregating every form of advertising hired by the national incumbent for both executive and legislative offices.
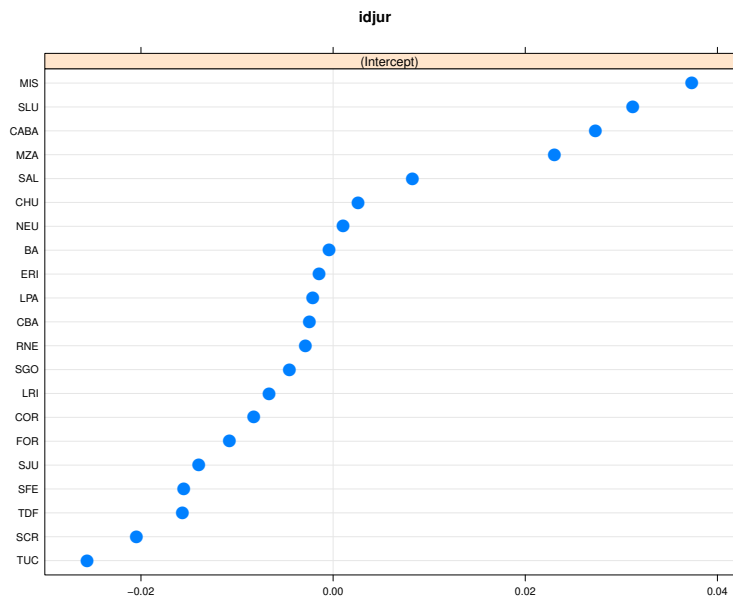
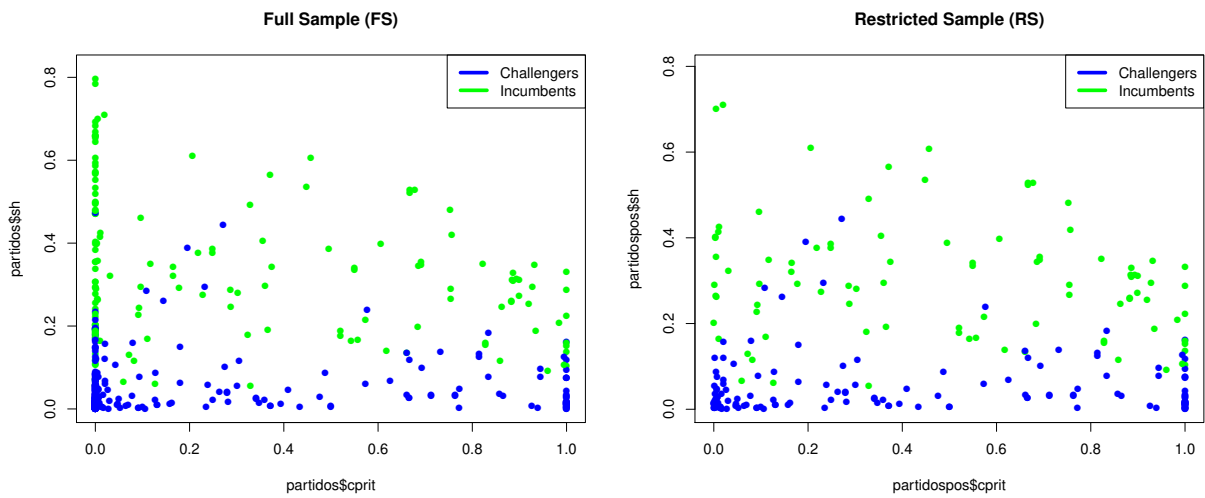Figure 3: Random intercepts

Figure 4: Random intercepts

Figure 5: Vote shares and private financing: Incumbents vs Challengers

Table 9: Regression results - Linear Mixed Effects (Only positive private contributions)

	Dependent variable:				
	sh				
	(1)	(2)	(3)	(4)	(5)
cpri_c	0.0000*				
	(0.00)				
cpub_c	0.0000***				
	(0.0000)				
cprit		0.04**	0.04**	0.04**	
		(0.02)	(0.02)	(0.02)	
cpripub					0.0000
					(0.0000)
comp	−0.01***	−0.004***	−0.004***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
marginpre	0.13***	0.07	0.07	0.07	0.06
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
shpre2		0.59***	0.59***	0.59***	0.60***
		(0.04)	(0.04)	(0.04)	(0.04)
Constant	0.22***	0.11***	0.11***	0.11***	0.12***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	593	405	405	405	405
Akaike Inf. Crit.	−456.99	−463.17	−461.17	−459.17	−456.13
Bayesian Inf. Crit.	−426.29	−435.14	−429.14	−423.14	−424.10

Note: ∗p<0.1; ∗∗p<0.05; ∗∗∗p<0.01

Table 10: Regression results - Incumbents vs Challenger Pooled OLS

	Dependent variable:			
	sh			
	Inc	Ch	Inc (RS)	Cha (RS)
	(1)	(2)	(3)	(4)
cprit	−0.06*	0.04***	−0.07*	−0.01
	(0.03)	(0.01)	(0.04)	(0.04)
comp	−0.01***	−0.002***	−0.01***	−0.001
	(0.002)	(0.0004)	(0.002)	(0.002)
marginpre	−0.03	0.02	0.06	0.13*
	(0.09)	(0.02)	(0.09)	(0.08)
shpre2	0.45***	0.25***	0.34***	0.67***
	(0.08)	(0.03)	(0.08)	(0.07)
Constant	0.32***	0.06***	0.32***	0.05
	(0.04)	(0.01)	(0.04)	(0.03)
Observations	123	265	80	112
R^2	0.42	0.32	0.43	0.51
Adjusted R^2	0.40	0.31	0.40	0.49
F Statistic	21.35***	31.12***	14.08***	28.15***

Note: ∗p<0.1; ∗∗p<0.05; ∗∗∗p<0.01

6 Conclusions

In this paper, we make a first attempt at testing empirically the relationship between electoral (party) financing and electoral results. Although still preliminary, our findings support the hypothesis that the larger the share of private contributions in relation with total contributions, the larger the vote share. This result holds even if we control for other party-level characteristics such as the vote share in the previous election and the size of the party affiliate base and other district-level characteristics such as the number of challengers in a given election and the margin of votes between the winner and runner in the previous election. These results are pretty robust to testing for alternative specifications and different econometric techniques. One aspect we do not fully account for is endogeneity of the independent variable *cprit*. Although we make an attempt to control for it by including a party's past electoral performance and interacting it with the *cprit* variable. It may well be the case that the ratio of private to total contributions is a linear function of the vote share of parties. At the time of writing this paper, we unable to find a good instrument to test for this since most electoral/political variables correlated with private contributions are also correlated with electoral outcomes.

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A   Data Sources and Methodology of Aggregation

Data on public and private campaign contributions were obtained from three different sources. Firstly, from the *Cámara Nacional Electoral* which is the national electoral organ in charge of supervising party activity. Secondly, from the *Dinero y Política* website. *Dinero y Política* was launched by *Poder Ciudadano*, an Argentine NGO which also serves as the local branch of *Transparency International*. Their data was assembled on the basis of the official records held at the *Cámara Nacional Electoral*. At the time of writing this paper, these data were available digitally at http://dineroypolitica.org. *Dinero y Política* provided the data for the 2007 and 2009 elections while the remaining years –2005, 2011 and 2013- were obtained from the *Cámara Nacional Electoral*. All these data come at different leves of aggregation. Public contributions are divided between ballot-printing and campaign funds. Private contributions detail individual-level data on name of donor, gender, district, party the donation goes to and amount of contribution. After processing the raw data to remove duplicates and consolidating multiple contributions from identical donors in a single election, we are left with a database of around 40000 individual party contributions for the period 2003-2013.

Data on election results and vote shares were obtained from the *Ministerio del Interior y Transporte* for all the National elections –both Presidential and legislative- between 2007 and 2011[19] We also collected data from the *Atlas Electoral* run by Andy Tow when official information was inaccurate or missing. Since the data on party and alliance names was not homogeneous between these two sources –in several cases, the names of the parties in two different electoral districts or election years did not match even when using that same data source-, we had to homogeneize and recode party and alliance names using the party and alliance codes registered in the *Cámara Nacional Electoral*. This was necessary to avoid recording one party as two different parties if indeed the differences were only due to a mismatch in the names contained in the data sources. Another issue was deciding on how to assign individual campaign contributions –on a party or alliance basis. In order to maximize the number of observations, we decided to use the data as was reported in the *Dinero y Política* database. The contributions can be directed both to the party and/or to the alliance and this introduced some problems when pairing these variables with the electoral variables –we worked with electoral results at the party level unless the party

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[19]There were two Presidential elections during that period in 2007 and 2011 and three legislative elections in 2007, 2009 and 2011. Also, in 2011, for the first time, compulsory primary elections were held. We also collected information on votes for the two primary elections –Presidential and legislative.

was part of an alliance in which case we used

Finally, we used the *Administración Federal de Ingresos Públicos (AFIP)* database of economic activities to assign every corporate donor to an economic sector. Since there are over 800 economic activities listed in the AFIP records, we recoded the activities into 29 economic sectors following loosely their coding numbers. These sectors are: Agro, Ganadería y Caza; Pesca, Minería y Actividades Extractivas; Industria Alimentaria; Industria Tabacalera; Industria Textil y Calzado; Industria Maderera, Papel e Impresiones; Industria Petroquímica y Farmacéutica; Industria Plasticos y Caucho; Industria Vidrio, Cerámica y Construcción; Industria Acero, Metales y Herramientas; Industria Maquinas y Electrodomésticos; Industria Eléctrica, Optica y Fotografia; Industria Automotor y Transporte; Industria Muebles, Juguetes y Deportes; Construcción y Edificación; Ventas Varias; Ventas al por Mayor; Ventas al por Menor; Servicios Alojamiento y Gastronómicos; Servicios Transporte, Almacenamiento y Transmisión de Datos; Servicios Banca, Seguros e Intermediación Financiera; Servicios Profesionales; Servicios Administración Pública; Servicios Enzeñanza; Servicios de Salud y Sociales; Servicios Esparcimiento y Otros; Servicios Organizaciones Políticas.

To integrate the "base partidos" we aggregated the individual contributions into a single observation for every party that received either a zero or a positive amount of individual contributions[20].

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[20]Note that all the registered parties complying with the regulations of the *Cámara Nacional Electoral* are entitled to a minimum amount of public funds for their electoral campaign